SC 07 - Technical Manual 2015-16 - Appendices

Contents

THE CENTER FOR EDUCATIONAL TESTING & EVALUATION
The University of Kansas

LIST OF TERMS

ACHIEVEMENT AND ASSESSMENT INSTITUTE (AAI) – The unit within the University of Kansas that includes Agile Technology Solutions, the Center for Educational Opportunity Programs, the Center for Educational Testing and Evaluation, and the Center for Public Partnerships and Research.

AGILE TECHNOLOGY SOLUTIONS – The organization that develops and maintains the KITE system and provides DLM® Service Desk support to educators in the field.

ALTERNATE CONTENT STANDARDS – Alternate or extended content standards that link to general education content standards and reflect the highest academic expectations for students with significant cognitive disabilities.

ALIGNMENT – The relationships between the content structures in the DLM assessment system and assessment items. The content of assessment items measure the student's knowledge, skills, and understandings reflected in the content standards that they are intended to measure.

ANSWER OPTIONS – response choices in assessment items.

ASSESSMENT COORDINATOR – The state or district person who supports local assessment implementation and test administrators of Dynamic Learning Maps alternate assessments.

CENTER FOR EDUCATIONAL TESTING AND EVALUATION (CETE) – Part of the University of Kansas' Achievement and Assessment Institute. CETE develops and administers educational testing programs including DLM.

COMPUTER-DELIVERED TESTLET – A test designed to emphasize student interaction with the content of the testlet, regardless of the means of physical access to the computer. The contents of the testlets are presented directly to the student.

DATA STEWARD – The state or district person who manages student and enrollment data and Educator Portal user accounts for Dynamic Learning Maps alternate assessments.

DISCIPLINARY CORE IDEA – An organizing concept in a science domain. Each domain has 3 to 4 core ideas.

DOMAIN - A focus within science content used to group disciplinary core ideas in the Next Generation Science Standards (i.e., Earth and space science, life science, physical science, or engineering).

DLM MAPS – A learning map model consisting of numerous nodes and connections representing the multiple learning progressions that cover the development of the cognitive and content-area skills from birth to high-school graduation. DLM maps also provide access to multiple and alternate routes to achieving the learning targets, making it more inclusive for learners with various disabilities.[1]

DIAGNOSTIC CLASSIFICATION MODEL (DCM) – Response model with discrete latent attributes (skills) that are used classify students into one latent class (where each latent class is defined by an attribute profile).

DISTRICT TEST COORDINATOR (DTC) – A role in Educator Portal that has the ability to manage user, enrollment, and roster data within the organizational unit.

DYNAMIC LEARNING MAPS ALTERNATE ASSESSMENT SYSTEM – An assessment system designed to be accessible by students with the most significant cognitive disabilities, including those who also have hearing or visual disabilities, and/or neuromuscular, orthopedic, or other motor disabilities. The assessment includes computer-based assessments and a web-based dashboard for educators to manage student information. The assessment system also includes professional development to support instruction aligned to the Essential Elements.

DYNAMIC LEARNING MAPS CONSORTIUM – A multi-state consortium that developed the DLM Alternate Assessment System.

DYNAMIC LEARNING MAPS SCIENCE CONSORTIUM – A multi-state consortium within the DLM Alternate Assessment Consortium that developed and used the DLM science assessments.

EDUCATOR PORTAL – An administrative application in the KITE system where staff and educators manage student data, complete required test administration training, assign instructionally embedded assessments, retrieve resources needed for each assigned testlet, and retrieve reports.

[1] The learning map model for science is currently in development.

ENGAGEMENT ACTIVITY – An activity that precedes a testlet that describes a scenario, taps prior knowledge or experience, and/or introduces the concept to be addressed. In science, the engagement activity provides context for the items.

ESSENTIAL ELEMENT – Specific statements of knowledge and skills linked to the grade-level expectations identified in general education content standards. Essential Elements build a bridge from the content in the grade-level standards to academic expectations for students with the most significant cognitive disabilities.

ESSENTIAL ELEMENT CONCEPT MAP (EECM) – A graphic organizer using principles of Evidence Centered Design to define ELA and mathematics content specifications for assessment. The EECM uses principles of evidence-centered design and provides information about evidence of EE mastery, key vocabulary and concepts, associated nodes in the learning map, and potential non-cognitive and accessibility barriers when assessing the target behaviors.

FIRST CONTACT SURVEY (FC) – A survey used to collect background information about students who are eligible for DLM assessments. The survey goes beyond basic demographic information and includes questions on topics such as communication, assistive technology devices, motor and sensory impairments, academic performance. Some questions from the First Contact survey are used to determine a student's entry point, or initialization, into the assessment.

FUNGIBLE – exchangeable, able to be replaced by another identical item. In DLM, all items were assumed to be fungible, or exchangeable, within a linkage level.

GENERAL RESEARCH FILE (GRF) – The data file provided to states at the end of each year. It contains student demographic information and assessment results.

INITIALIZATION – The process by which existing information about a student is used to determine the linkage level at which the student begins the assessment.

KANSAS INTERACTIVE TESTING ENGINE (KITE) – The platform that includes KITE Client and KITE Educator Portal. Two additional applications not seen by students and teachers include platforms for hosting test content and building technology-enhanced items.

KITE CLIENT – An online testing interface for students. KITE Client is available for use on PCs, Macs, Chromebooks, and iPads.

LEARNING PROFILE – Part of the individual student score report provided at the end of the year. Provides information about student mastery of linkage levels for every Essential Element assessed.

LINKAGE LEVEL – Assessment goals that represent critical concepts or skills needed to learn the Essential Element. The initial and precursor linkage levels are always related directly to the target level. There are three levels: Initial, Precursor, and Target. The target level is aligned to the Essential Element.

NEXT GENERATION SCIENCE STANDARDS - The Next Generation Science Standards are the result of a multi-state effort to create new education standards that are "rich in content and practice, arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education" (NGSS, 2013). Overall, the guidelines are intended to help students deeply understand core scientific concepts, to understand the scientific process of developing and testing ideas, and to have a greater ability to evaluate scientific evidence.

PERFORMANCE PROFILE – Part of the individual student score report provided at the end of the year. The Performance Profile provides information about student mastery of linkage levels mastered across EEs within a conceptual area and overall in the subject.

PERSONAL NEEDS AND PREFERENCES (PNP) PROFILE – Student-specific information that tells the DLM test delivery system what the needs are for individual users. The PNP includes information the system needs to make the student's user interface compatible with his or her accessibility needs. In DLM, the PNP profile includes information about display enhancements, language and braille, assistive technology, and audio and environment supports. Educators who know the student provide the information in the profile.

SCIENCE AND ENGINEERING PRACTICES – A set of eight practices that scientists and engineers use to conduct investigations and design models and systems.

STUDENT WITH THE MOST SIGNIFICANT COGNITIVE DISABILITIES – A student who falls within one of the existing categories of disability under IDEA (autism, deaf-blindness, hearing impairment, mental retardation, orthopedic impairment, deafness, emotional disturbance, multiple disability, traumatic brain injury, visual impairment, learning disability, speech and language impairment, other health impaired) whose cognitive impairments may prevent them from attaining grade-level achievement standards, even with the very best instruction.

TEACHER-ADMINISTERED TESTLET – A test designed to be administered directly by the test administrator outside of the KITE system. The KITE system still delivers the test, but the test administrator plays a more direct role than in computer-delivered testlets.

TECHNICAL LIAISON – A role that describes the state or district person who manages DLM technology requirements for a school or district.

TEST ADMINISTRATOR – The person who administers the assessments to students.

TEST DELIVERY ENGINE (TDE) – The portal that allows students to log in and complete assigned testlets. See KITE Client.

TESTLET – A set of 3–8 items and an engagement activity. Combining multiple items and beginning with an engagement activity increases the instructional relevance of the assessment, and provides a better estimate of the students' knowledge, skills and abilities than can be achieved by a single test item. Thus, testlets are more reliable and valid indicators of the student's performance.

TESTLET INFORMATION PAGE (TIP) – A secure PDF document that is unique to each testlet and provides specific information to guide the test administrator in preparing for and administering the testlet.

THEORY OF ACTION – Summary statement of values that guided the design of the DLM Alternate Assessment System. It expresses the belief that high expectations for students with significant cognitive disabilities (SWSCD), combined with appropriate educational supports and diagnostic tools for teachers, result in improved academic experiences and outcomes for students, teachers, and parents.

TOPIC – A component of a core idea in science. Each core idea has 3 to 5 topics.

TRAINING MODULE – A standardized or self-contained component that with other such components constructs an educational course or training program. DLM training modules are available in both self-directed and facilitated formats. Modules cover topics such as the use of assessment results and required skills for test administrators.

LIST OF ACRONYMS

ATS – Agile Technology Solutions
AA-AAS – Alternate Assessment based on Alternate Achievement Standards
AAC – Augmentative and Alternative Communication
BVI – Blind or visual impairment
CETE – Center for Educational Testing and Evaluation
CA –Conceptual Area
CCCs – Crosscutting concepts
DCM – Diagnostic Classification Model
DCI – Disciplinary core ideas
DLM – Dynamic Learning Maps Alternate Assessment System
ESS – Earth and space science
EP – Educator Portal
EOI – End-of-Instruction
ESOL - English for Speakers of Other Languages
ELA – English Language Arts
ELL – English language learner
EE – Essential Element
EECM – Essential Element Concept Map
ECD – Evidence-centered design
FC – First Contact survey
FERPA – Family Educational Rights and Privacy Act
HS – High school
IEP – Individualized Education Program
KITE – Kansas Interactive Testing Engine
LS – Life science
LL – Linkage level
MS – Middle school
NGSS – Next Generation Science Standards
PAS – Partner-assisted scanning
PLD – Performance level descriptor
PII – Personally-identifiable information
PNP – Personal Needs and Preferences Profile
PS – Physical science
SEP – Science and Engineering Practices
SEA – State education agency
SFTP – Secure file transfer protocol
SCD – Students with the most significant cognitive disabilities

TAC – Technical Advisory Committee
TDE – Test Delivery Engine
TIP – Testlet Information Page
TTS – Text-to-speech
UDL – Universal design for learning

Draft #1 Review Panel

Expert Review Panel for Draft 1 of the Essential Elements

Panelist	Institution	Areas of Expertise
Claire Greer	University of North Carolina at Chapel Hill	Special education
Karen Erickson	University of North Carolina at Chapel Hill	Special education
Patricia Bricker	Western Carolina University	Science; elementary education
Eddie Case	Wingate University	Science; high school and middle school education
Shaun Bates	Missouri Department of Elementary and Secondary Education	Assessment
Matt Krehbiel	Kansas State Department of Education	Science
Russell Swinburne Romine	Dynamic Learning Maps	English Language Arts
Allison Lawrence	Dynamic Learning Maps	Mathematics

Table 8

Average Agreement Rate Results (Middle School Level)

Essential Element Code	The EE reflects a high but reasonable expectation for a SWSCD at this grade level.	The EE is important for learning what the student will need in post-secondary life.	The EE is relevant to current science instruction in the classroom.	Average Agreement Rate
EE.MS.PS.2.2	0.86	0.29	0.43	0.52
EE.MS.PS.3.3	0.57	0.71	0.71	0.67
EE.MS.PS.1.2	0.29	0.14	0.43	0.29
EE.MS.PS.4.2	0.14	0.00	0.43	0.19
EE.MS.LS.1.3	0.71	0.71	0.71	0.71
EE.MS.LS.1.5	0.71	0.29	0.71	0.57
EE.MS.LS.2.2	0.71	0.14	0.57	0.48
EE.MS.LS.3.2	0.43	0.57	0.43	0.48
EE.MS.ESS.3.3	0.86	0.86	1.00	0.90
EE.MS.ESS.2.6	0.71	0.86	0.86	0.81
EE.MS.ESS.2.2	0.86	0.57	0.71	0.71
EE.MS.ESS.3.1	0.57	0.43	0.71	0.57
EE.MS.ESS.1.1	0.71	0.71	0.71	0.71
EE.MS.ESS.2.1	0.43	0.00	0.43	0.29

EE = Essential Element, SWSCD = student with significant cognitive disabilities, MS = middle school, PS = physical science, LS = life science, ESS = Earth and space science.

Table 9

Overall Average Rating Results (Middle School Level)

Essential Element Code	The EE reflects a high but reasonable expectation for a SWSCD at this grade level.	The EE is important for learning what the student will need in post-secondary life.	The EE is relevant to current science instruction in the classroom.	Overall Average Rating
EE.MS.PS.2.2	3.86	3.29	3.43	3.52
EE.MS.PS.3.3	3.29	3.43	3.14	3.29
EE.MS.PS.1.2	3.00	2.86	3.14	3.00
EE.MS.PS.4.2	3.00	2.71	3.29	3.00
EE.MS.LS.1.3	3.71	3.71	3.71	3.71
EE.MS.LS.1.5	3.71	3.17	3.57	3.48
EE.MS.LS.2.2	3.57	3.00	3.43	3.33
EE.MS.LS.3.2	3.29	3.43	3.29	3.33
EE.MS.ESS.3.3	3.86	3.86	4.00	3.90
EE.MS.ESS.2.6	3.71	3.86	3.86	3.81
EE.MS.ESS.2.2	3.86	3.43	3.71	3.67
EE.MS.ESS.3.1	3.57	3.43	3.71	3.57
EE.MS.ESS.1.1	3.57	3.43	3.29	3.43
EE.MS.ESS.2.1	2.86	2.14	2.71	2.57

EE = Essential Element, SWSCD = student with significant cognitive disabilities, MS = middle school, PS = physical science, LS = life science, ESS = Earth and space science.

Table 10

Average Agreement Rate Results (High School Level)

Essential Element Code	The EE reflects a high but reasonable expectation for a SWSCD at this grade level.	The EE is important for learning what the student will need in post-secondary life.	The EE is relevant to current science instruction in the classroom.	Average Agreement Rate
EE.HS.PS.2.3	0.56	0.56	0.67	0.59
EE.HS.PS.1.2	0.56	0.22	0.44	0.41
EE.HS.PS.3.4	0.44	0.11	0.44	0.33
EE.HS.PS.4.5	0.11	0.00	0.44	0.19
EE.HS.LS.1.2	0.67	0.56	0.67	0.63
EE.HS.LS.1.4	0.56	0.33	0.44	0.44
EE.HS.LS.2.2	0.78	0.56	0.56	0.63
EE.HS.LS.3.2	0.56	0.44	0.33	0.44
EE.HS.LS.4.2	0.56	0.56	0.44	0.52
EE.HS.ESS.1.4	0.78	0.44	0.78	0.67
EE.HS.ESS.2.1	0.56	0.33	0.56	0.48
EE.HS.ESS.2.4	0.56	0.44	0.56	0.52
EE.HS.ESS.3.1	0.44	0.44	0.56	0.48
EE.HS.ESS.3.2	0.67	0.67	0.67	0.67
EE.HS.ESS.3.3	0.78	0.56	0.56	0.63

EE = Essential Element, SWSCD = student with significant cognitive disabilities, HS = high school, PS = physical science, LS = life science, ESS = Earth and space science.

Table 11

Overall Average Rating Results (High School Level)

Essential Element Code	The EE reflects a high but reasonable expectation for a SWSCD at this grade level.	The EE is important for learning what the student will need in post-secondary life.	The EE is relevant to current science instruction in the classroom.	Overall Average Rating
EE.HS.PS.2.3	3.57	3.57	3.71	3.62
EE.HS.PS.1.2	3.71	2.86	3.43	3.33
EE.HS.PS.3.4	3.43	2.43	3.43	3.10
EE.HS.PS.4.5	2.71	2.14	3.14	2.67
EE.HS.LS.1.2	3.86	3.43	3.86	3.71
EE.HS.LS.1.4	3.71	2.86	3.29	3.29
EE.HS.LS.2.2	4.00	3.43	3.57	3.67
EE.HS.LS.3.2	3.57	3.00	3.00	3.19
EE.HS.LS.4.2	3.71	3.43	3.57	3.57
EE.HS.ESS.1.4	4.00	3.29	4.00	3.76
EE.HS.ESS.2.1	3.57	3.14	3.57	3.43
EE.HS.ESS.2.4	3.57	2.86	3.43	3.29
EE.HS.ESS.3.1	3.57	3.29	3.57	3.48
EE.HS.ESS.3.2	3.86	3.57	3.86	3.76
EE.HS.ESS.3.3	4.00	3.43	3.57	3.67

EE = Essential Element, SWSCD = student with significant cognitive disabilities, HS = high school, PS = physical science, LS = life science, ESS = Earth and space science.

This document shows how the science and engineering practices (adapted from the *Next Generation Science Standards;* Achieve, 2013) may be used in the DLM Science Alternate Assessment.

Seven science and engineering practices are currently used in the DLM Science Essential Elements (the practice of asking questions and defining problems may be added later):

- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations and designing solutions
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

These practices are embedded in the DLM Science Essential Elements. This document provides guidance as to how these practices might be articulated across grade levels from Elementary to High School. It is adapted from the NGSS Appendix H.

DYNAMIC LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	Grade Level		
	EL	MS	HS
Developing and using models	Models include: physical replicas, drawings, diagrams, storyboards, dramatizations, or dioramas.	In addition to EL, models include: simple physical prototypes of proposed objects, tools, or processes.	In addition to MS, models include: representations of more abstract phenomena and design systems or unobservable mechanisms, including mathematical or computational models.
	Models can be used to: represent concrete events or processes; represent amounts, relationships, relative scales (bigger/smaller) or patterns.	Models can be used to: describe a scientific principle or design solution; predict phenomena; test cause and effect relationships.	Models can be used to: describe unobservable mechanisms; represent inputs and outputs; illustrate the relationships between systems or components of a system.
	Students can be asked to: distinguish between models and the actual objects, process, or events that the model represents; compare models to identify common features and differences; use models to describe phenomena.	Students can be asked to: develop a model of simple systems; revise a model based on evidence; design solutions; identify limitations of models.	Students can be asked to: select between models that best fit the evidence or design criteria; modify a model to match what happens if a variable or component of a system is changed; predict more abstract phenomena

DYNAMIC® LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	Grade Level		
	EL	MS	HS
Planning and carrying out investigations	Components of investigations include: carrying out investigations including making observations/measurements and collecting data; identifying results.	In addition to EL, components of investigations include: identifying goal of investigation; planning; controlling variables; producing data; predicting outcomes.	In addition to MS, components of investigations include: identifying independent and dependent variables; evaluating data collection methods.
	Investigations can be used to: answer questions; test solutions.	Investigations can be used to: support an explanation or design solution; test a model or a design; compare two different models.	Investigations can be used to: answer scientific questions; provide evidence to support claims; evaluate the performance of a proposed object, tool, or process.
	Students can be asked to: with guidance, conduct simple investigations; identify data that answers a question; make predictions based on prior experiences.	Students can be asked to: evaluate appropriate methods and/or tools for collecting data; plan and conduct an investigation using fair tests; identify and produce data that will serve as the basis for evidence.	Students can be asked to: produce data that provides evidence needed to answer a scientific question or test a design solution; select appropriate tools to collect, record, analyze, and evaluate data; evaluate accuracy of data collection methods; revise an experimental design.

DYNAMIC® LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	Grade Level		
	EL	MS	HS
Analyzing and interpreting data	Data include: observations (pictures, drawings, writing); thought; ideas.	In addition to EL, data include: tables; graphical displays (bar or line graphs, pictographs, pie charts).	In addition to MS, data include: graphical displays of data sets (maps, charts, graphs).
	Analysis can be used to: describe patterns and relationships; compare predictions; determine if an object or tool works.	Analysis can be used to: reveal patterns that indicate relationships; make sense of phenomena; discuss similarities and differences in findings; refine a problem statement.	Analysis can be used to: identify linear and non-linear relationships; identify temporal and spatial relationships; provide evidence for phenomena.
	Students can be asked to: record information; use and share observations; answer questions; solve problems.	Students can be asked to: conduct multiple trials of qualitative observations; represent, analyze, and interpret data; use data to evaluate and refine design solutions.	Students can be asked to: distinguish between correlation and causation; apply concepts of statistics and probability; evaluate the impact of new data on a working explanation and/or model of a proposed process or system.

DYNAMIC LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	Grade Level		
	EL	**MS**	**HS**
Using mathematics and computational thinking	Computations include: counting, measuring.	Computations include: area, volume, weight, time.	Computations include: algorithms, ratio, rate, percent, basic operations, simple algebra.
	Mathematical thinking can be used to: describe the natural and designed worlds; compare quantitative attributes; identify patterns.	Mathematical thinking can be used to: organize data; represent relationships; compare design solutions.	Mathematical thinking can be used to: describe and/or support scientific conclusions; solve a problem; test and compare solutions.
	Students can be asked to: use mathematics to represent physical variables; use tools to measure and record data; display data in simple graphs.	Students can be asked to: use computation to analyze data; decide if qualitative or quantitative data are the best evidence; organize simple data sets; describe, measure, estimate, and/or graph quantities; create and use charts and graphs.	Students can be asked to: use mathematics to support explanations and arguments; analyze data sets for patterns or trends; use mathematical representations to solve a problem; test and compare proposed solutions.

DYNAMIC LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	**Grade Level**		
	EL	**MS**	**HS**
Constructing explanations and designing solutions	Constructing explanations and designing solutions include: using evidence-based accounts of natural phenomena; using tools and/or materials to design or build a device.	In addition to EL, constructing explanations and designing solutions include: specifying variables that describe and predict phenomena; designing multiple solutions to a design problem.	In addition to MS, constructing explanations and designing solutions include: describing qualitative or quantitative relationships between variables; using models or representations.
	Explanations and design solutions can be used to: explain causes of phenomena; build a device that solves a specific problem.	Explanations and design solutions can be used to: support a claim; identify evidence that supports particular points in an explanation; solve design problems.	Explanations and design solutions can be used to: make claims regarding the relationship of independent and dependent variables; test a design of an object, tool, process, or system; optimize performance of a design.
	Students can be asked to: identify evidence that accounts for natural phenomena; compare multiple solutions to a problem.	Students can be asked to: specify variables that describe the causes of and predict natural phenomena; show relationships between variables; test and refine a device; generate solutions to a design problem.	Students can be asked to: use multiple sources of evidence to construct explanations or design solutions; use qualitative or quantitative relationships between variables; use models or representations; define a problem and propose solutions.

DYNAMIC LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	Grade Level		
	EL	**MS**	**HS**
Engaging in argument from evidence	Arguments include: comparing ideas and representations about the natural and designed worlds.	In addition to EL, arguments include: citing relevant evidence about the natural and designed worlds.	In addition to MS, arguments include: constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed worlds.
	Arguments can be used to: support a claim; make a claim about the effectiveness of an object, tool, or solution.	Arguments can be used to: distinguish among facts and speculation in an explanation; make a claim about the merits of a solution to a problem.	Arguments can be used to: support or refute an explanation or a model for a phenomenon or a solution to a problem; evaluate competing design solutions.
	Students can be asked to: identify arguments that are supported by evidence; distinguish between explanations that account for all gathered evidence and those that do not; distinguish between opinions and evidence in one's own explanations; listen actively to arguments and retell the main points of arguments.	Students can be asked to: compare and refine arguments based on an evaluation of the evidence; use data to evaluate claims about cause and effect; support an argument with evidence, data, or a model.	Students can be asked to: compare two arguments on the same topic; present a written argument; evaluate design solutions based on criteria.

DYNAMIC® LEARNING MAPS

Adapted Science and Engineering Practices 6/29/16

Science/Engineering Practice	Grade Level		
	EL	**MS**	**HS**
Obtaining, evaluating, and communicating information	Information includes: observations and grade-appropriate text, text features; and other media; models, drawings, writing, or numbers.	In addition to EL, information includes: multiple sources: text with corresponding tables, diagrams and/or charts; multiple texts; texts and other media.	In addition to MS, information includes: scientific text adapted for classroom use; qualitative and quantitative scientific and/or technical information.
	Information can be used to: communicate new information; answer scientific questions; support a scientific claim.	Information can be used to: evaluate the merit and accuracy of ideas and methods; support engagement in other scientific and/or engineering practices; explain phenomena or solutions to a design problem.	Information can be used to: evaluate the merit and validity of ideas and methods; clarify claims and findings; describe patterns in and/or evidence about the natural and designed worlds.
	Students can be asked to: read grade-appropriate texts and/or use media to obtain information; describe how specific images support a scientific or engineering idea; use text features (headings, tables of contents, glossaries, electronic menus, icons) to answer scientific questions; communicate design ideas and/or solutions with others.	Students can be asked to: obtain and summarize scientific and technical ideas; compare and/or combine information from multiple sources; communicate scientific and/or technical information using various forms of media as well as tables, diagrams, and charts.	Students can be asked to: determine central ideas in scientific texts; integrate qualitative and quantitative information; gather, read, and synthesize information from multiple sources; evaluate data, hypotheses and/or conclusions in scientific and technical texts; communicate scientific and/or technical information.

List of All Materials Used by Item Writers for Science in January and July of 2015

S:\DLM\Science\Content Development**IWW January 2015**\Materials\IW Jump Drives**Resources**

1. Item Writing Handbook Science January 2015
2. Science Testlet Template Tutorial for Initial
3. Science Testlet Template Tutorial for Target & Precursor
4. Science Item Prototypes
5. Engagement Activity Revision Instructions
6. DLM Graph Templates
7. Online Training Modules

S:\DLM\Science\Content Development**IWW January 2015**\Materials\IW Jump Drives**Review Checklists**

1. Final Review Checklist before Editing
2. Science Peer Review Checklist

S:\DLM\Science\Content Development**IWW July 2015**\Item Writer Flash Drive**Resources**

1. Day 1 July Item Writing Training
2. DLM Graph Templates
3. K-12 Framework for Science Education
4. Science and Engineering Practices in Science Testlets

S:\DLM\Science\Content Development**IWW July 2015**\Item Writer Flash Drive\Resources\Training Powerpoints**Online Training**

1. DLM Science Recap and Overview Part 1
2. DL Science Recap and Overview Part 2
3. Science and Engineering Practices
4. Science story

S:\DLM\Science\Content Development**IWW July 2015**\Item Writer Flash Drive\Resources**Testlet Template Tutorials**

1. Science Testlet Template Tutorial for Initial
2. Science Testlet Template Tutorial for Target & Precursor

S:\DLM\Science\Content Development**IWW July 2015**\Item Writer Flash Drive\Resources**Item Writing Handbook**

1. DLM Core Vocabulary
2. DLM Name List
3. DOK Examples
4. Item Writing Handbook Science
5. Science Naming Conventions

S:\DLM\Science\Content Development\IWW July 2015\Item Writer Flash Drive\Resources**Images**

1. Science Images

S:\DLM\Science\Content Development\IWW July 2015**Handouts to Print**

1. End of Day Exit Ticket
2. Initial Testlet Template Checklist Streamlined
3. Item Writing Summer Agenda Day 1
4. Precursor & Target Template Checklist
5. Science Peer Review Checklist
6. Science Practices Handout
7. EL EECMs
8. MS EECMs
9. HS EECMs

DYNAMIC LEARNING MAPS

Test Security and Confidentiality Statement

Item writers for the Dynamic Learning Maps (DLM) Alternate Assessment are employees of the Center for Educational Testing and Evaluation (CETE) at the University of Kansas. Item writers are hired to develop assessment items that are part of a secure test system. DLM employees are expected to follow standard procedures for keeping test materials secure and maintaining confidentiality about item writing processes and products. In particular, the following standards should be followed:

1. Test materials may **not** be removed from the test development location (University of Kansas, Joseph R. Pearson Hall) at any time. Test materials may **not** be duplicated or reproduced in any way without prior consent from the Associate Director.
2. Electronic copies of test items, testlets, or testing material are not to be stored or saved on your personal computers or personal storage devices. All testing materials shall be developed on USB drives provided by the DLM project and transferred to DLM lead staff to be stored securely. The DLM USB drive may **not** be removed from the test development location at any time.
3. Electronic copies of items, testlets, or other testing material are not to be shared via email or other unsecure file sharing system, such as video capture, photograph, instant message, Dropbox, GoogleDocs, Skype, or chat tools.
4. Discussions of matters related to test materials should **not** take place in any public place, such as halls, restrooms, reception areas, etc.
5. Any unneeded notes, forms or drafts that bear test information should be turned in to DLM lead staff for shredding.
6. Computer passwords and log-in information are not to be shared with anyone except as requested by a supervisor, DLM Associate Director, or an information services professional in order to resolve a technology problem.
7. Staff must report loss of a password, or any actual or attempted unauthorized access, use or disclosure of confidential data to the Associate Director and to other University personnel or officials as required by the policies or procedures of the University.
8. Any violation of these policies and procedures may result in disciplinary action, including but not limited to, privilege revocation and/or suspension or termination.
9. The obligations under this agreement will continue after the staff member has terminated his/her relationship with the University. Upon termination staff will immediately return any documents or media containing confidential or secure information to DLM.
10. Questions about activities that may be permissible under this agreement should be directed to the Associate Director.

______________________	Item Writer
Name (print)	Position at CETE
______________________	______________________
Signature	Date

EE.5.ESS1-2

Essential Element Concept Map (EECM)

Domain: Earth and Space Science
Core Idea: ESS1; Earth's Place in Universe
Topic: ESS1.B; Earth and the Solar System
Science and Engineering Practices: Analyzing and Interpreting Data
Crosscutting Concepts: Patterns
Essential Element: SCI.EE.5.ESS1-2; Represent and interpret data on a picture, line, or bar graph to show seasonal patterns in day length.

Essential Questions for Concept
- Does the student understand sunrise and sunset?
- Does the student understand that daylight hours change across seasons?

Accessibility Considerations for Science Practice
- Data may be presented in graphical and/or tactile representations or by using objects for key visuals that represent concepts
- Provide brief verbal description of visual phenomena, results or patterns in the data.

Vocabulary	(I) Initial Level	(P) Precursor Level	(T) Target Level
Concepts	Timing of sunrise and sunset	Changes in day length over time	Interpreting patterns of change in the length of day
Words	sunrise, sunset	day length, daylight	seasons

(I) Initial Level Name	Level Description	Testlet Access	# Items
EE.5.ESS1-2.I	Order events in daily routine including sunrise and sunset.	☐ Blind/VI (B) ☐ Mobility (M) ☐ Deaf/HI (D)	3-4 ☒ TO

(I) Questions to Ask
- Can the student order events that occur in a day?

(I) Misconceptions
- The student does not recognize sunrise as happening at the beginning of the day and sunset at the end of the day.
- The student orders daily events but puts sunrise and sunset in incorrect places in the day.

EE.5.ESS1-2

Essential Element Concept Map (EECM)

(P) Precursor Level Name	Level Description	Testlet Access	# Items
EE.5.ESS1-2.P	Recognize patterns about length of daylight hours over time (e.g., week to week, month to month).	☐ Blind/VI (B) ☐ Mobility (M) ☐ Deaf/HI (D)	3-4 ☐ TO

(P) Questions to Ask

- Can the student identify patterns (goes up, goes down) in data presented of daylight hours over a period of months?

(P) Misconceptions

- The student does not recognize patterns in a data table.
- The student cannot derive meaning from trends in a data table.

(T) Target Level Name	Level Description	Testlet Access	# Items
EE.5.ESS1-2.T	Represent and interpret data on a picture, line, or bar graph to show seasonal patterns in the length of daylight hours.	☐ Blind/VI (B) ☐ Mobility (M) ☐ Deaf/HI (D)	3-4 ☐ TO

(T) Questions to Ask

- Does the student recognize patterns of change in day length from season to season?
- Is the student able to represent data from a table on a bar graph?
- Is the student able to read a bar graph to identify patterns?
- Is the student able to correctly interpret seasonal patterns?

(T) Misconceptions

- The student connects the sequence of seasons with incorrect patterns of day length.
- The student represents the data on the x and y axes incorrectly.
- The student does not correctly connect the information on the x axis with the information on the y axis.

[State]

Wednesday, June 01, 2016 8:34 AM

YE Model – Testing HS Grades 9, 10, 11

Spring 2016 testing window
4/04-6/03

PII Information by E-mail

[State] allows a district to send the State Student Identifier in an email but as long as no other PII information is included. Phone call is fine as well.

Out-of-State Enrollments

[State] does not have out-of-state enrollments

Test Reset Policy

States would consider these situations as test security violations and would require the districts to complete a violation form describing the situation and extent of the violation. States make decisions on a case by case basis. The form is found at http://kan.sas.co

Special Circumstances Codes

Code	State's Definition
Medical Waiver	A significant medical emergency is a significant health impairment that renders the student incapable of participating in any academic activities, including state assessments, for the entire testing window. The student counts as not-tested for accountability purposes.
Parent Refusal	A parent must submit a written request for student opt-out to the principal or the school board. When a parent or guardian requests that the student be excused from participation, this request must be honored. This request may come at any time during the testing window. All students excused by parent opt-out are marked as "not tested" students in school and district reporting determinations.
Other Reason For Nonparticipation	English learners (ELs) with limited English proficiency who are new to country (less than 12 calendar months) are permitted a 1-time exemption to the ELA portion (only) of the DLM. Students in district for less than a full academic year (FAY) are counted for test participation only. ELs are required to still take the math and science portion of the DLM.
Other	Invalidation

DLM APPENDIX

FIRST CONTACT SURVEY (ALL QUESTIONS)

Hint: The First Contact survey has changed for 2015-16.

The questions asked in the First Contact survey are included here. The First Contact survey is completed in Educator Portal.

First Contact Survey

*The item only appears when a certain choice is selected from a previous question.

Special Education Services
Select the student's Primary Disability

- Autism
- Deaf-blindness
- Deafness
- Developmental delay
- Emotional disturbance
- Hearing impairment
- Intellectual disability
- Multiple disabilities
- Orthopedic impairment
- Other health impairment
- Specific learning disability
- Speech or language impairment
- Traumatic brain injury
- Visual impairment, including blindness
- Non-categorical/Eligible Individual

Educational Placement**:** Choose the option that best describes the student's educational placement. "Regular Class" means a typical classroom, not a resource room or separate class.

- 80% or more of the day in Regular Class
- 40%–79% of the day in Regular Class
- Less than 40% of the day in Regular Class

- Separate School: includes public or private separate day school for students with disabilities, at public school expense
- Residential Facility: includes public or private separate residential school for students with disabilities, at public school expense
- Homebound/Hospital Environment: includes students placed in and receiving special education in a hospital or homebound program

Hearing

Hearing *

- No hearing loss suspected/documented
- Questionable hearing but testing inconclusive
- Deaf or hard of hearing

Classification of Hearing Impairment

- Mild (26–40 dB loss)
- Moderate (41–55 dB loss)
- Moderately Severe (56–70 dB loss)
- Severe (71–90 dB loss) 5. Profound (91+ dB loss)
- Unknown

Hearing: Mark all that apply–

- Uses personal or classroom amplification (e.g., personal FM device)
- Uses unilateral hearing aid
- Uses bilateral hearing aid
- Has cochlear implant
- Uses oral language
- Uses sign language

Vision

Vision *

- No vision loss suspected or documented
- Normal vision with glasses or contact lenses
- Questionable vision but testing inconclusive
- Blind or low vision, including vision that is not completely corrected with glasses or contact lenses

Classification of Visual Impairment (select all that apply)

- Low Vision (acuity of 20/70 to 20/200 in the better eye with correction.)

- Legally Blind (acuity of 20/200 or less or field loss to 20 degrees or less in the better eye with correction.)
- Light Perception Only
- Totally Blind
- Cortical Visual Impairment

Vision: Mark all that apply–
- Requires enlarged print
- Requires tactile media (objects, tactile graphics, and tactile symbols)
- Requires or uses braille
    - Uncontracted braille
    - Contracted braille
    - UEB

Technological Visual Aids: Mark all that apply–
- Screen magnification device (fits over standard monitor) or software (e.g., Closeview for Mac, ZoomText)
- CCTV
- Screen reader and/or talking word processor
- Manual (e.g., Perkins Brailler) or Electronic (e.g., Mountbatten Brailler) braille writing device
- Device with refreshable braille display

Arm/ Hand Control and Health

Arm and hand control: Mark all that apply–
- Uses two hands together to perform tasks
- Uses only one hand to perform tasks
- Requires physical assistance to perform tasks with hands
- Cannot use hands to complete tasks even with assistance

Does the student have any health issues (e.g., fragile medical condition, seizures, therapy or treatment that prevents the student from accessing instruction, medications, etc.) that interfere with instruction or assessment? *
- No
- Yes

Computer Use and Instruction

Computer Use: Select the student's primary use of a computer during instruction*
- Accesses a computer independently

- Accesses a computer independently given assistive technology
- Uses a computer with human support (with or without assistive technology)
- This student has not had the opportunity to access a computer
- This student cannot access a computer with human or assistive technology support

Why has this student not had the opportunity to access a computer during instruction? *

- Student's disability prevents the student from accessing a computer
- The equipment is unavailable
- Student refuses to try to use a computer
- I (or other educators) at this school have not had the opportunity to instruct the student on computer usage

Computer access during instruction: Mark all that apply–

- Standard computer keyboard
- Keyboard with large keys or alternative keyboard (e.g., Intellikeys)
- Touch screen (e.g., touch screen computer, tablet, iPad, iPod touch)
- Standard mouse or head mouse
- Eye gaze technology (e.g., Tobii, EyeGaze Edge)
- Scanning with switches (one or two-switch scanning)

Level of attention to computer-directed instruction *

- Generally sustains attention to computer-directed instruction
- Demonstrates fleeting attention to computer-directed instructional activities and requires repeated bids or prompts for attention
- Demonstrates little or no attention to computer-directed instructional activities

Level of attention to teacher-directed instruction *

- Generally sustains attention to teacher-directed instruction
- Demonstrates fleeting attention to teacher-directed instructional activities and requires repeated bids or prompts for attention
- Demonstrates little or no attention to teacher-directed instructional activities

Expressive Communication

Does the student use speech to meet expressive communication needs? *

- Yes
- No

Choose the highest statement that describes the student's expressive communication with speech *

- Regularly combines 3 or more spoken words according to grammatical rules to accomplish a variety of communicative purposes (e.g., sharing complex information, asking/answering longer questions, giving directions to another person)
- Usually uses 2 spoken words at a time to meet a variety of more complex communicative purposes (e.g., obtaining things including absent objects, social expressions beyond greetings, sharing information, directing another person's attention, asking/answering questions, and commenting)
- Usually uses only 1 spoken word at a time to meet a limited number of simple communicative purposes (e.g., refusing/rejecting things, making choices, requesting attention, greeting, and labeling)

Does the student use sign language in addition to or in place of speech to meet expressive communication needs? *
- Yes
- No

Choose the highest statement that describes the student's expressive communication with sign language *
- Regularly combines 3 or more signed words according to grammatical rules to accomplish a variety of communicative purposes (e.g., sharing complex information, asking/answering longer questions, giving directions to another person)
- Usually uses 2 signed words at a time to meet a variety of more complex communicative purposes (e.g., obtaining things including absent objects, social expressions beyond greetings, sharing information, directing another person's attention, asking/answering brief questions, and commenting)
- Usually uses only 1 signed word at a time to meet a limited number of simple communicative purposes (e.g., refusing/rejecting things, making choices, requesting attention, greeting, and labeling)

Select the student's primary sign system *
- American Sign Language (ASL)
- Signed Exact English (SEE)
- Hybrid or idiosyncratic/personalized signing system

Alternate Communication

Does the student use augmentative or alternative communication in addition to or in place of speech or sign language to meet expressive communication needs? *
- Yes
- No

Choose the highest statement that describes the student's expressive communication with augmentative or alternative communication *

- Regularly combines 3 or more symbols according to grammatical rules to accomplish the 4 major communicative purposes (e.g., expressing needs and wants, developing social closeness, exchanging information, and fulfilling social etiquette routines)
- Usually uses 2 symbols at a time to meet a variety of more complex communicative purposes (e.g., obtaining things including absent objects, social expressions beyond greetings, sharing information, directing another person's attention, asking/answering brief questions, commenting)
- Usually uses only 1 symbol to meet a limited number of simple communicative purposes (e.g., refusing/rejecting things, making choices, requesting attention, greeting)

Augmentative or Alternative Communication

How many symbols does the student choose from when communicating? (choose the highest that applies)

- 1 or 2 at a time
- 3 or 4 at a time
- 5 to 9 at a time
- 10 or more at a time

What types of symbols does the student use? (choose all that apply)

- Real objects
- Tactual symbols
- Photos
- Line drawing symbol sets (Boardmaker, PCS, Symbol Stix, other)
- Text Only

What voice output technology does the student use? (choose all that apply)

- Single message devices (e.g., BIGmac)
- Simple devices (e.g., GoTalk; QuickTalker; SuperTalker)
- Speech generating device (e.g., Tobii-DynaVox, PRC/PrentkeRomich)
- None

If the student does not use speech, sign language, or augmentative or alternative communication, which of the following statements best describes the student's expressive communication? Choose the highest statement that applies *

- Uses conventional gestures (e.g., waving, nodding and shaking head, thumbs up/down), looking, pointing, and/or vocalizations to communicate intentionally but

does not yet use symbols or sign language
- Uses only unconventional vocalizations (e.g., grunts), unconventional gestures (e.g., opening mouth wide to indicate hunger), and/or body movement to communicate intentionally
- Exhibits behaviors that may be reflexive and are not intentionally communicative but can be interpreted by others as communication (e.g., crying, laughing, reaching for an object, pushing an object away)

Receptive Communication

Receptive communication: MARK EACH ONE to show how consistently the student uses each skill. 1) 0%–20% of the time–Almost never, 2) 21%–50% of the time–Occasionally, 3) 51%–80% of the time–Frequently, 4) More than 80% of the time–Consistently

If the student previously demonstrated and no longer receives instruction, mark "More than 80%."

A. Can point to, look at, or touch things in the immediate vicinity when asked (e.g., pictures, objects, body parts)
B. Can perform simple actions, movements or activities when asked (e.g., comes to educator's location, gives an object to educator or peer, locates or retrieves an object)
C. Responds appropriately in any modality (sign, gestures, facial expressions) when offered a favored item that is not present or visible (e.g., "Do you want some ice cream?")
D. Responds appropriately in any modality (sign, gestures, facial expressions) to single words that are spoken or signed
E. Responds appropriately in any modality (sign, gestures, facial expressions) to phrases and sentences that are spoken or signed
F. Follows 2-step directions presented verbally or through sign (e.g., gets a worksheet or journal and begins to work, distributes items needed by peers for a lesson or activity, looks at requested or desired item and then looks at location where it should go)

Reading Skills

Reading skills: MARK EACH ONE to show how consistently the student uses each skill. 1) 0%–20% of the time–Almost never, 2) 21%–50% of the time–Occasionally, 3) 51%–80% of the time–Frequently, 4) More than 80% of the time–Consistently

If the student previously demonstrated and no longer receives instruction, mark "More than 80%."

A. Recognizes single symbols presented visually or tactually (e.g., letters, numerals, environmental signs such as restroom symbols, logos, trademarks, or business signs such as fast food restaurants)

B. Understands purpose of print or braille but not necessarily by manipulating a book (e.g., knows correct orientation, can find beginning of text, understands purpose of text in print or braille, enjoys being read to)
C. Matches sounds to symbols or signs to symbols (e.g., matches sounds to letters presented visually or tactually, matches spoken or signed words to written words)
D. Reads words, phrases, or sentences in print or braille when symbols are provided with the words
E. Identifies individual words without symbol support (e.g., recognizes words in print or braille; can choose correct word using eye gaze)
F. Reads text presented in print or braille without symbol support but WITHOUT comprehension
G. Reads text presented in print or braille without symbol support and WITH comprehension (e.g., locates answers in text, reads and answers questions, retells after reading, completes maze task)
H. Explains or elaborates on text read in print or braille

Student's approximate instructional level of reading text with comprehension (print or braille): Mark the highest one that applies *

- Above third grade level
- Above second grade level to third grade level
- Above first grade level to second grade level
- Primer to first grade level
- Reads only a few words or up to pre-primer level
- Does not read any words when presented in print or braille (not including environmental signs or logos)

Math Skills

Math skills: MARK EACH ONE to show how consistently the student uses each skill. 1) 0%–20% of the time–Almost never, 2) 21%–50% of the time–Occasionally, 3) 51%–80% of the time–Frequently, 4) More than 80% of the time–Consistently

If the student previously demonstrated and no longer receives instruction, mark "More than 80%."

A. Creates or matches patterns of objects or images
B. Identifies simple shapes in 2 or 3 dimensions (e.g., square, circle, triangle, cube, sphere)
C. Sorts objects by common properties (e.g., color, size, shape)
D. Counts more than two objects
E. Adds or subtracts by joining or separating groups of objects

F. Adds and/or subtracts using numerals
G. Forms groups of objects for multiplication or division
H. Multiplies and/or divides using numerals
I. Uses an abacus
J. Uses a calculator
K. Tells time using an analog or digital clock
L. Uses common measuring tools (e.g., ruler or measuring cup)
M. Uses a schedule, agenda, or calendar to identify or anticipate sequence of activities

Writing Skills

Indicate the highest level that describes the student's writing skills. Choose the highest level that the student has demonstrated even once during instruction, not the highest skill demonstrated consistently.

Writing includes any method the student uses to write using any writing tool that includes access to all 26 letters of the alphabet. Examples of these tools include paper and pencil, traditional keyboards, alternate keyboards and eye-gaze displays of letters.

A. Writes paragraph length text without copying using spelling (with or without word prediction)
B. Writes sentences or complete ideas without copying using spelling (with or without word prediction)
C. Writes words or simple phrases without copying using spelling (with or without word prediction)
D. Writes words using letters to accurately reflect some of the sounds
E. Writes using word banks or picture symbols
F. Writes by copying words or letters
G. Scribbles or randomly writes/selects letters or symbols

*The item only appears when a certain choice is selected from a previous question.

End of Survey

DYNAMIC® LEARNING MAPS

Sample TIP EL.ESS3-1 T

Testlet Information Page: SCI1234

Testlet Type: Computer-delivered

Number of Items: 3

Materials Needed: None

Materials Use: None

Suggested Substitute Materials: None

Accessibility supports NOT allowed:
Follow your state's guidance on the use of language translation.
Definitions (see "other comments")

Other comments: Test administrator should not define the following word(s) and concept(s): natural resources, effect of a conservation strategy on a natural resource.

DYNAMIC LEARNING MAPS

Sample TIP EL.ESS3-1 T

Science1234

Alternate Text for Testlet Images

This page is ONLY needed when administering the testlet to a student who receives the **human read aloud** support and who requires **verbal descriptions of images in addition to the text**.

Below is the text that a teacher will use to describe the images shown on each screen.

- If language is provided, read the description exactly as it appears on this document, after reading the text on the screen.
- "Do not describe" means do not describe the image at all. Doing so may cue the answer or alter the test.
- "N/A" means there is no image to describe or that there is no item.

Only read what is in bold font. Do not read the words that are not in bold (like "stem" or "option"). See the Test Administration Manual for more instructions on how to provide human read aloud support.

Engagement Activity 1: **boy putting plates on a table**
Engagement Activity 2: **N/A**
Engagement Activity 3: **N/A**
Engagement Activity 4: **N/A**
Engagement Activity 5: **N/A**
Engagement Activity 6: **N/A**

Item 1
Stem: **N/A**
Option 1: **N/A**
Option 2: **N/A**
Option 3: **N/A**
Option 4: **N/A**

Item 2
Stem: **N/A**
Option 1: **N/A**
Option 2: **N/A**
Option 3: **N/A**
Option 4: **N/A**

Item 3
Stem: **N/A**
Option 1: **N/A**
Option 2: **N/A**
Option 3: **N/A**
Option 4: **N/A**

Item 4
Stem: **N/A**
Option 1: **N/A**
Option 2: **N/A**
Option 3: **N/A**
Option 4: **N/A**

This is a secure testing document. Do not reproduce or redistribute. Shred after use.

DLM Test Administration Observation Research Protocol - Short Version

Purpose

The purpose of this protocol is to give observers a standardized way to describe the way a DLM testlet was administered. Observers complete one observation form per testlet administered. There are separate forms depending on whether the observer is recording information about a computer-delivered testlet or a teacher-administered testlet.

This protocol should only be used when observing the testing session for informational purposes. It should not be used when the primary purpose of the visit is to evaluate the teacher, monitor student performance, or coach the teacher.

General Instructions

Set-up

1. Remind the teacher that you are not there to evaluate their teaching or monitor student performance. You are there simply to observe what s/he normally does during DLM assessments. The purpose of what you are recording is to support documentation of the alternate assessment.
2. Ask the teacher to arrange the session as s/he typically would for that student.
3. Based on that arrangement, place yourself where you can unobtrusively observe – preferably outside the student's line of vision and where you can still see the screen (for computer-delivered assessments) or behind the teacher/student pair, facing the computer (for teacher-administered assessments).
4. If the student completes multiple testlets, **use separate observation forms for each testlet**.

During the session

1. When recording the identifying information at the beginning of each form, do NOT include information that could be used to identify the student by name. Use an identifier that helps you distinguish between multiple students observed (e.g., "green shirt", "girl with glasses").
2. Document your observations in each section as thoroughly as possible.
3. Avoid interrupting the testing process.

After the session

1. Confirm that you have completed all parts of the protocol.
2. Make sure narrative comments are clearly written.
3. Follow up with the teacher if any clarifications need to be made on the protocol.
4. Allow the teacher to ask any questions if they would like to.

Submitting the protocol after the session

1. Paper protocol forms may be scanned and submitted by email to dlm@ku.edu. Paper protocol forms may also be faxed to 785-864-3566, Attn: DLM Test Administration Observations.

DLM Test Administration Observation Protocol – Short Version
Computer-Administered Testlets

State: ________ School: ________________________________ Student: _______________

Observation date: __________________ Observer: _________________________________

Test subject: ELA Math Science Grade: _______

Testlet Identifier (last 4 digits of the form name seen in KITE):_______________

---

1. Preparation/Set Up

a. Location
- ❒ Student's typical classroom
- ❒ Computer lab
- ❒ Small room for individual testing
- ❒ Other (describe): ______________________

b. Testing conditions (select all that apply)
- ❒ Other students were present but **could not** see the student's test
- ❒ Other students were present and **could** see the student's test
- ❒ The TA was the student's teacher or other familiar educator
- ❒ The TA administered tests to multiple students simultaneously
- ❒ Other adults were present

c. Testing device:
- ❒ Desktop computer
- ❒ Laptop computer
- ❒ iPad
- ❒ Interactive whiteboard/projector
- ❒ Chromebook
- ❒ Other: ________________________________

2. Administration

a. Test administrator behaviors (Mark YES or NO for each.):

YES	NO	The test administrator…
		navigated one or more screens for the student
		repeated question(s) before student responded
		repeated question(s) after student responded (gave a second trial at the same item)
		reduced the number of choices available to the student
		used verbal prompts to direct the student's attention What did the TA say?
		used physical prompts
		clarified directions
		defined vocabulary used in the testlet
		interpreted data table or graph for the student
		asked the student to clarify one or more responses What did the TA say?
		entered one or more responses for the student → If YES, complete questions b and c below. → If NO, skip to question d.

b. Did the response recorded by the TA match the student's answer?
- ❒ Yes
- ❒ No
- ❒ Could not tell

c. What condition(s) led to the teacher's response entry on the student's behalf?___________________

____

d. Student behaviors (Select all that apply):
- ❒ navigated the screens independently
- ❒ navigated the screens with verbal prompts
- ❒ selected answers independently
- ❒ selected answers after verbal prompts
- ❒ indicated answers using sign language
- ❒ Indicated answers using eye gaze
- ❒ Indicated answers using materials outside of KITE (e.g., communication board)
- ❒ skipped one or more items
- ❒ revisited a question after answering it
- ❒ asked the TA a question. Record question here:__________________________

  ____
- ❒ used graphic organizer
- ❒ used manipulatives (other than the ones required for the testlet)

f. Technical problems with the KITE system (select all that apply)
- ❒ Login/authentication problem
- ❒ Test not available
- ❒ System logged student out before test was completed
- ❒ Navigation did not work as intended
- ❒ Item did not display fully
- ❒ Scrolling/magnification – could not select intended answer
- ❒ Read aloud problem (e.g., distorted sound, highlighting did not work properly)
- ❒ Other: ____

g. Did the student complete the testlet? YES NO

If no, why was testlet not completed?____

____

3. Accessibility

a. Accessibility features used for *part or all* of the testlet. (Mark YES or NO for each.)

YES	NO	Feature
		Magnification (2x, 3x, 4x, 5x)
		Invert Color Choice (black background, white font)
		Color Contrast (white or black background and color font)
		Color Overlay (background different color)
		Synthetic Read Aloud (text to speech)
		Human Read Aloud
		Single switch
		Two switch system
		Adaptive equipment (keyboard, mouse, touchpad, slant board, etc.)
		Individualized manipulatives (unit cubes, counters, etc.)
		Partner Assisted Scanning (TA assists students with scanning answer choices)

b. Did the student have difficulty with accessibility? YES NO

Describe the problem and what the test administrator did.________________________________

____

c. Indicate any other device(s) the student used:

- ❒ Alternate keyboard
- ❒ Teacher-made symbols/pictures
- ❒ Low-tech communication boards
- ❒ Eye gaze technology
- ❒ Sip and puff technology
- ❒ Voice recognition software
- ❒ Voice output device
- ❒ Light box
- ❒ Computer screen magnifier
- ❒ Joystick (operates like a mouse)
- ❒ Head mouse
- ❒ Other: ___________________________

4. Observer Evaluation

a. Rate the student's overall engagement during the session: Low Medium High

b. Other observer comments:

DLM Test Administration Observation Protocol – Short Version
Teacher-Administered Testlets

State: ________ School: ________________________________ Student: _______________

Observation date: __________________ Observer: _________________________________

Test subject: ELA Math Science Grade: _______

Testlet Identifier (last 4 digits of the form name seen in KITE):_______________

---

1. Preparation/Set Up

a. Location

- ❒ Student's typical classroom
- ❒ Computer lab
- ❒ Small room for individual testing
- ❒ Other (describe): ______________________

b. Testing conditions (select all that apply)

- ❒ Other students were present but **could not** see the student's test
- ❒ Other students were present and **could** see the student's test
- ❒ The TA was the student's teacher or other familiar educator
- ❒ The TA administered tests to multiple students simultaneously
- ❒ Other adults were present

c. Testing device:

- ❒ Desktop computer
- ❒ Laptop computer
- ❒ iPad

d. Preparation/Set Up (Mark YES or NO for each.)

YES	NO	The test administrator…
		referred to the Testlet Information Page before beginning to assess the student
		had materials prepared before starting to assess with the student
		arranged student/materials for optimal test administration
		substituted materials List materials used:

2. Administration

a. Student's response mode(s): Verbal Gesture Eye gaze Other: ________________

b. Test administrator behaviors (Mark YES or NO for each.)

YES	NO	The test administrator…
		navigated the system without problems
		repeated question(s) before student responded
		repeated question(s) after student responded (gave a second trial at the same item)
		reduced the number of choices available to the student
		interpreted the student's responses and recorded a response that matched the student's behavior
		used verbal prompts to direct the student's attention
		used physical prompts or hand over hand guidance to assist the student in answering an item

c. *For ELA testlets only*: Test administrator behaviors (Mark YES or NO for each.)

YES	NO	The test administrator…
		encouraged engagement and interaction
		connected words/pictures to student background knowledge and experience
		labeled/pointed out pictures
		modeled concepts about print (reading left-to-right, one-to-one correspondence between a spoken and written word)
		pointed out rhymes, syllables and sounds in words
		modeled how to communicate using students' communication symbols
		incorporated objects to help make connections

d. *For science testlets only*: Test administrator behaviors (Mark YES or NO for each.)

YES	NO	The test administrator…
		used picture cards if they were available for the testlet
		discussed/defined science vocabulary
		connected words/pictures to student background knowledge and experience
		incorporated objects to help make connections

e. *For math testlets only*: Test administrator behaviors (Mark YES or NO for each.)

YES	NO	The test administrator…
		discussed/defined math vocabulary
		connected words/pictures to student background knowledge and experience
		incorporated objects to help make connections

f. Technical problems with the KITE system (select all that apply)

- ❒ Login/authentication problem
- ❒ Test not available
- ❒ System logged student out before test was completed
- ❒ Navigation did not work as intended
- ❒ Item did not display fully
- ❒ Scrolling/magnification – could not select intended answer
- ❒ Read aloud problem (e.g., distorted sound, highlighting did not work properly)
- ❒ Other: ____

g. Did the student complete the testlet? YES NO

If not, why not?

3. Accessibility

a. Accessibility features used for *part or all* of the testlet. (Mark YES or NO for each.)

YES	NO	Feature
		Magnification (2x, 3x, 4x, 5x)
		Invert Color Choice (black background, white font)
		Color Contrast (white or black background and color font)
		Color Overlay (background different color)
		Synthetic Read Aloud (text to speech)
		Human Read Aloud
		Single switch
		Two switch system
		Adaptive equipment (keyboard, mouse, touchpad, slant board, etc.)
		Individualized manipulatives (unit cubes, counters, etc.)
		Partner Assisted Scanning (TA assists students with scanning answer choices)

b. Did the student have difficulty with accessibility? YES NO

Describe the problem and what the test administrator did.________________________________

____

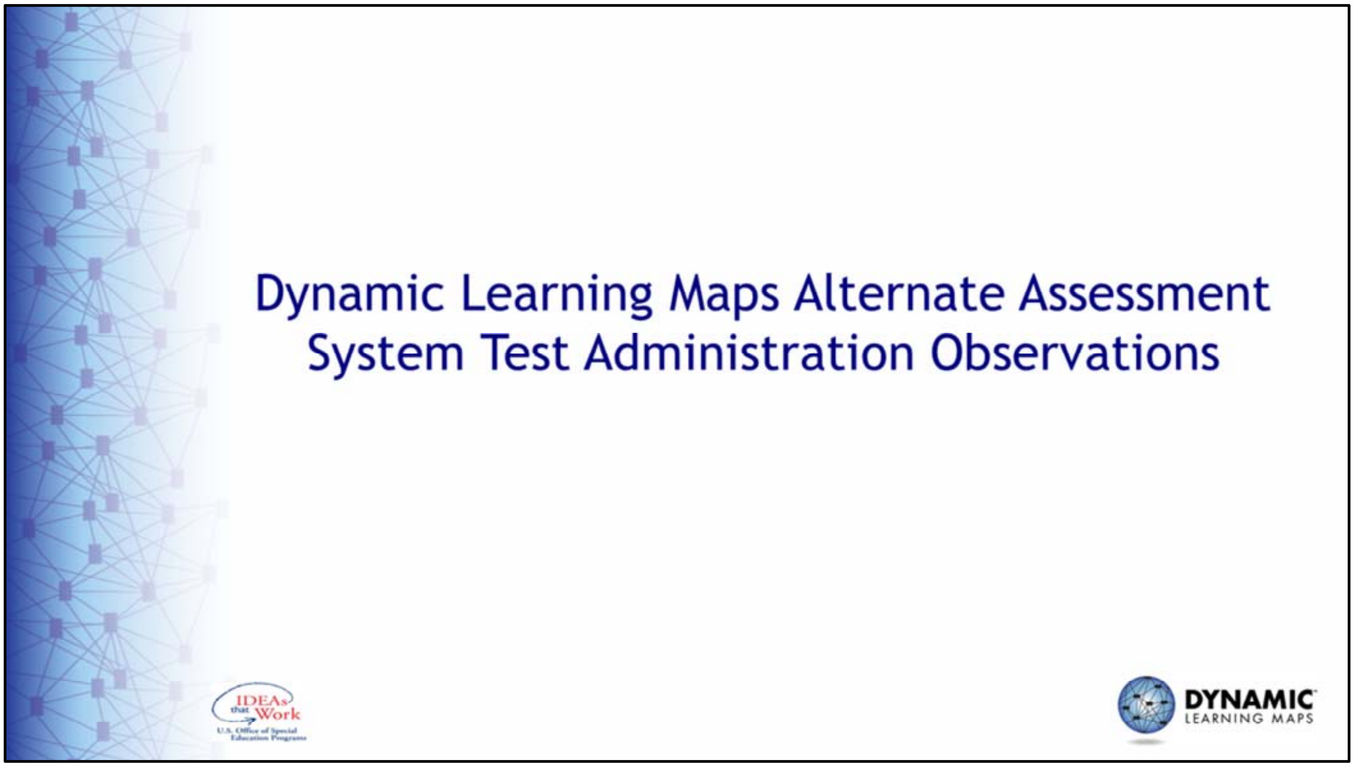
c. Indicate any other device(s) the student used:

- ❒ Alternate keyboard
- ❒ Teacher-made symbols/pictures
- ❒ Low-tech communication boards
- ❒ Eye gaze technology
- ❒ Sip and puff technology
- ❒ Voice recognition software
- ❒ Voice output device
- ❒ Light box
- ❒ Computer screen magnifier
- ❒ Joystick (operates like a mouse)
- ❒ Head mouse
- ❒ Other: ___________________________

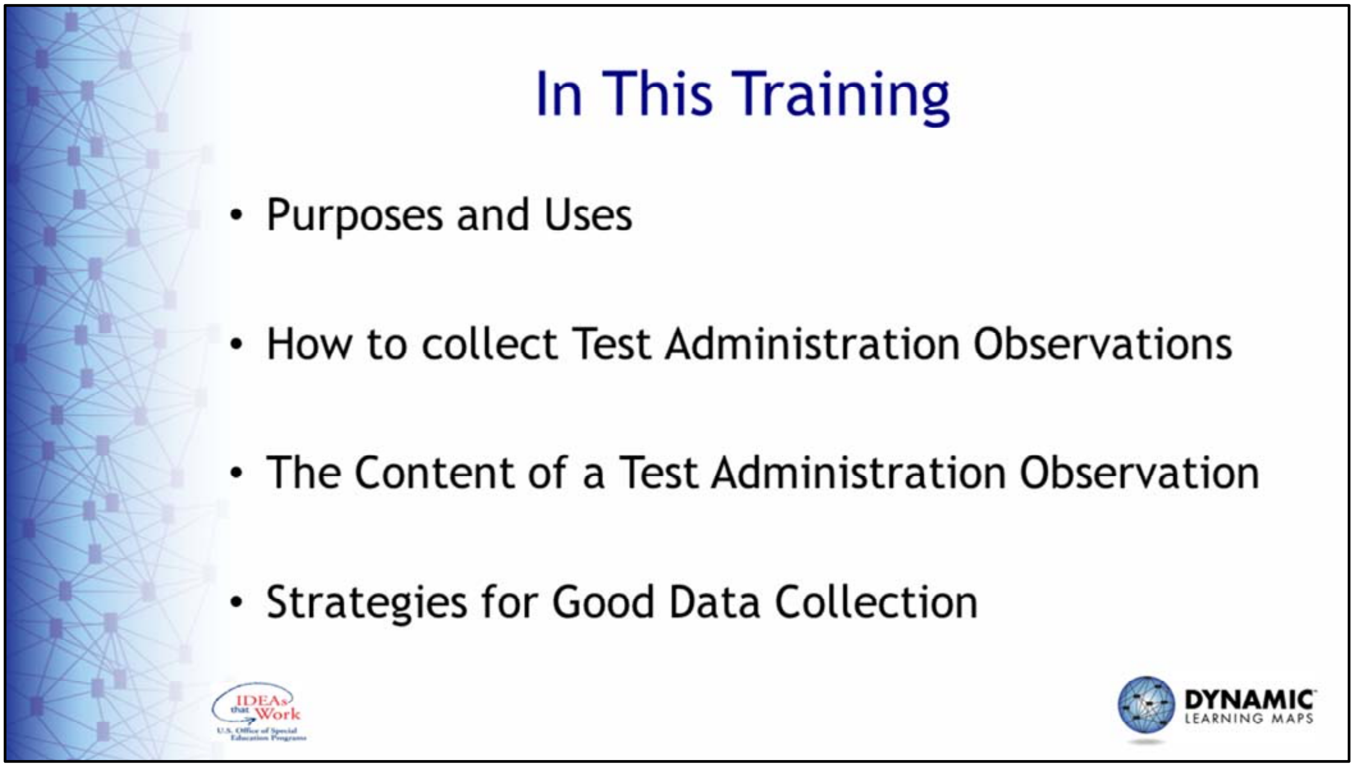
4. Observer Evaluation

a. Rate the student's overall engagement during the session: Low Medium High

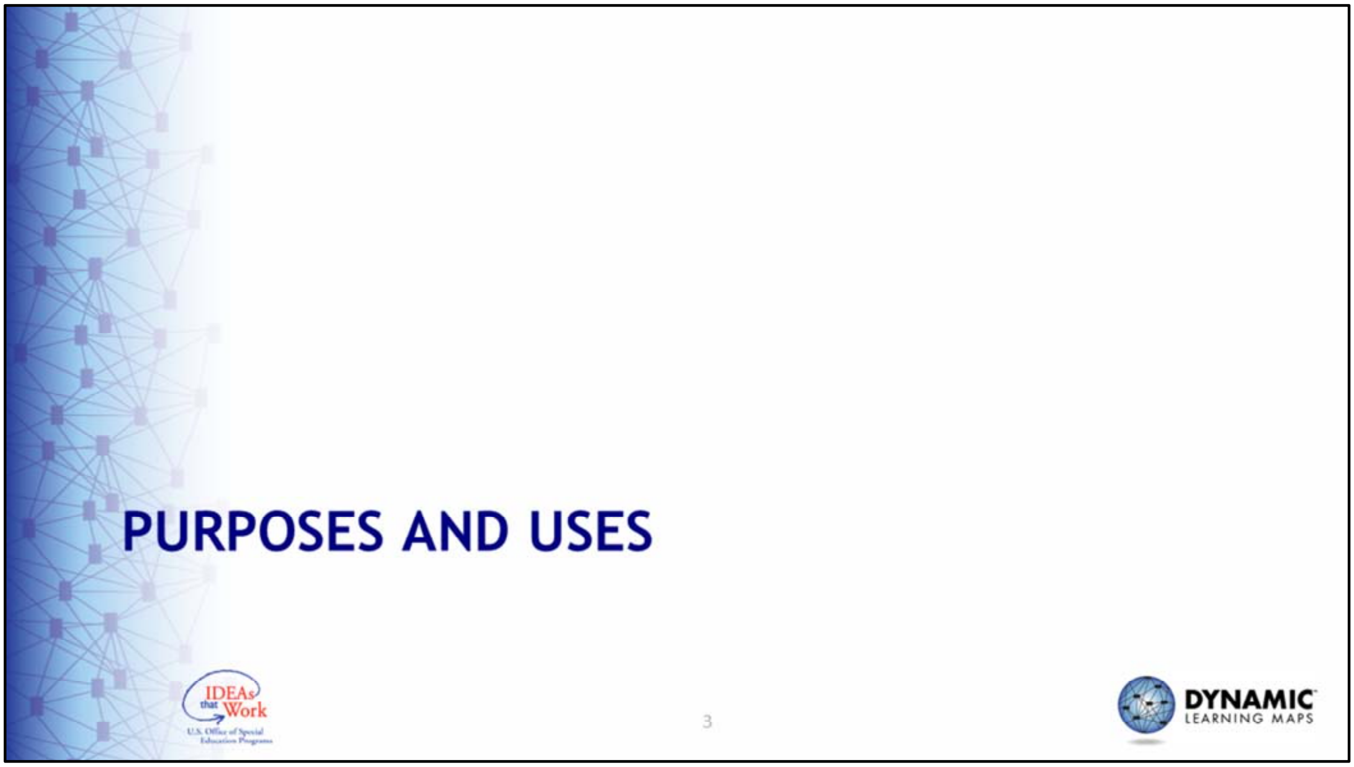
b. Other observer comments:



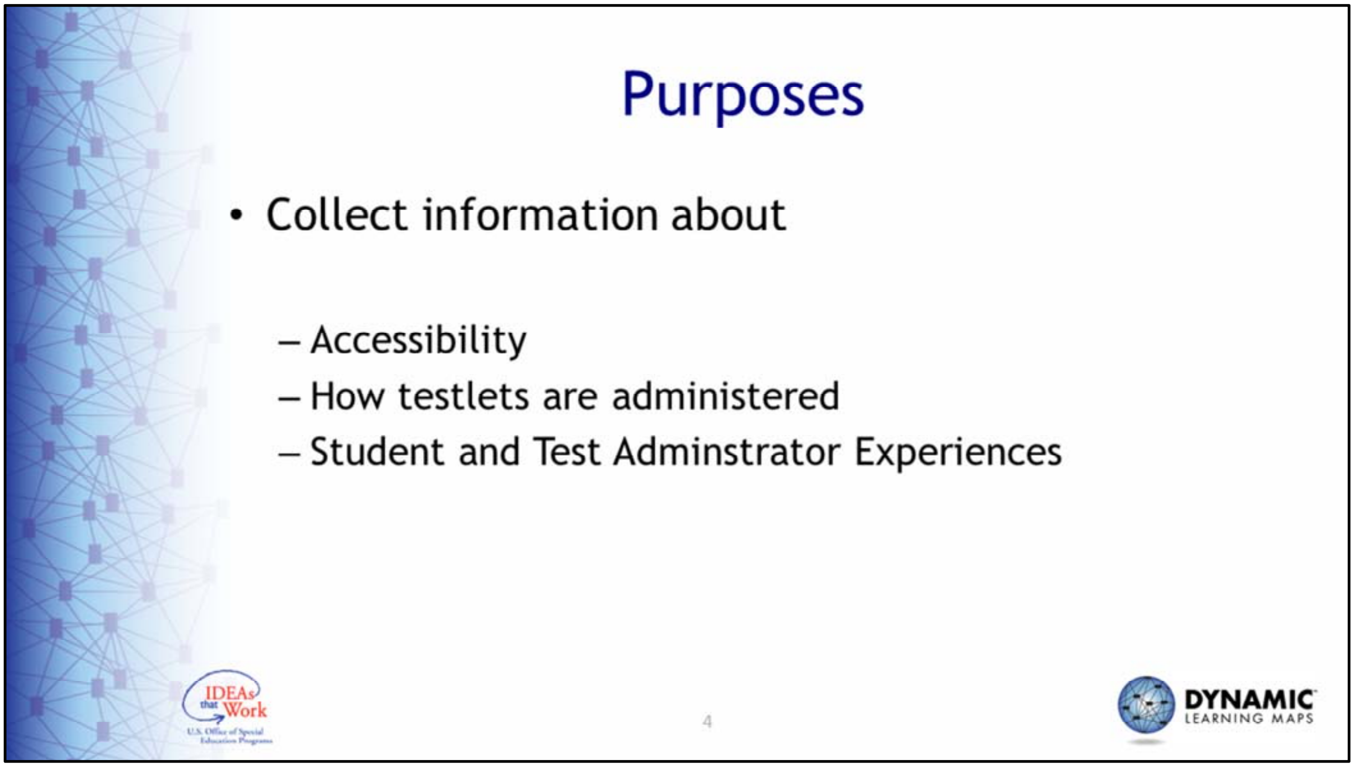
This video describes Dynamic Learning Maps Alternate Assessment System Test Administration Observation protocols. DLM uses a test administration observation protocol to gather information about how educators in the consortium states deliver testlets to students with significant cognitive disabilities. This protocol gives observers a standardized way to describe the way a DLM testlet was administered – no matter their role or experience with DLM.



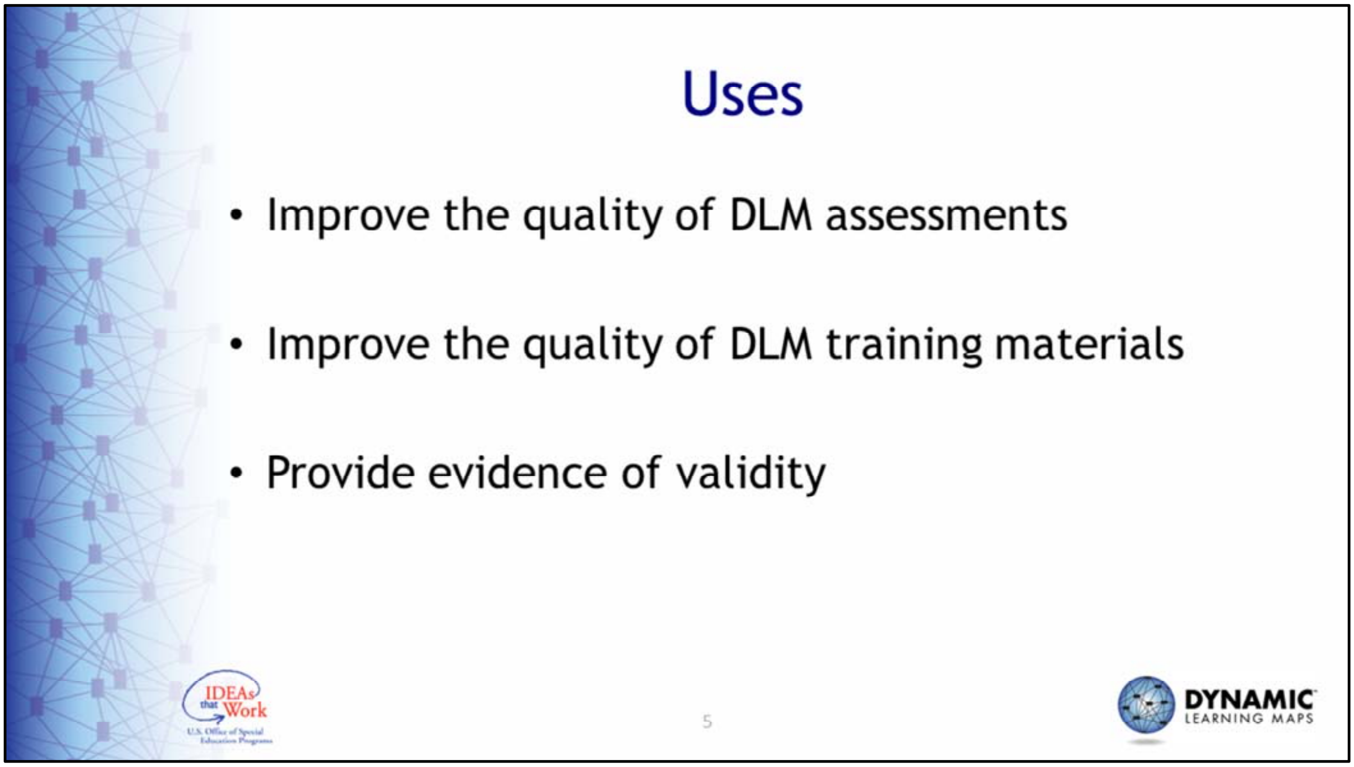
In this training we will first discuss the purposes and uses of the test administration observation protocol. Next we will discuss how to collect test administration observations. Then we will describe the content of the test administration observation protocol. Finally we will discuss some strategies for good data collection while using the protocol.



First we will describe the purposes and uses of the test administration protocols.

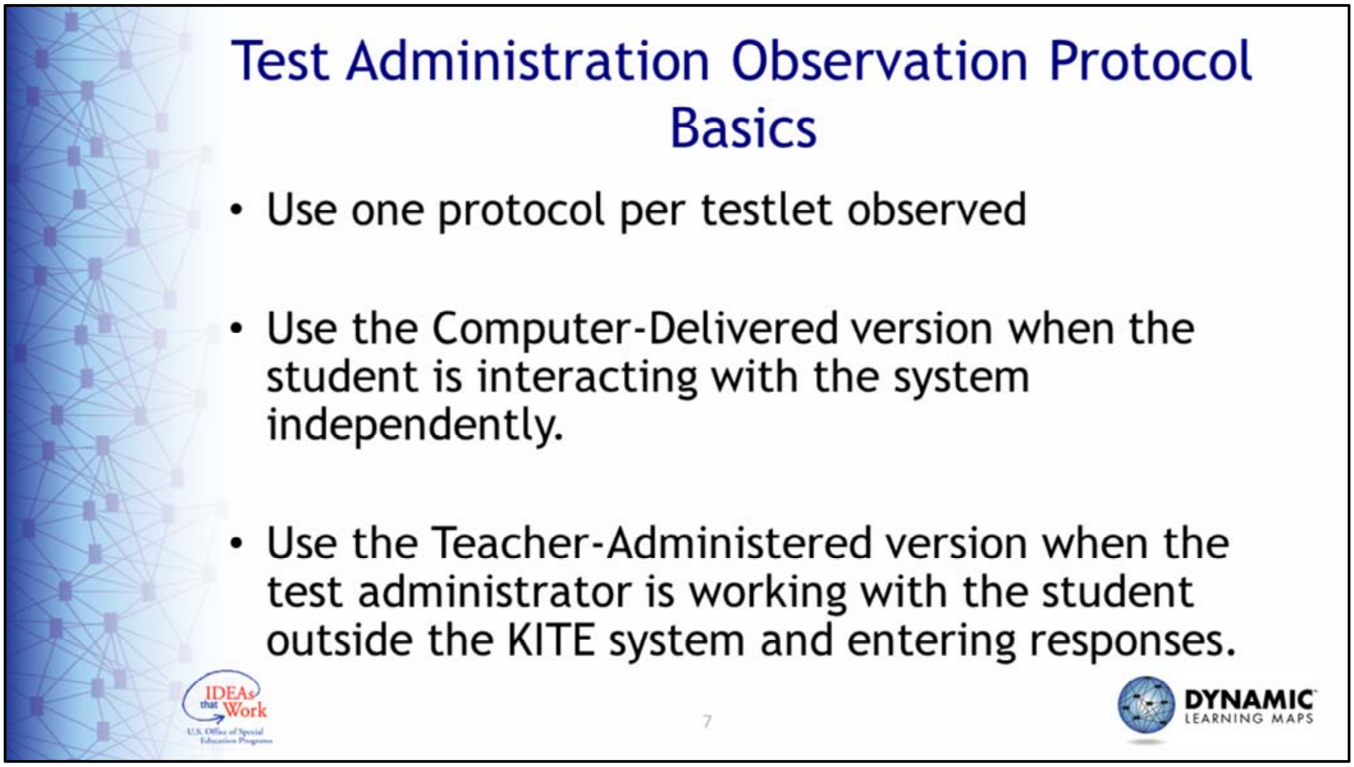


The purpose of the test administration observation protocol is to collect information about accessibility, how testlets are administered, and student and test administrator experiences. This protocol should only be used for descriptive purposes. It should not be used when the primary purpose of the visit is to evaluate or coach the teacher, or to monitor student performance.

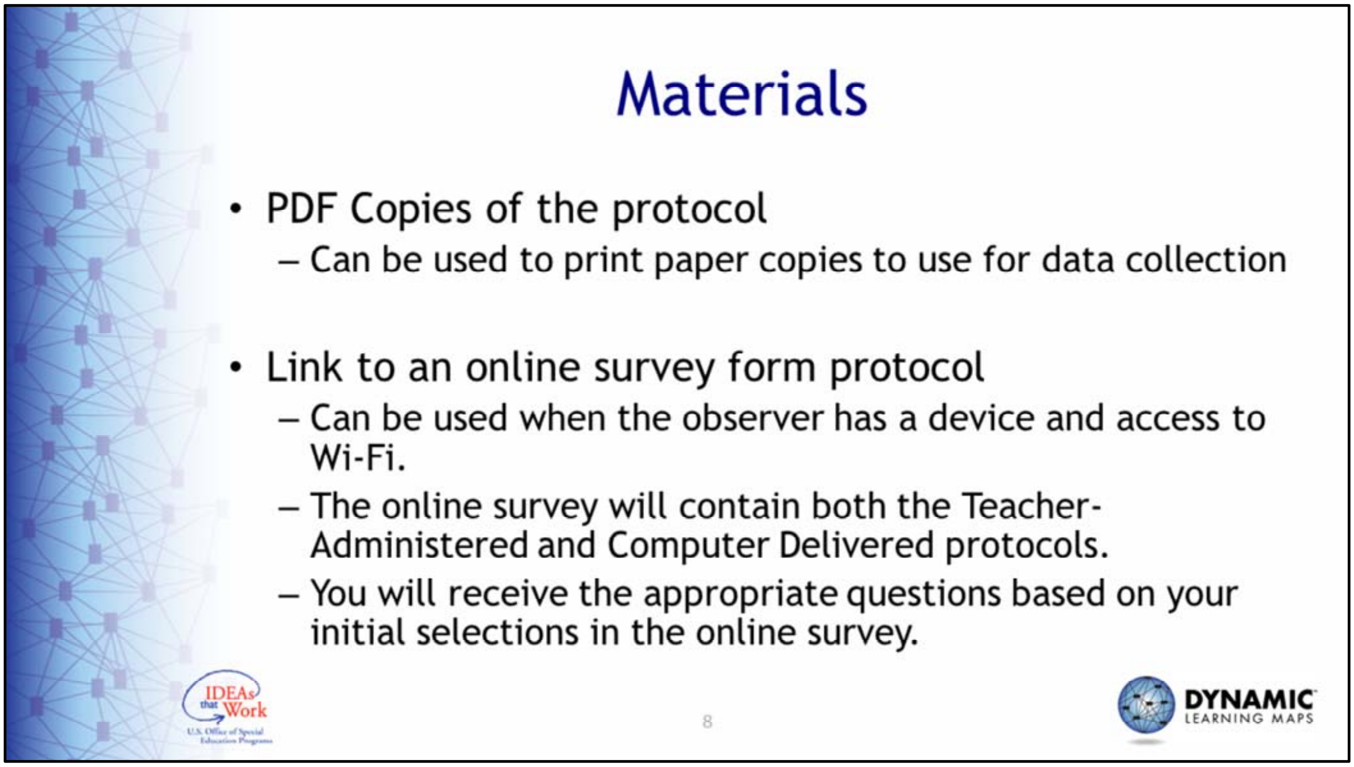


The information collected using the protocol is used to improve the quality of DLM assessments and materials. Information from the testlet observation protocol is also used to provide evidence of validity for the assessment system. Please do not use the protocol to report testing irregularities or test security violations. Consult your DLM state contact for further guidance.

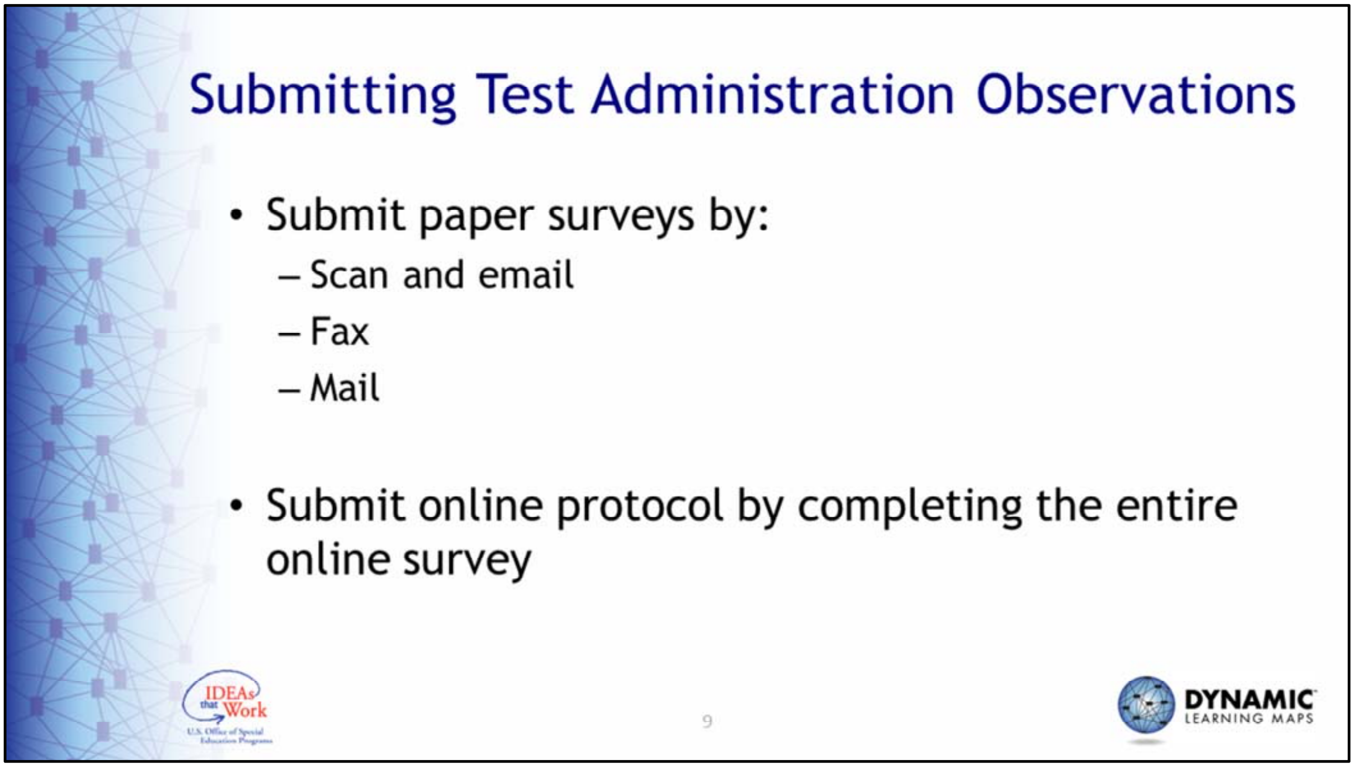
Next we will discuss how to collect Test Administration protocols.



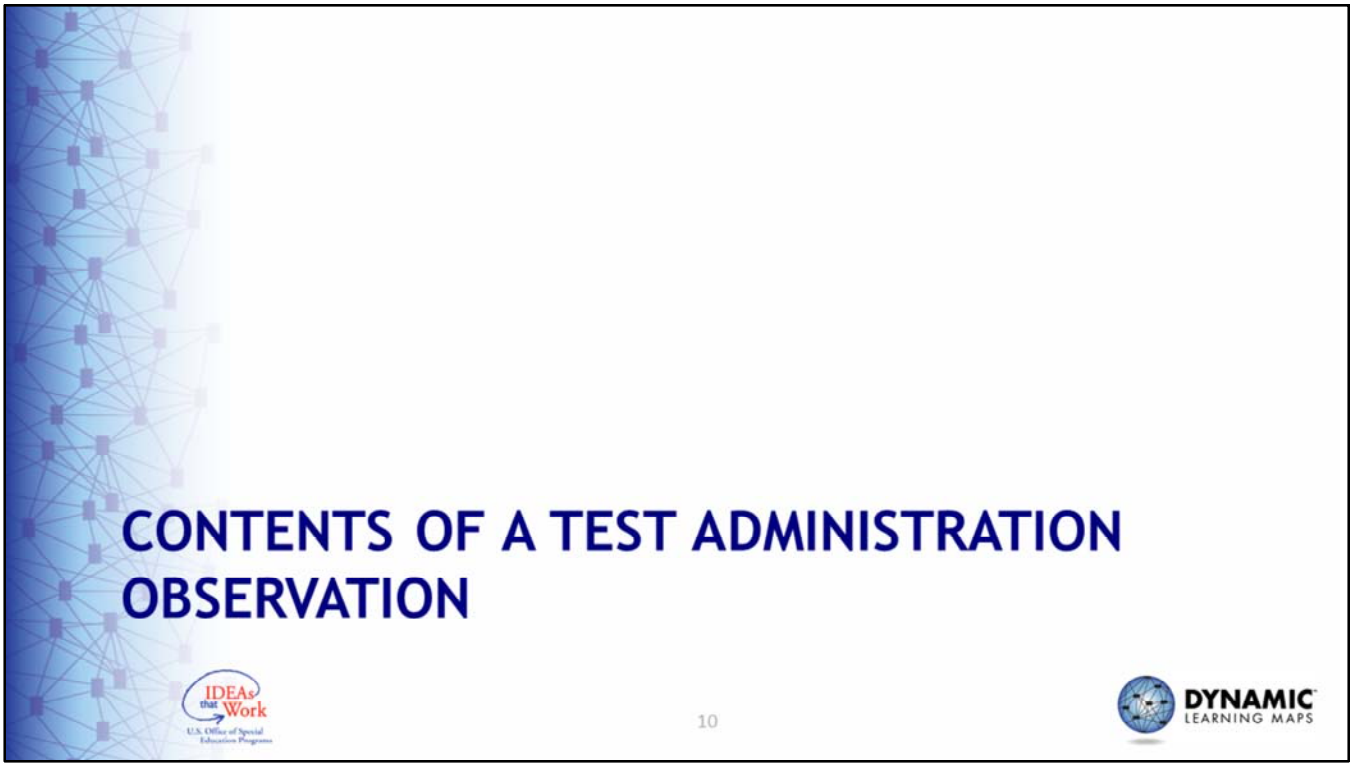
Observers complete <u>one observation per testlet administered</u>. Most items are a direct report of what is observed – for instance, how the test administrator sets up for the assessment, and what the test administrator and student say and do. There is a version of the protocol to use when a student is taking a computer-delivered testlet. Another version is for use with teacher-administered testlets. Responses are submitted directly to DLM for analysis. Results are described for whole groups and are used to support technical documentation for the assessment system.



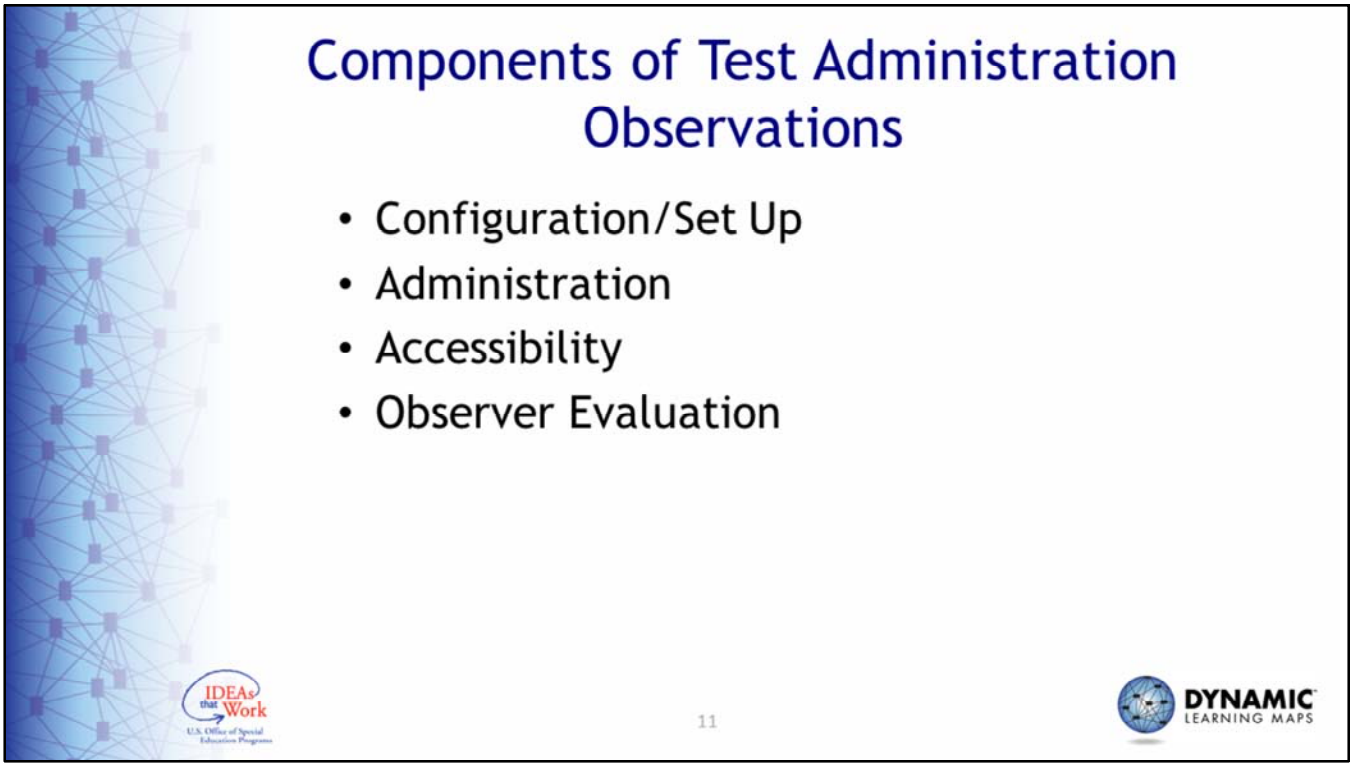
The observation protocol is available in a paper (PDF) format and as an online survey. Specific instructions can be found at the beginning of the protocol, and in the "Guidance for Local Observers" document. Consult your DLM state contact for further information.



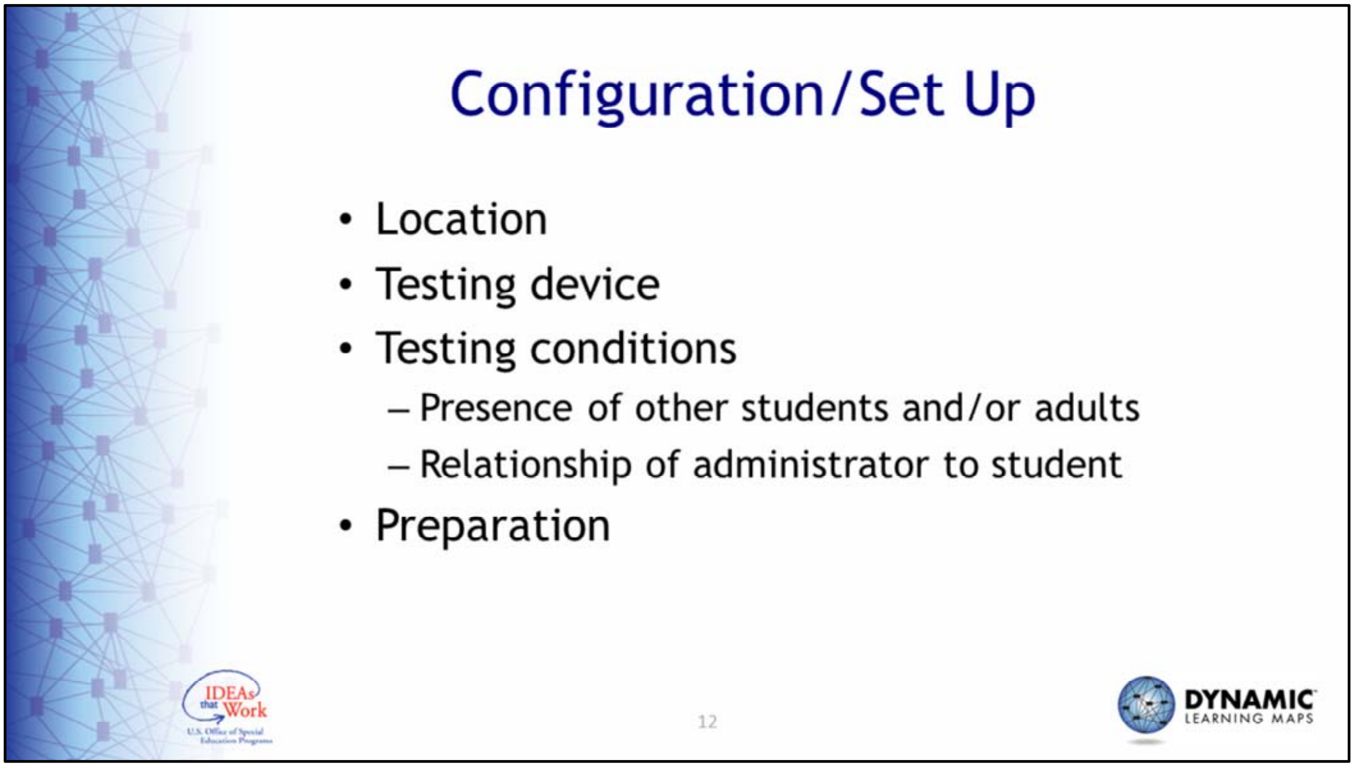
After you confirm that you have completed all parts of the test administration observation protocol, you can submit the protocol in several ways. If you completed a paper survey, you can scan and email it to DLM. You can also fax or the paper surveys. Information on where to send the paper surveys can be found on the test administration observation protocol. You may also fill out the protocol online. Once you submit the online protocol survey, the results are automatically submitted to DLM.



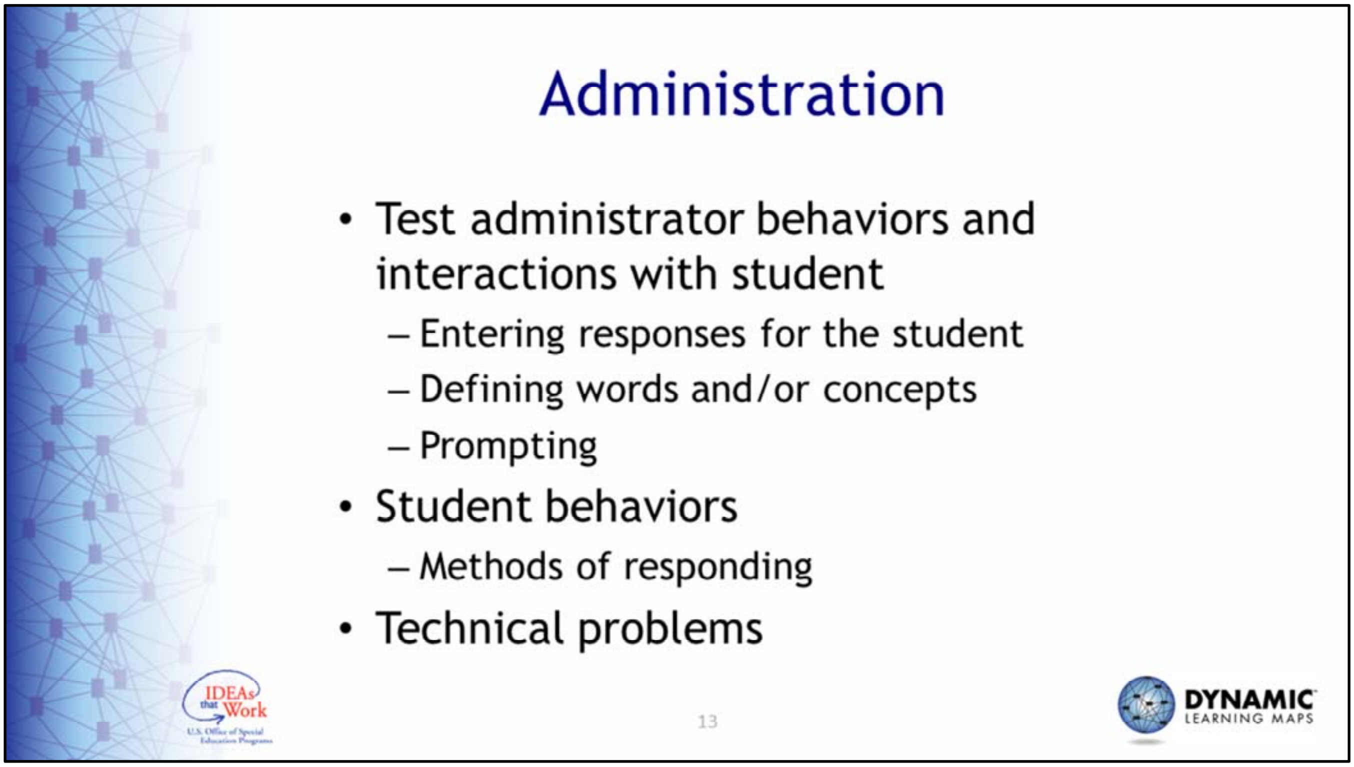
We will now discuss the contents and main components of a test administration observation.



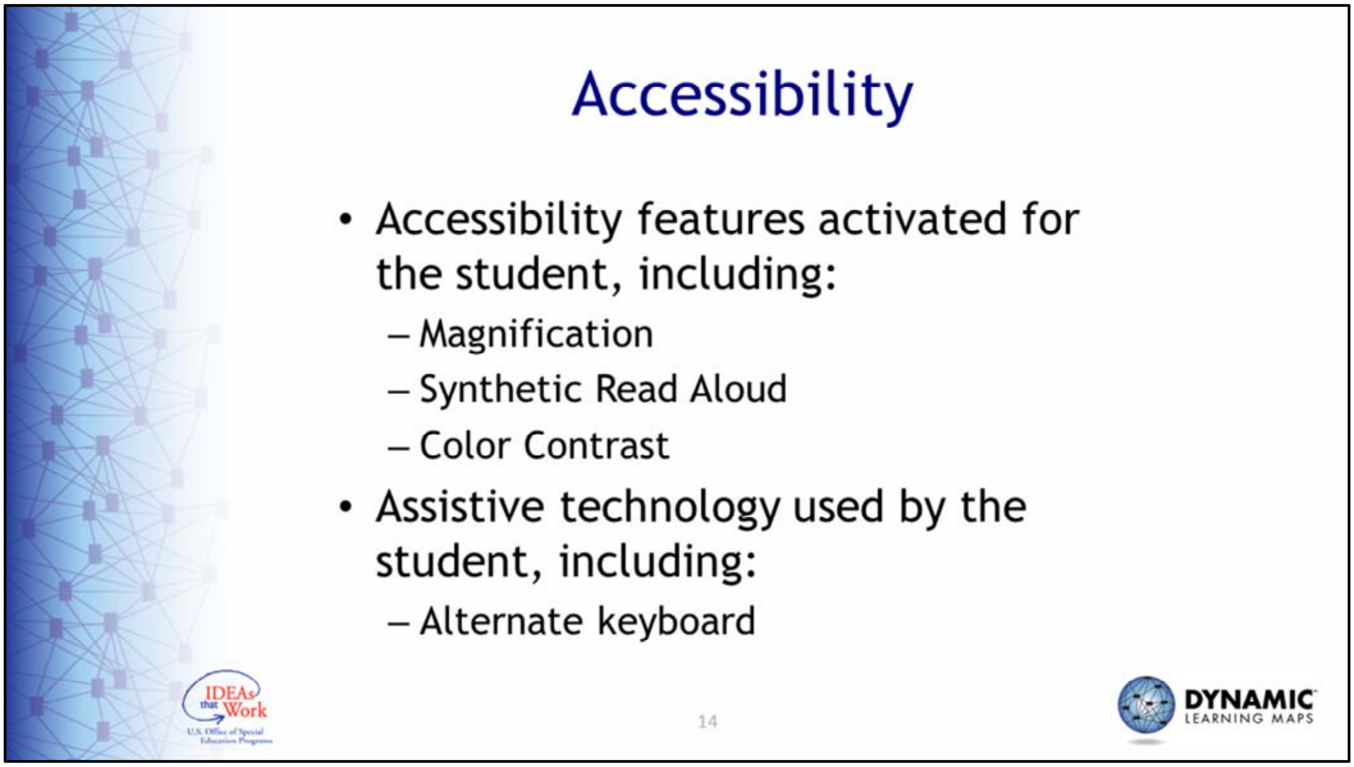
There are four components of a test administration observation. They include: Configuration/Set Up of the testing session, Administration of the assessment, Accessibility features used, and Observer Evaluations. These components will be discussed in greater detail in the following slides.



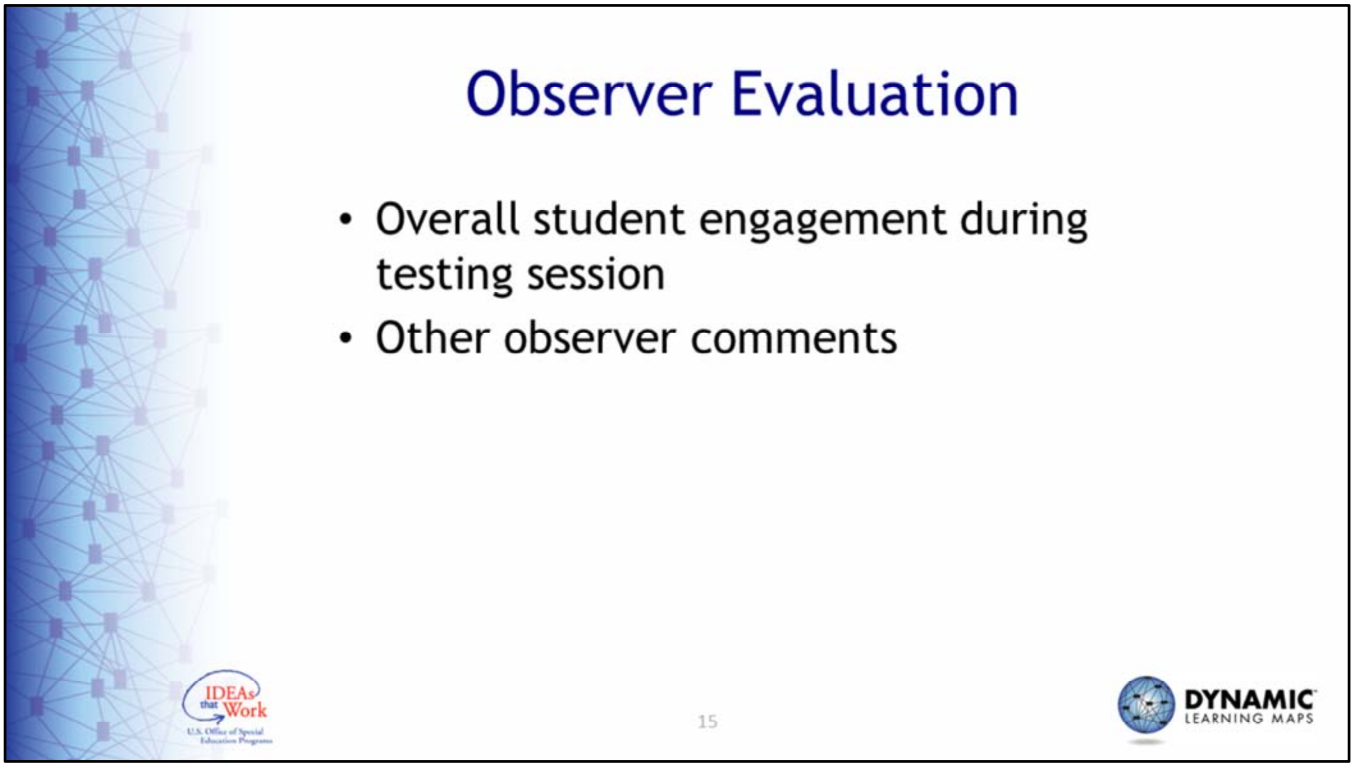
Local observers will record where the student takes the assessment and what kind of device the student and/or teacher uses to take the test, such as a desktop computer or iPad. Observers will also note the conditions of the testing environment, such as the presence of other students and/or adults in the testing room and whether they could see the student's test, as well as who was administering the assessment. In addition, for teacher-administered testlets, observers will note how the test administrator prepared for the administration of the testlet, including assembling necessary materials and referring to the Testlet Information Page before beginning the test.



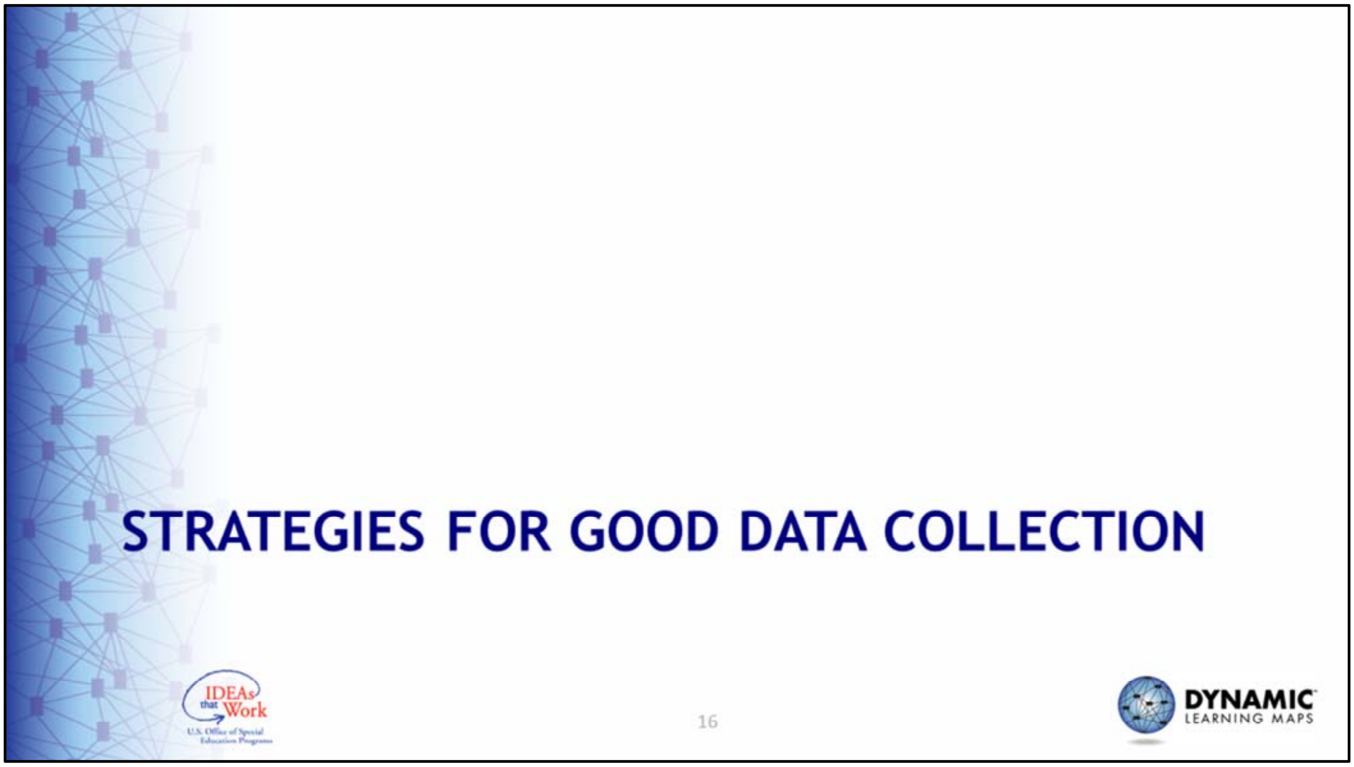
Observers will also note how the tests are administered. Observers will look for how the teacher interacts with the student during the assessment and to what degree the administrator offers assistance and prompting. Observers will look for more specific behaviors per subject when observing teacher-administered testlets, such as encouraging engagement while reading an ELA text and connecting pictures to background knowledge for math and science testlets. Student behaviors are also observed. Observers will note how independently the student could navigate through the testlet, select answers, and interact with the system. If a test administrator has difficulty with the testing program, such as login issues or tests not being available, that will be noted as well.



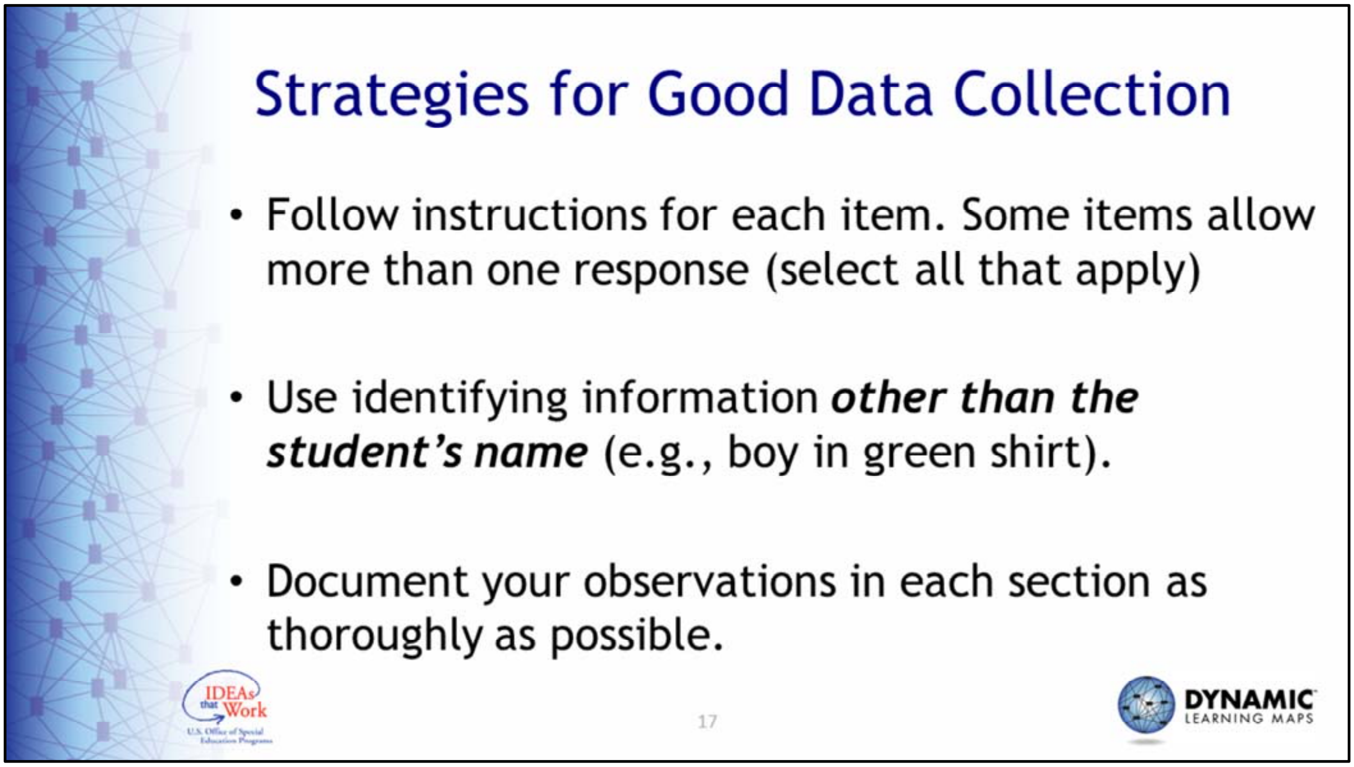
Observers will record what kind of accessibility features of the testing system that is available for the student, including, but not limited to, magnification, single switch, synthetic read aloud, and color contrast. If the student has any difficulty with accessibility, that will be noted as well. In addition, any other assistive technology devices that the student uses during testing should also be recorded.



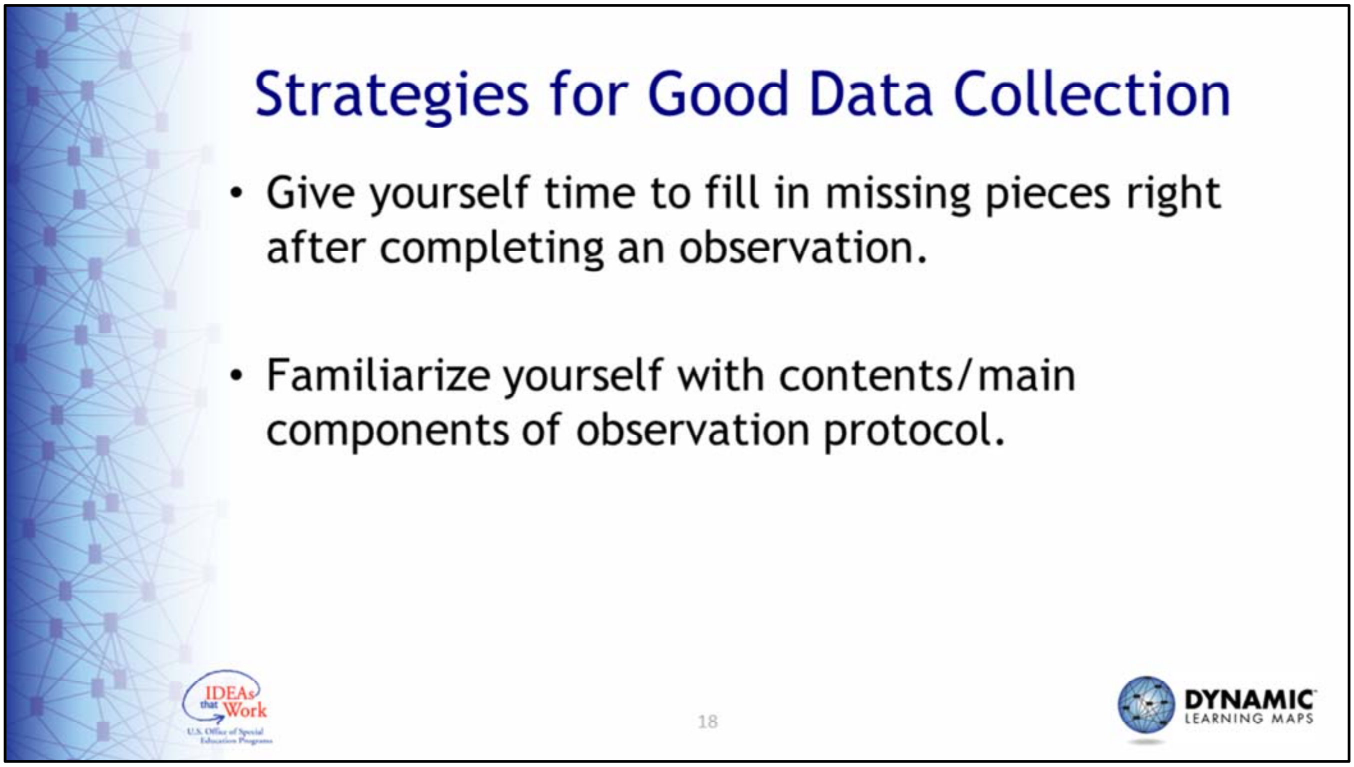
Last, observers will rate the student's overall engagement during the testing session, from low to high. There will also be an opportunity for the observer to note any additional comments or observations that did not fit in a previous category.



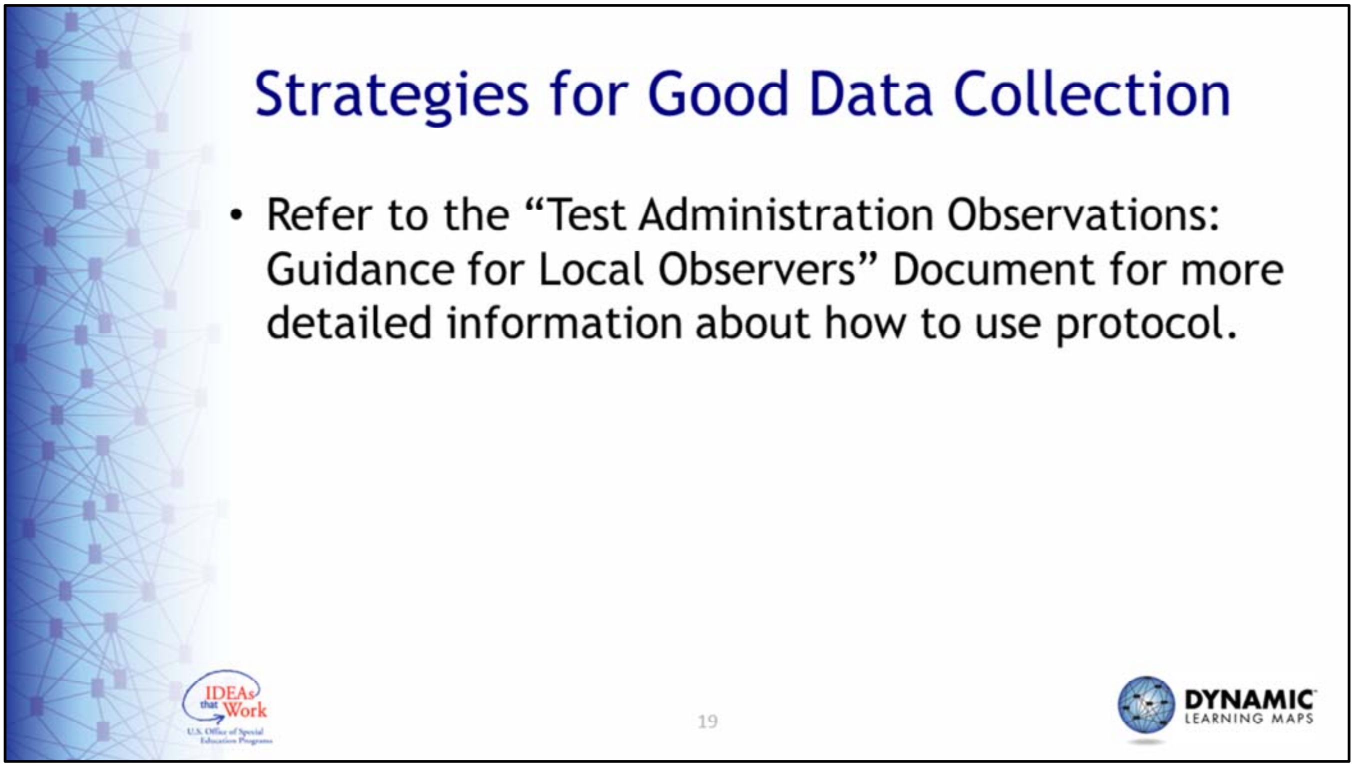
Last, we will discuss strategies for collecting good and complete data.



Follow the instructions for each item on the protocol. Some items allow multiple responses.
In addition, use identifying information different than the student's name. Rather than recording a student's name on the protocol, use non-indentifying information. An example might be "boy in a green shirt." Not only is this important for confidentiality, but it can help keep you organized if you are completing multiple observation protocols. Finally, It is very important to complete all sections on the protocol. Answer each item.



Make sure you allow yourself time to fill in any missing pieces in the observation protocol right after you complete an observation so you do not lose important information before you are able to record it. Also, familiarizing yourself with the main components of the test administration protocol is helpful, so that you know what to look for and what behaviors to focus on if you get behind in completing one part of the observation protocol before moving on to a different part. Observations can go quickly!



Additional information about using the test administration protocol is available in a document called: "Test Administration Observations: Guidance for Local Observers." Consult your DLM state contact for further information.


THANK YOU!
For more information: www.dynamiclearningmaps.org
For Professional Development:
www.dlmpd.com
IDEAs that Work
U.S. Office of Special Education Programs
DYNAMIC LEARNING MAPS

Thank you!

Test Administration Observations: Guidance for Local Observers

DLM uses a test administration observation protocol to gather information about how educators in the consortium states deliver testlets to students with significant cognitive disabilities. This protocol gives observers a standardized way to describe the way a DLM testlet was administered – no matter their role or experience with DLM.

The observation protocol is available in a paper (PDF) format and as an online survey. Responses are submitted directly to DLM for analysis. Results are described for whole groups and are used to support technical documentation for the assessment system.

Purposes and Uses
This protocol should only be used for descriptive purposes. It should not be used when the primary purpose of the visit is to evaluate or coach the teacher, or to monitor student performance. If you must observe for multiple purposes at once, please do not record comments related to your secondary purpose on the DLM observation form. Please do not use this protocol to report testing irregularities or test security violations. Consult your DLM state contact for further guidance.

Observers complete one observation per testlet administered. Most items are a direct report of what is observed – for instance, how the test administrator sets up for the assessment, and what the test administrator and student say and do. One section asks observers to make judgments about the student's engagement during the session.

General Instructions
After coordinating the visit with the test administrator[1], bring an electronic device with internet connection (e.g., laptop or tablet) to the session. If you cannot access the online survey during the observation, take notes on a copy of the paper form and transfer them into the online survey as soon after the observation session as possible.

Arrival / Set-up

1. Before entering the room, launch the online survey: https://goo.gl/nWIuGa
   and fill out as many questions on the first screen as possible before the observation begins. *If you cannot use the online survey during the session, keep notes on the paper version of the survey and transfer your responses to the online version within 1-2 days after completing the observation.*
2. Remind the teacher that you are not there to evaluate his or her teaching or monitor student performance. You are there simply to observe what s/he normally does during DLM

[1] Since the test administrator is typically a teacher, we use "teacher" in this document to refer to the test administrator. Depending on state policy, other educators may be qualified to deliver DLM assessments.

assessments. The purpose of what you are recording is to support documentation of the alternate assessment. If the teacher still welcomes you to observe, indicate “YES” on the consent question on the survey. If the teacher is no longer comfortable with you observing, leave the classroom, indicate “NO” on the consent question, and submit the survey.

3. Ask the teacher to arrange the session as s/he typically would for that student.
4. Based on that arrangement, place yourself where you can unobtrusively observe – preferably outside the student’s line of vision and where you can still see the screen (for computer-delivered assessments) or behind teacher/student pair, facing the computer (for teacher-administered assessments).
5. After the test administrator logs into KITE but before the test is selected, note the last number in the test form name. It is a 3-5 digit number near the end of the name. For example:
   For a test named: ELA RL.8.2 S 1234 → Enter 1234 on the survey
6. Ask the teacher whether the test is designed as a teacher-administered testlet or a computer-delivered testlet. (If the teacher is unsure, this information is located on the Testlet Information Page, a PDF delivered when the test is assigned.)

   Note: Complete one survey for one testlet administered. If the student completes multiple testlets and you wish to provide data for more than one, complete the survey again for each testlet.

During the session

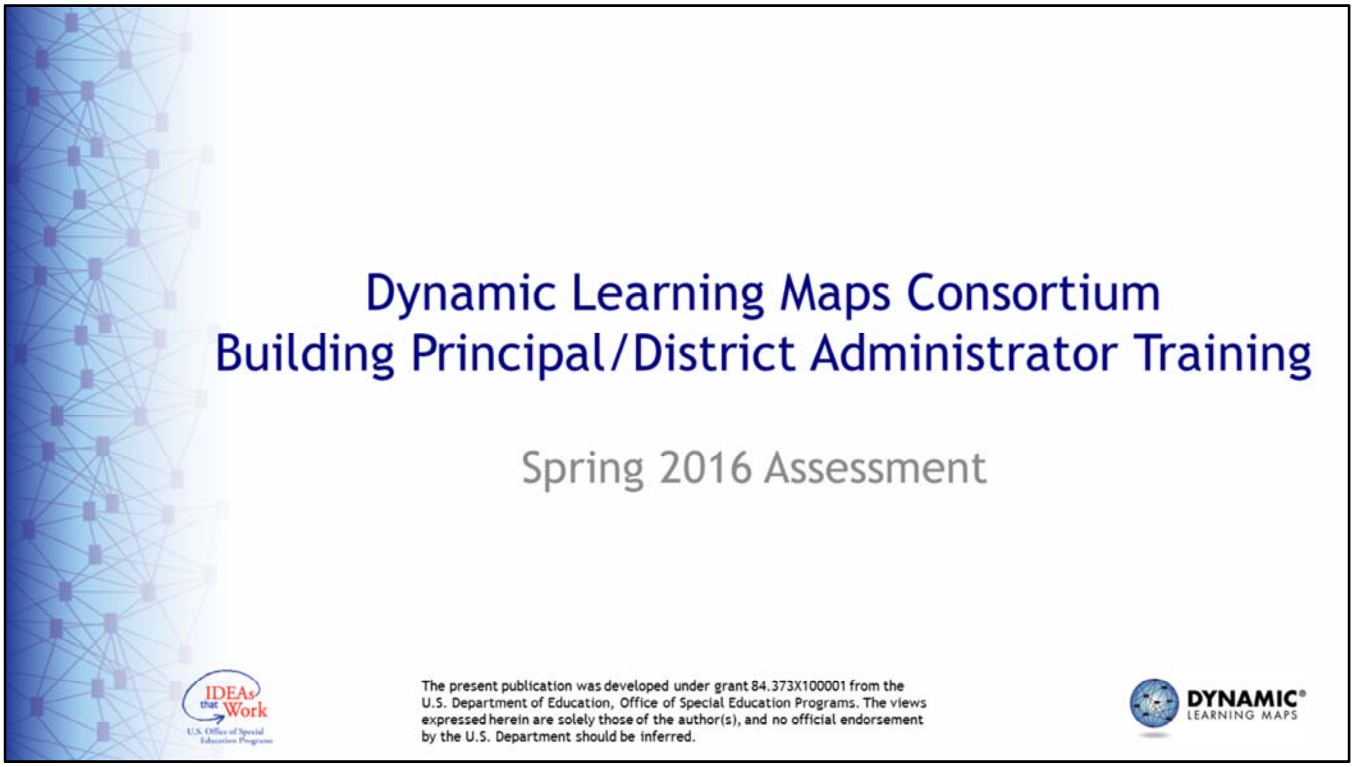
1. Follow instructions for each item. Some items allow more than one response (select all that apply)
2. When recording notes, do NOT include information that could be used to identify the student by name.
3. If you are observing for multiple purposes, make sure the comments recorded for DLM only pertain to descriptions of test administration.
4. Document your observations in each section as thoroughly as possible.
5. Avoid interrupting the testing process.

After the session

1. Follow up with teacher if any clarifications need to be made about what you observed (e.g., you weren’t sure if the student or the teacher navigated on a particular screen).
2. Confirm that you have completed all parts of the protocol and submit the online survey.
   - If working on a paper copy, make sure notes are complete. Transfer them to the online survey as soon after the observation as possible.
3. Thank the teacher for allowing you to observe.
4. If you have a second purpose for your observation, remember to keep that separate from the DLM observation.

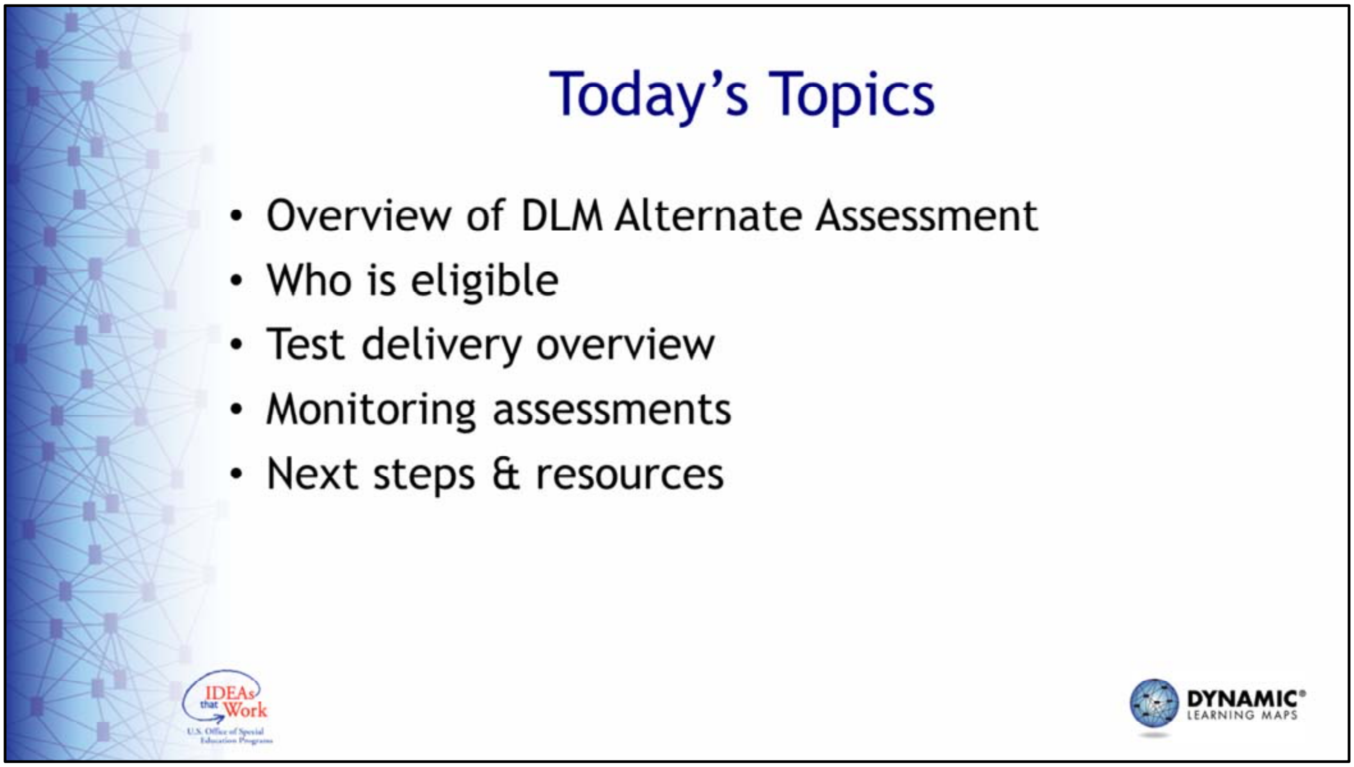
Submitting the protocol after the session if using the paper (PDF) version

1. Paper protocol forms may be scanned and submitted by email to dlm@ku.edu. Paper protocol forms may also be faxed to 785-864-3566, Attn: DLM Test Administration Observations.



Hello and welcome to the Dynamic Learning Maps Training for Building Principals and/or District Administrators.

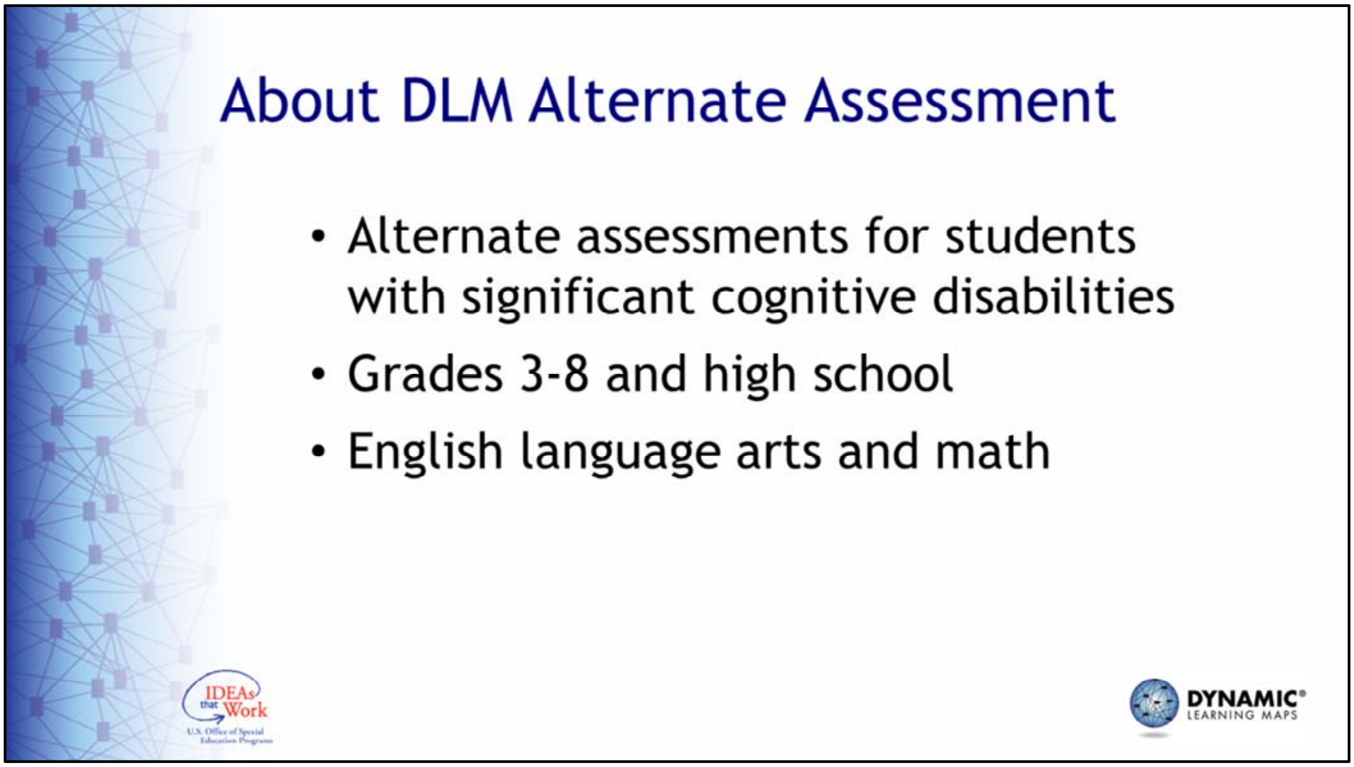
This session is intended to orient you with the DLM Alternate Assessment and your role.



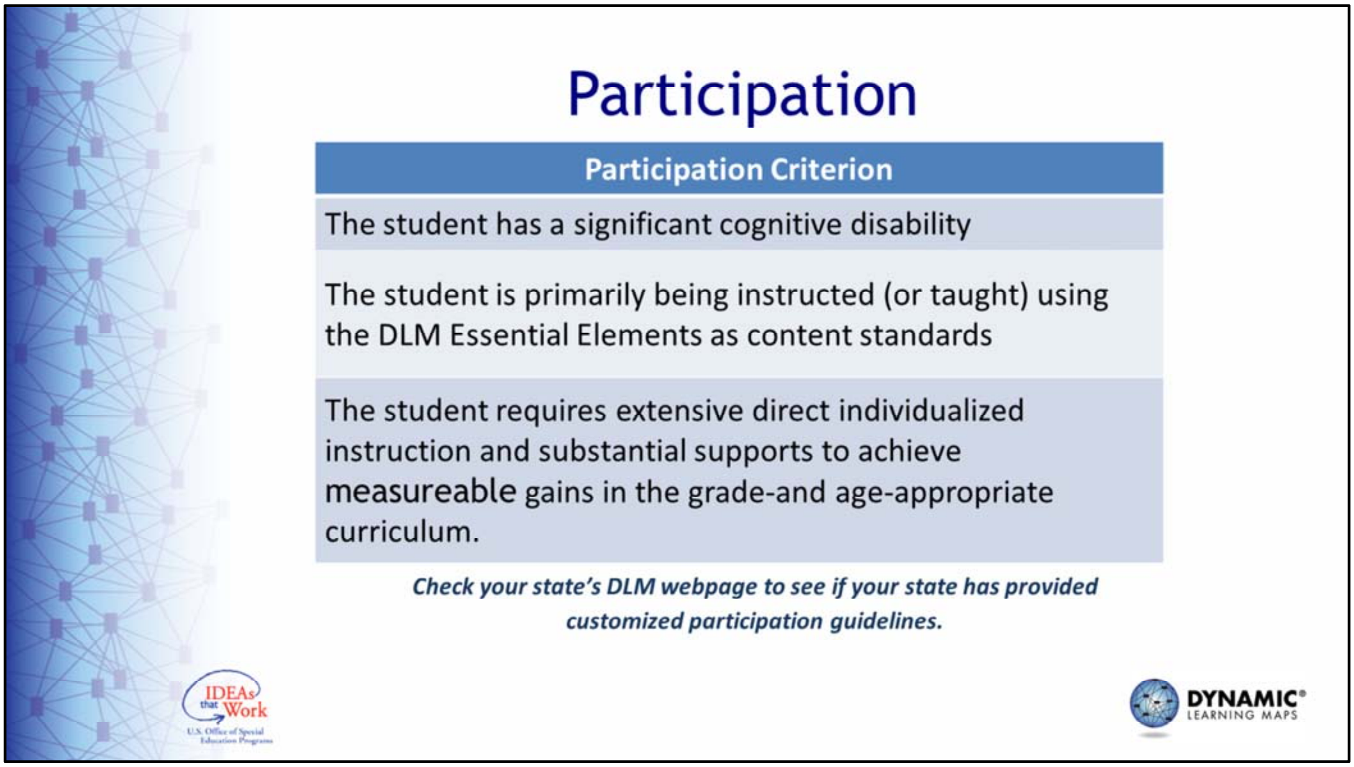
Here are the topics we'll cover today.

Throughout the webinar, we will reference the Test Administration Manual and/or the Assessment Coordinator Manual. These two documents contain the answers to most of the questions you may have.

The current version of both manuals is available on your state's DLM webpage.

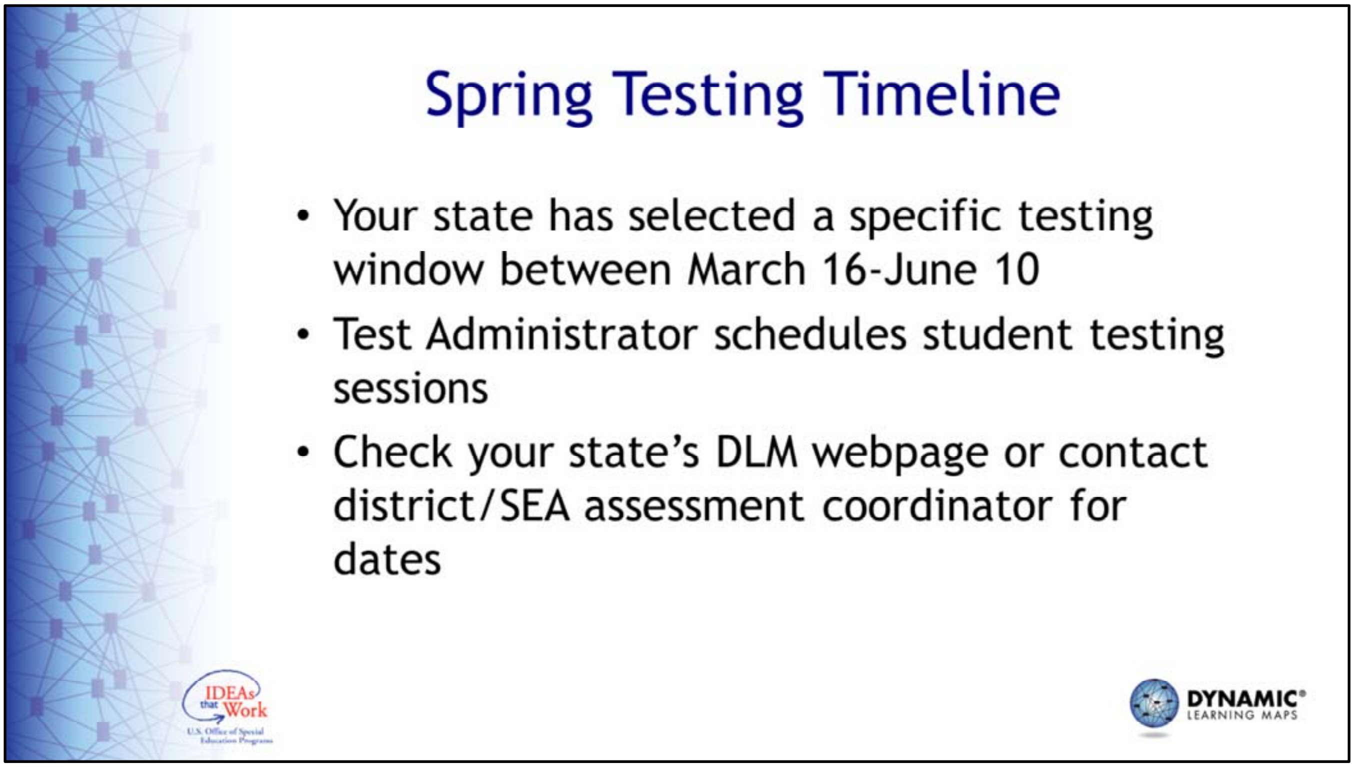


The DLM Alternate Assessment system is an assessment program designed to validly measure what students with the most significant cognitive disabilities know and can do. It has been designed for students in grades 3-8 and high school in English language arts (ELA) and mathematics.



Students who are eligible for the DLM Alternate Assessment are those for whom general education assessments, even with accommodations, are not appropriate. Students taking the DLM Alternate Assessment require extensive, direct instruction and substantial supports to achieve measureable gains in the same grade and age curriculum as their peers. As well as, are provided instruction on the DLM Essential Elements.

See your state's participation guidelines on your state's DLM webpage for more information.
If you are not sure which students in your district or school are participating in the DLM assessment, please talk with your assessment coordinator.

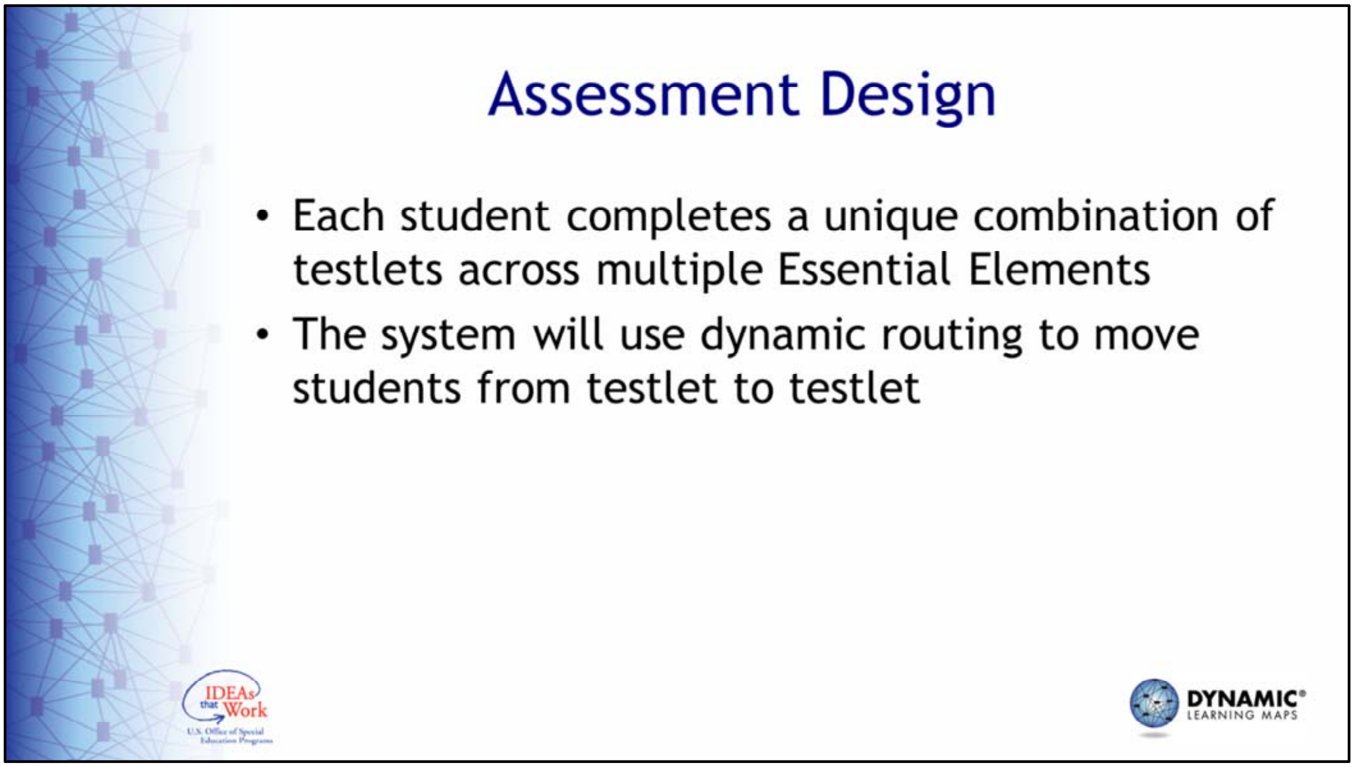


Each state has set its own spring testing window, so please consult your state-specific documentation for more information about those dates.

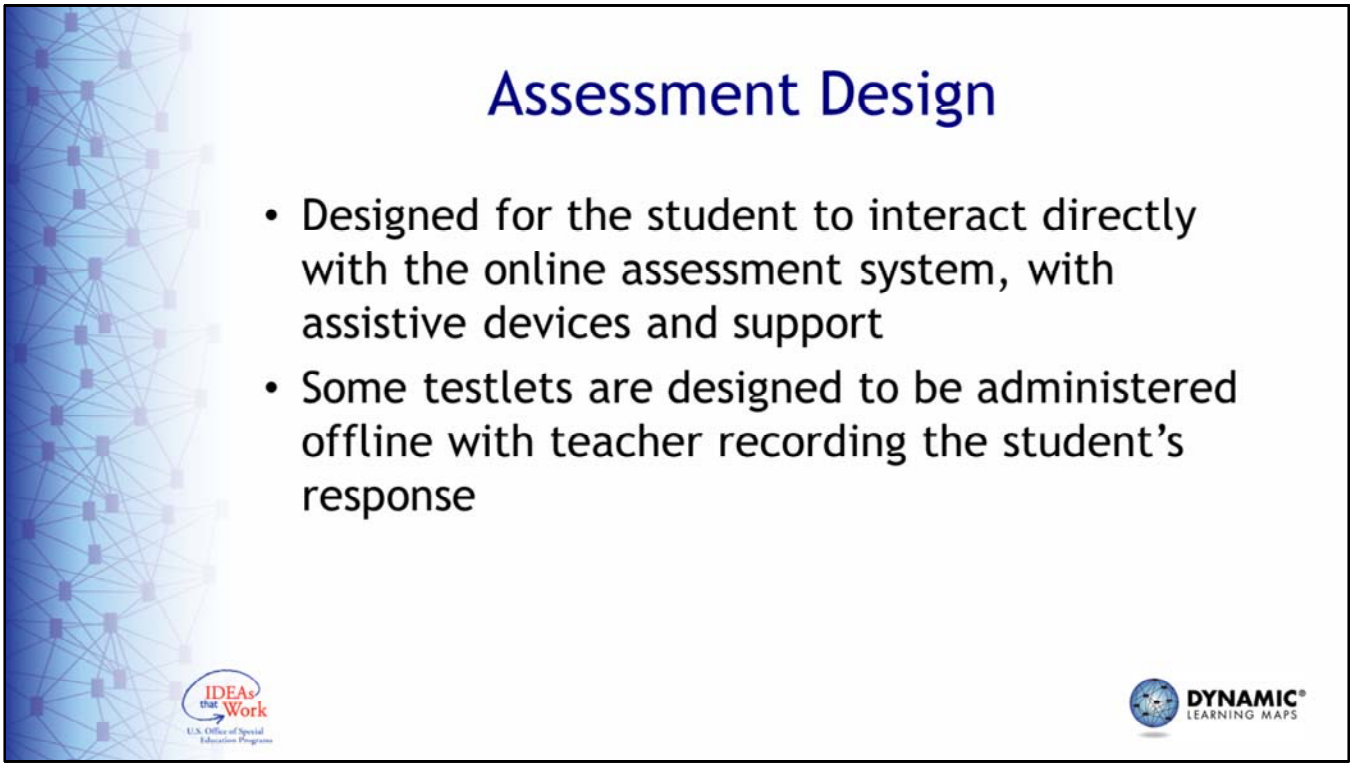
The test administrator, who is usually the student's teacher, schedules each individual student's testing session. That testing session must fall within your state's test window.

Again, if you are uncertain, please check your state's DLM webpage or with your assessment coordinator to confirm your testing window.

In the next section, I will give you a quick overview of how the test is delivered.



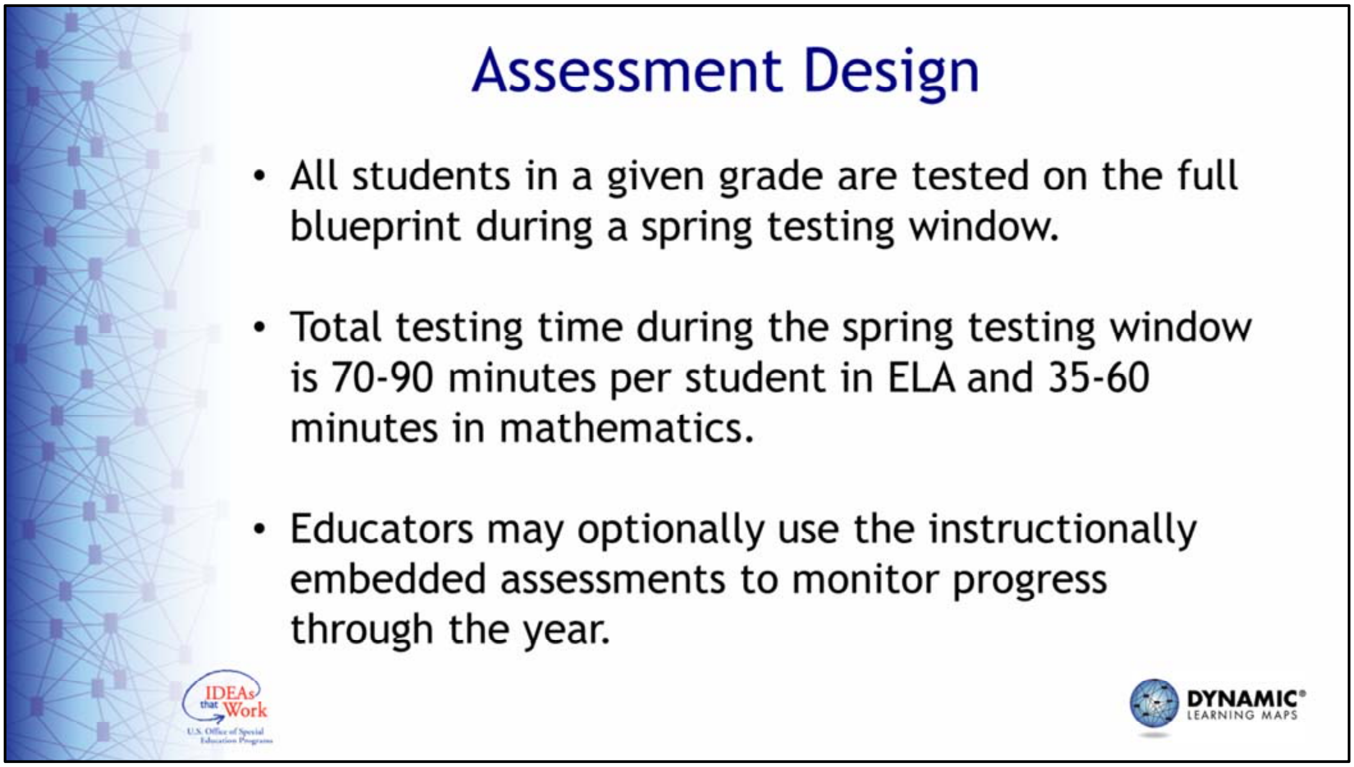
The DLM Alternate Assessment adjusts based on how a student performs on each testlet. Each student will complete a unique combination of testlets across multiple Essential Elements. An educator with multiple students in the same grade may see some similar content, but typically there is not the same test for all students.



The assessments are designed for the student to interact directly with the online assessment system.

It is also designed so that the student can interact with the assessment by using assistive devices and with teacher support as needed.

Some testlets are designed for the teacher to administer offline and then answer questions about the student's responses.



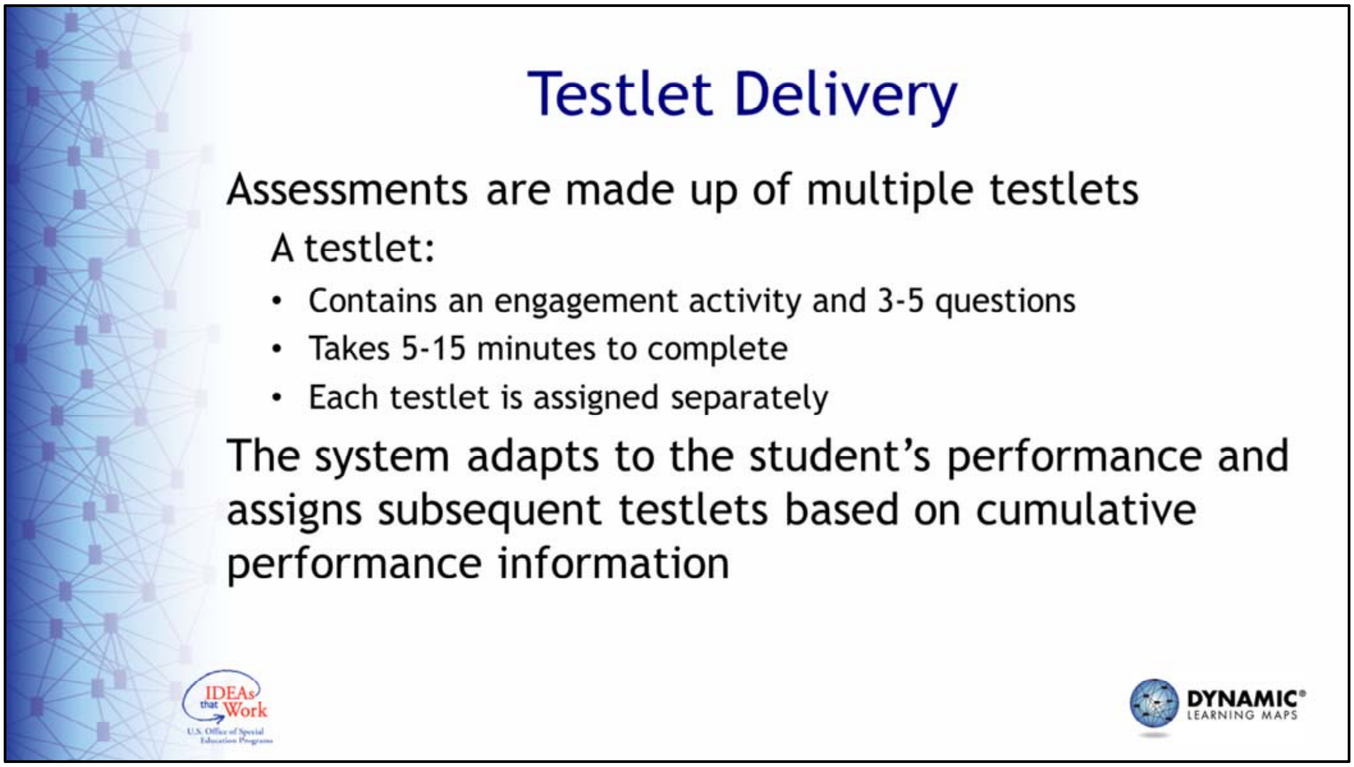
All students in each grade are tested on the full blueprint. The blueprint describes recommendations for the contents of the assessment.

Many have asked how long the assessment will take to administer to students. The TOTAL testing time is approx. 70-90 minutes for ELA and about 35-60 minutes for mathematics.

Teachers can also use instructionally embedded DLM assessments throughout the school year. This information is in the Test Administration manual.

Educator Portal is the administrative application where staff and educators manage student data and retrieve reports. While Educator Portal also does many other things, we will focus on managing student data and retrieving test monitoring data.

Assessments are delivered to students through the KITE Client on computers, iPads, Chromebooks, with various accessibility supports.



In the spring testing window, students will receive several testlets to make up the whole test. Students may receive as few as 4 and as many as 7, depending on the grade and subject.

Each testlet includes items from one or more Essential Elements in the blueprint and is chosen for the student based on information about the student and the learning map.

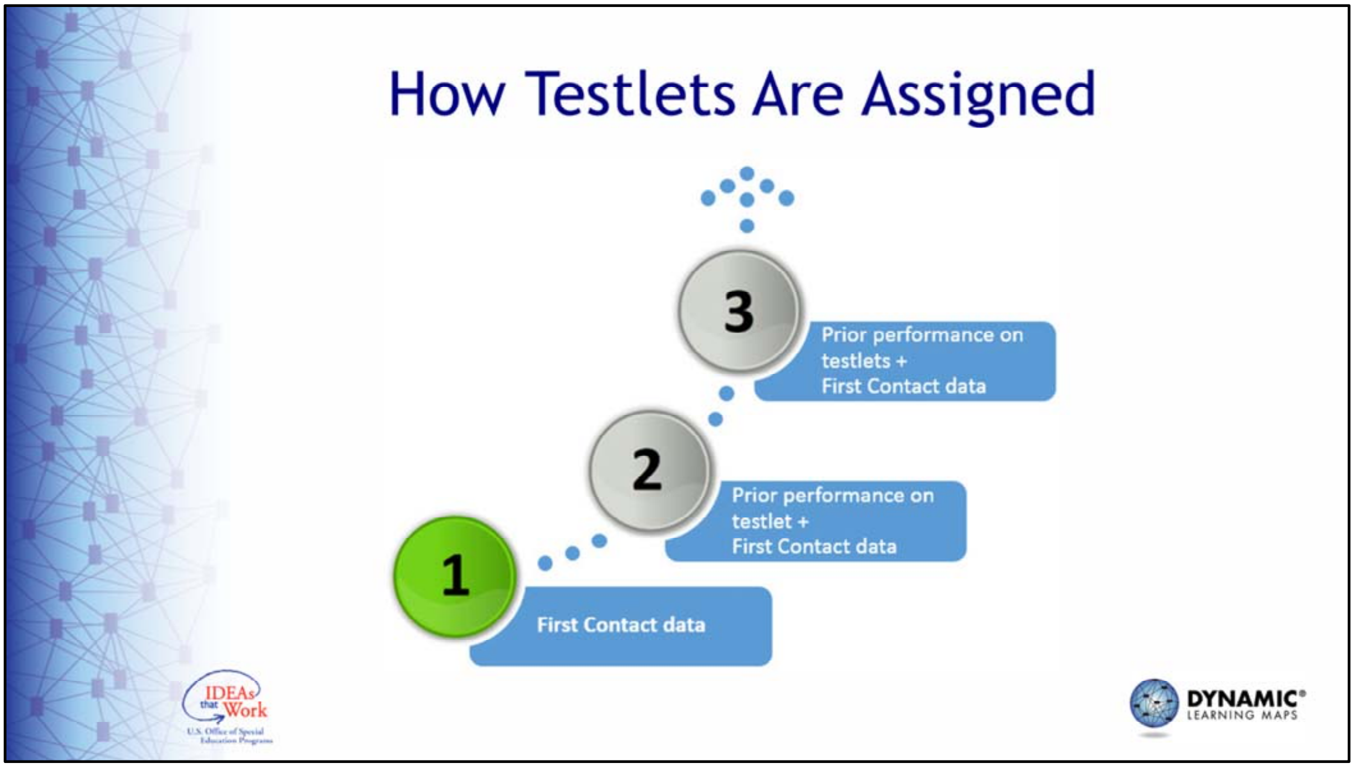
The first testlet is chosen based on the student's First Contact information that is completed by the student's teacher before testing begins.

The system delivers only one testlet at a time in each subject. After the student takes the first testlet, the system delivers the next testlet.

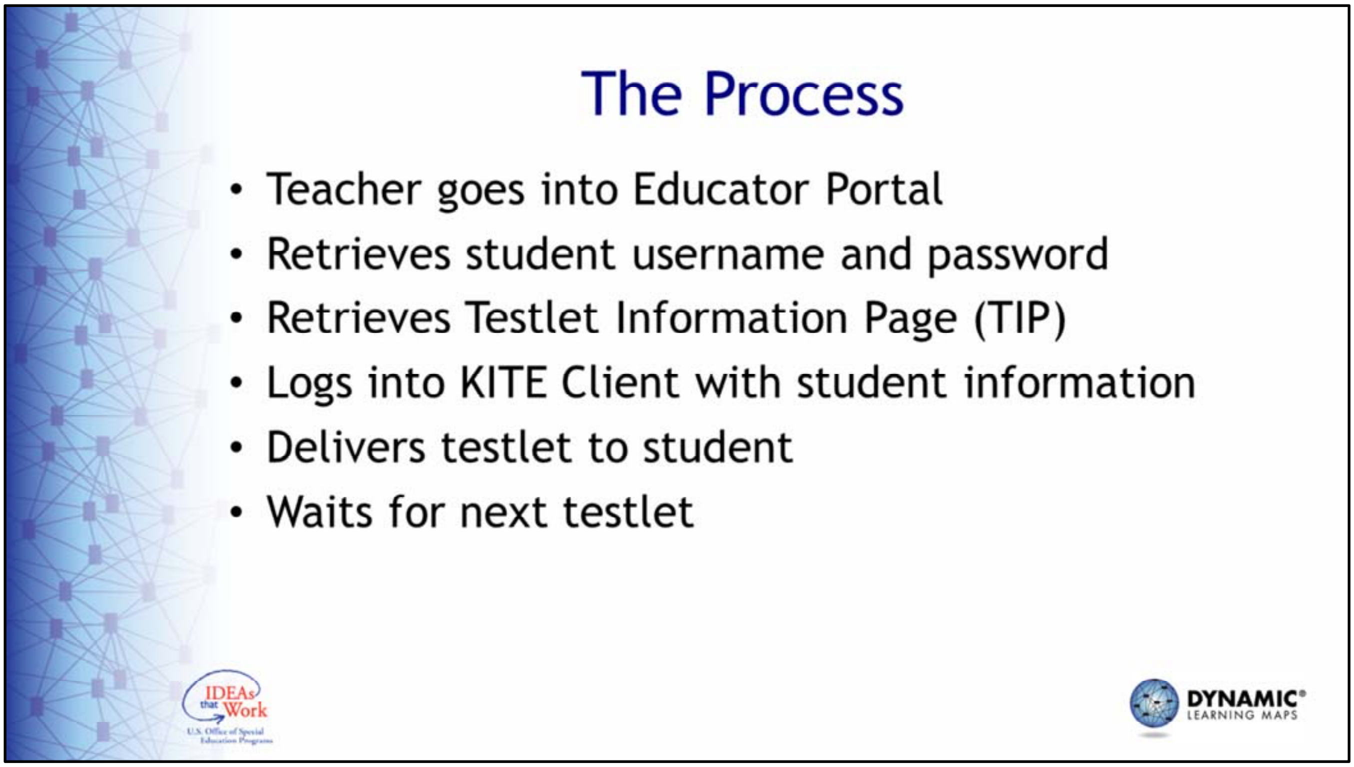
The second testlet is then assigned based on what the system knows about the student and about the learning map. The system has First Contact information as well as information about the student's performance on the first testlet.

The system uses this available information to decide what level testlet to deliver is part of Dynamic Learning Maps dynamic routing system. Each subsequent testlet is selected for the student by the system based on the cumulative performance information about the student.

Each testlet is packaged and delivered separately and the test administrator determines when to schedule each testlet within the larger window.

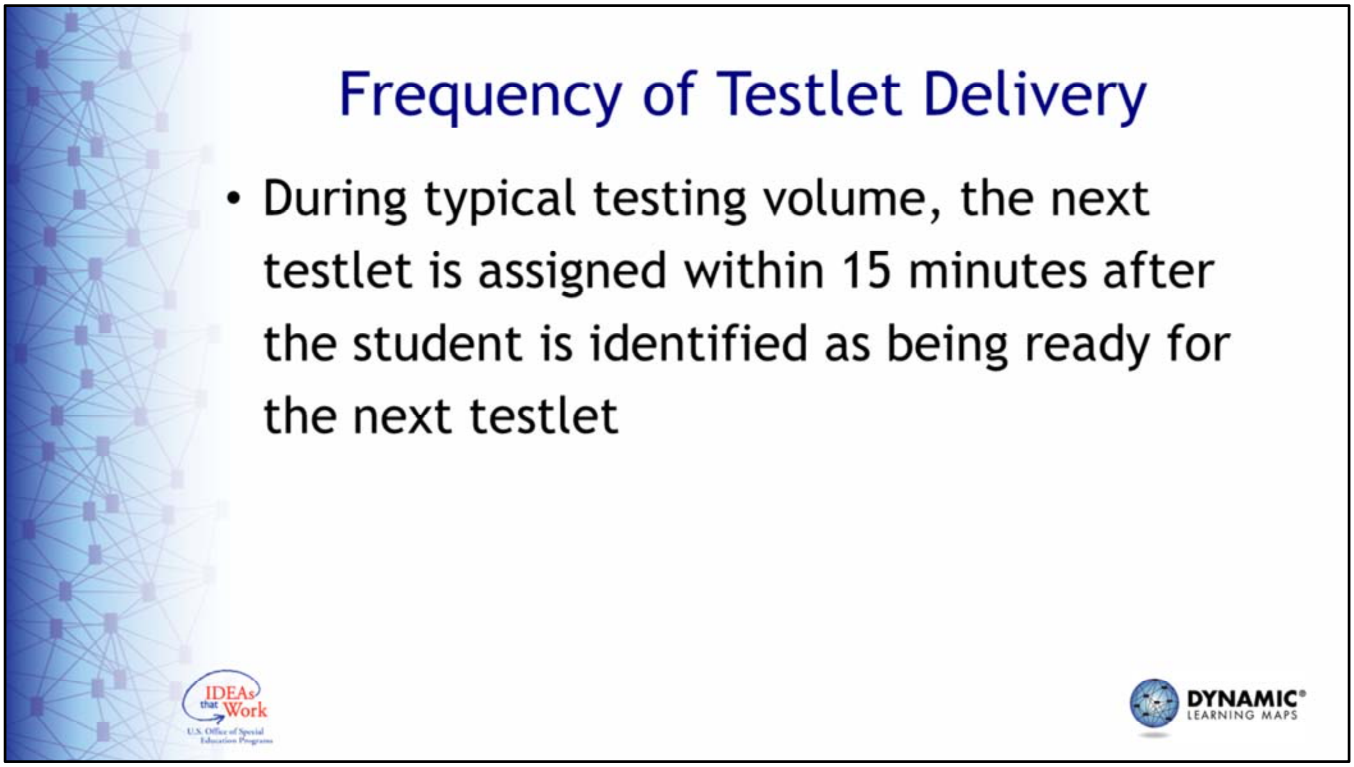


The DLM system will select the first testlet based on the student's prior information provided in the First Contact survey. After the student takes the first testlet in the spring testing window, the system then delivers the remaining testlets by adapting between testlets based on the cumulative information about the student, including First Contact and previous testlets administered during the spring window. The more assessment responses the student has, the less the system relies on First Contact information to determine linkage level assignment.

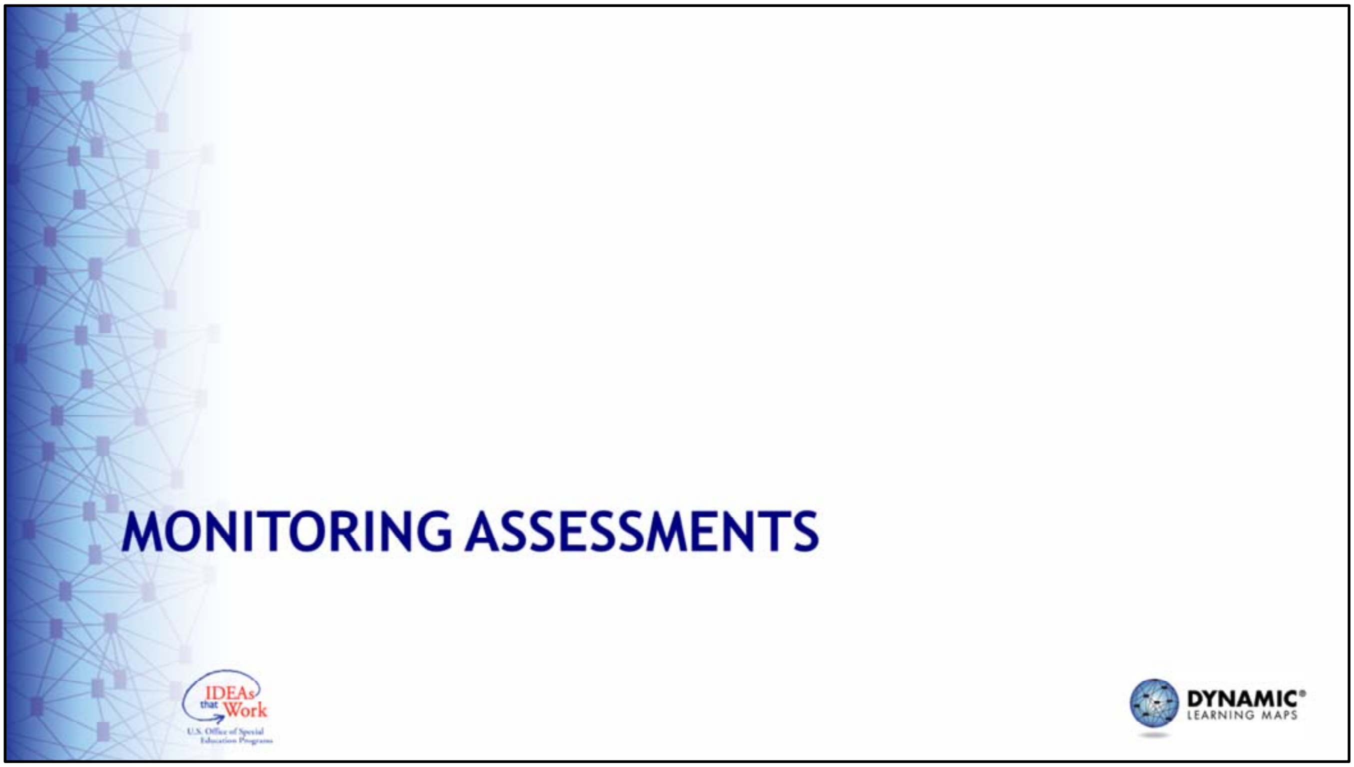


Each student begins with one testlet in ELA and one testlet in math. Once a testlet is completed, the system uses information to assign the next one in that subject area.

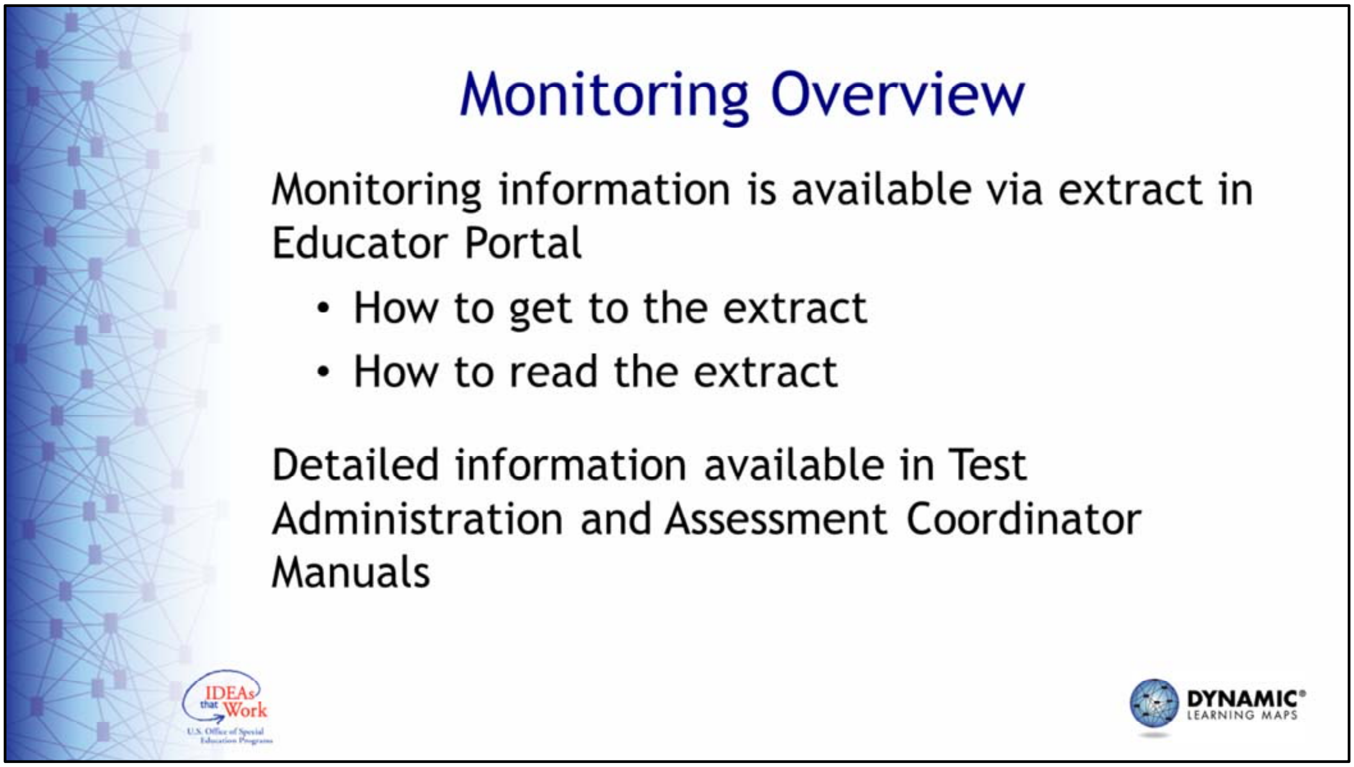
Teacher goes into Educator Portal
Retrieves student username and password
Retrieves Testlet Information Page (TIP)
Logs into KITE Client with student information
Delivers testlet to student
Waits for next testlet.



The KITE system delivers only one testlet at a time in each subject. After the student takes the first testlet, KITE Client delivers the next testlet, usually within 15 minutes.

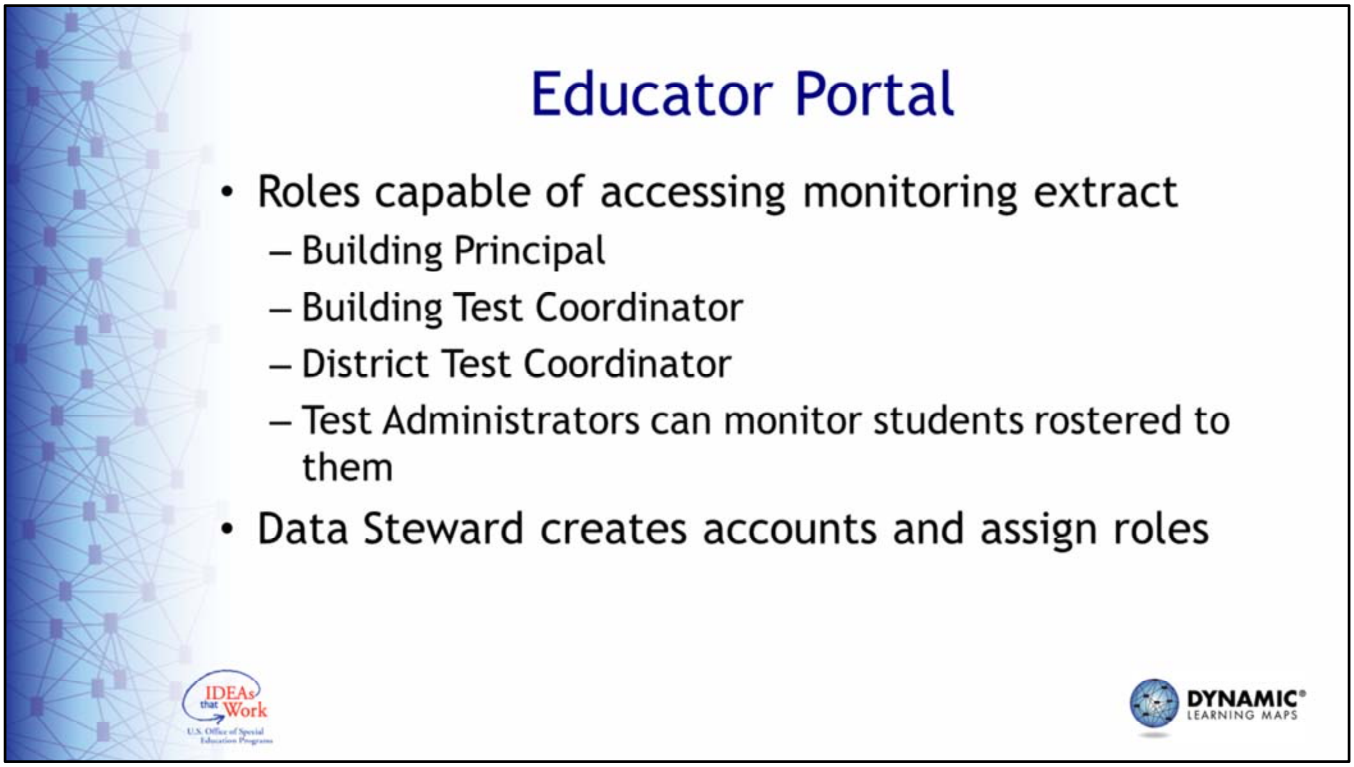


We will now discuss how to monitor assessments in Educator Portal.



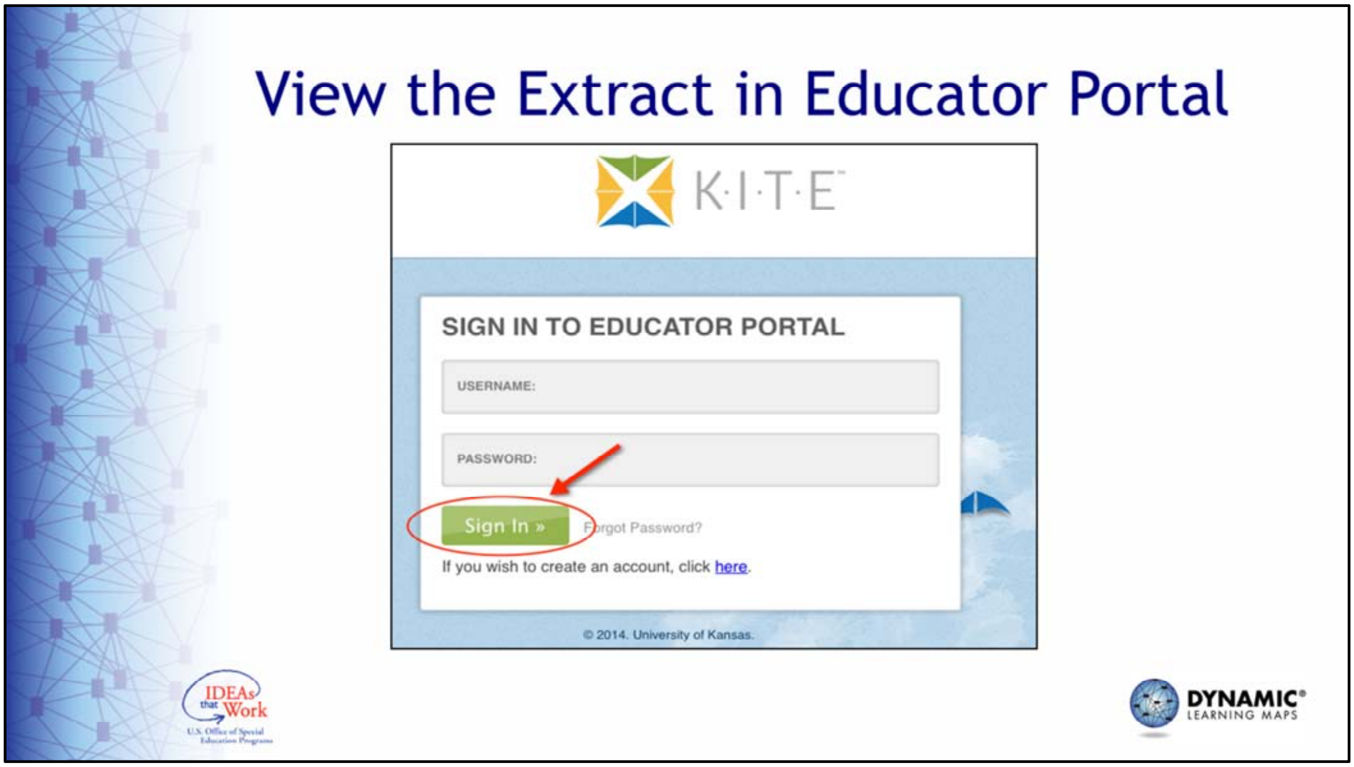
Monitoring information is available through an extract in Educator Portal. We will go over how to get to the extract and how to read the extract.

You can find the same information, with more detail, in the Test Administration Manual.



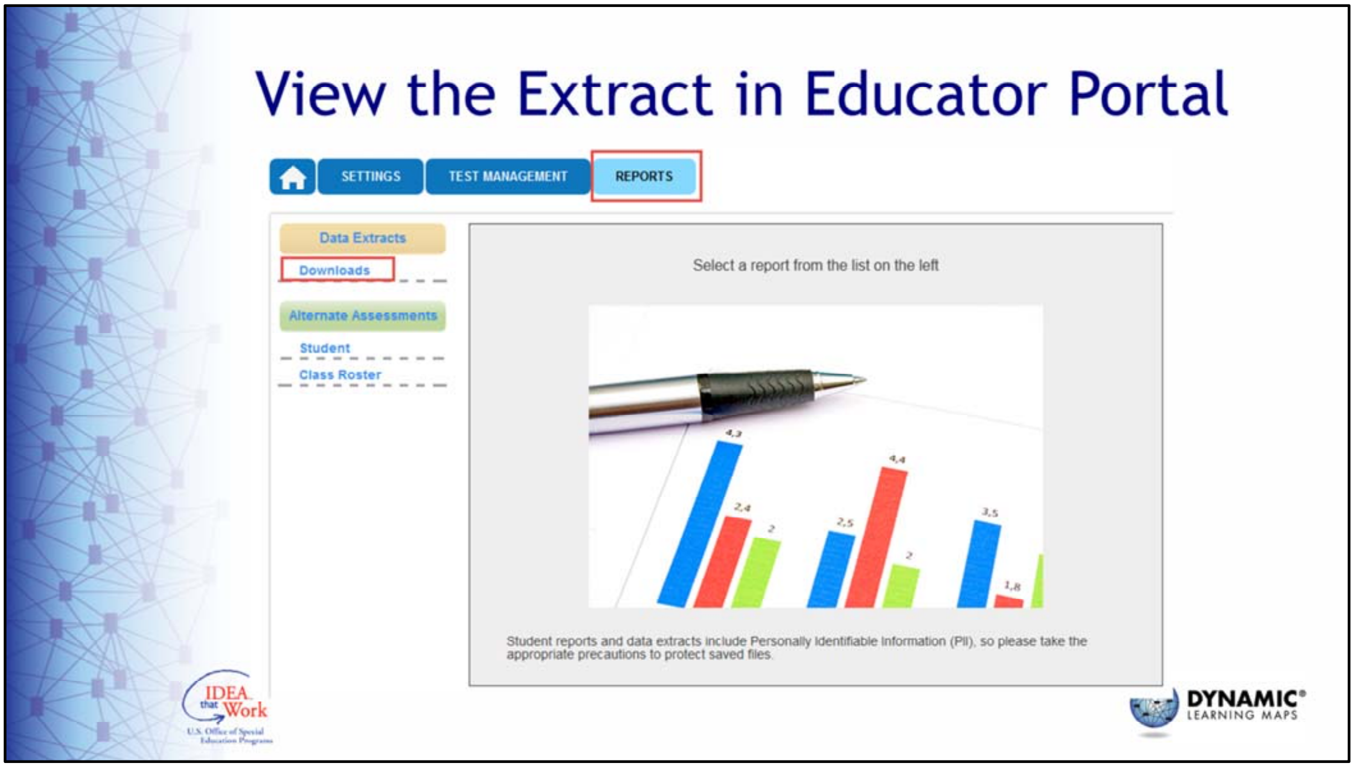
To access the monitoring extract you will need one of the following roles:
Building Principal
Building Test Coordinator
District Test Coordinator
Test Administrators can monitor students rostered to them
Your Data Steward has the ability to create an account and assign your role

Building roles can view student information in the building while district roles can view student information in a district.
Test administrators are able to view students rostered to them.



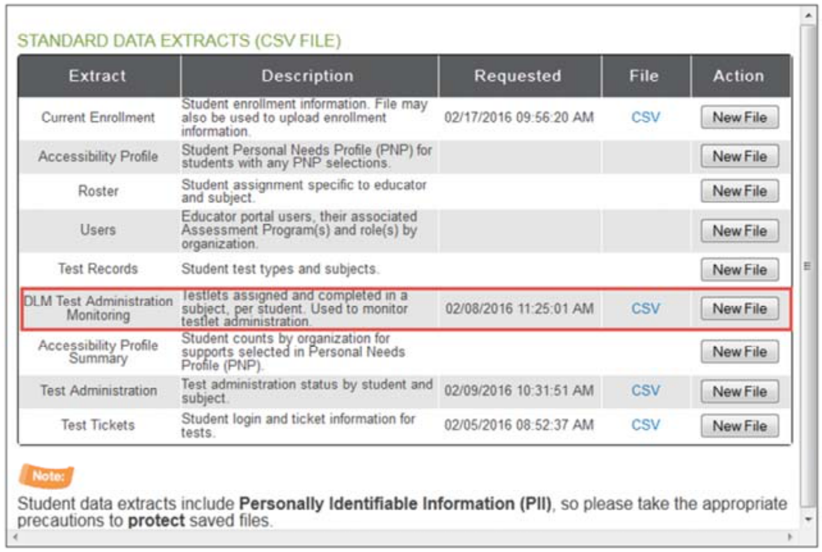
We will quickly walk through these steps. You can find the same steps, with screen shots, in the Test Administration Manual, under the section titled View a Data Extract.

1. Log in to Educator Portal



2. Click Reports
3. Click Downloads under Data Extracts

View the Extract in Educator Portal



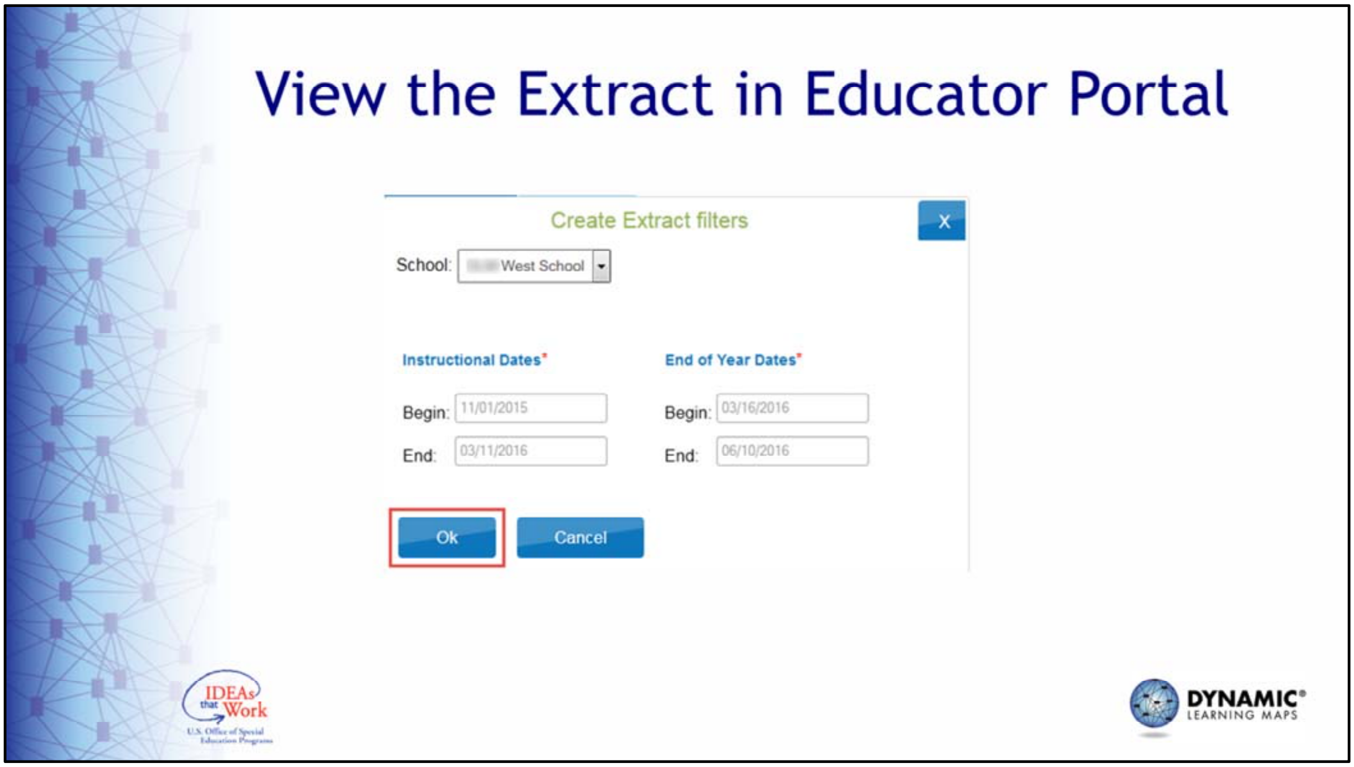
STANDARD DATA EXTRACTS (CSV FILE)

Extract	Description	Requested	File	Action
Current Enrollment	Student enrollment information. File may also be used to upload enrollment information.	02/17/2016 09:56:20 AM	CSV	New File
Accessibility Profile	Student Personal Needs Profile (PNP) for students with any PNP selections.			New File
Roster	Student assignment specific to educator and subject.			New File
Users	Educator portal users, their associated Assessment Program(s) and role(s) by organization.			New File
Test Records	Student test types and subjects.			New File
DLM Test Administration Monitoring	Testlets assigned and completed in a subject, per student. Used to monitor testlet administration.	02/08/2016 11:25:01 AM	CSV	New File
Accessibility Profile Summary	Student counts by organization for supports selected in Personal Needs Profile (PNP).			New File
Test Administration	Test administration status by student and subject.	02/09/2016 10:31:51 AM	CSV	New File
Test Tickets	Student login and ticket information for tests.	02/05/2016 08:52:37 AM	CSV	New File

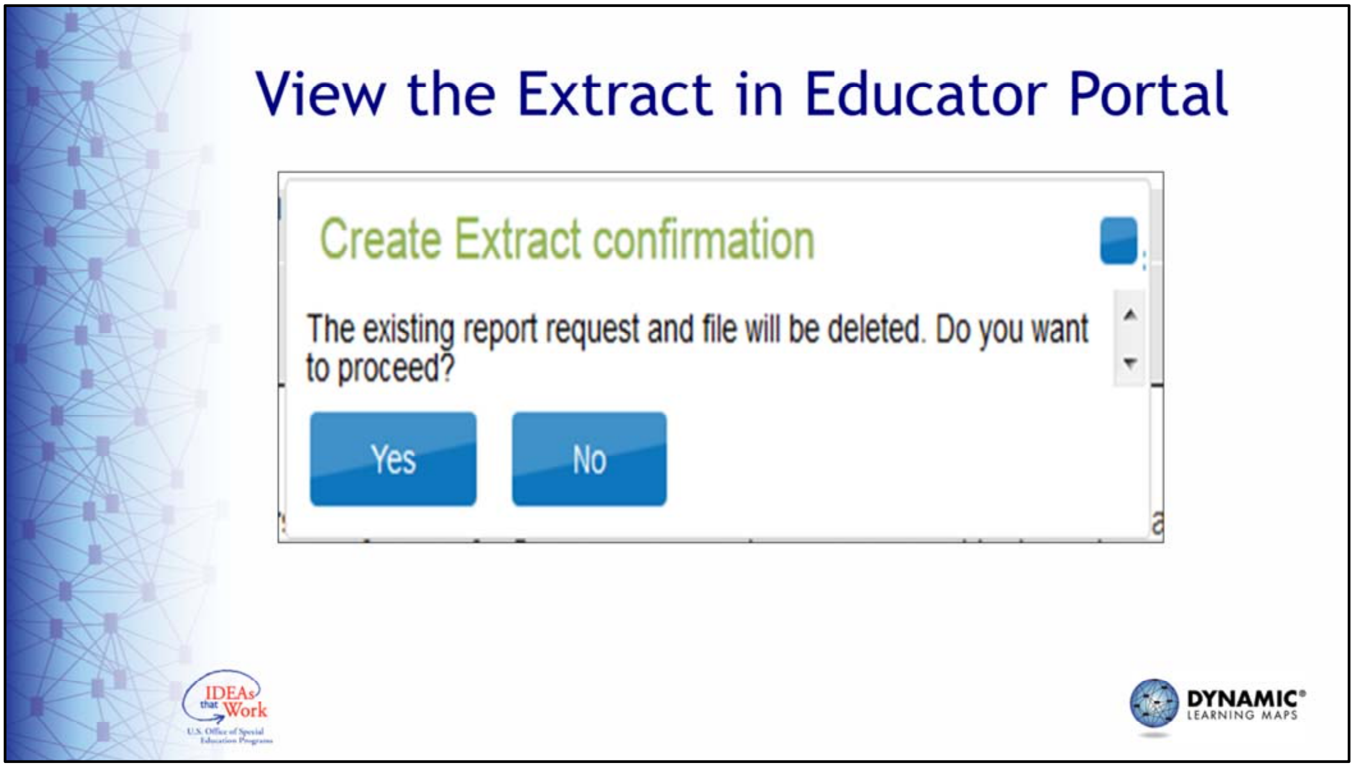
Note:

Student data extracts include **Personally Identifiable Information (PII)**, so please take the appropriate precautions to **protect** saved files.

4. Click New File for DLM Test Administration Monitoring

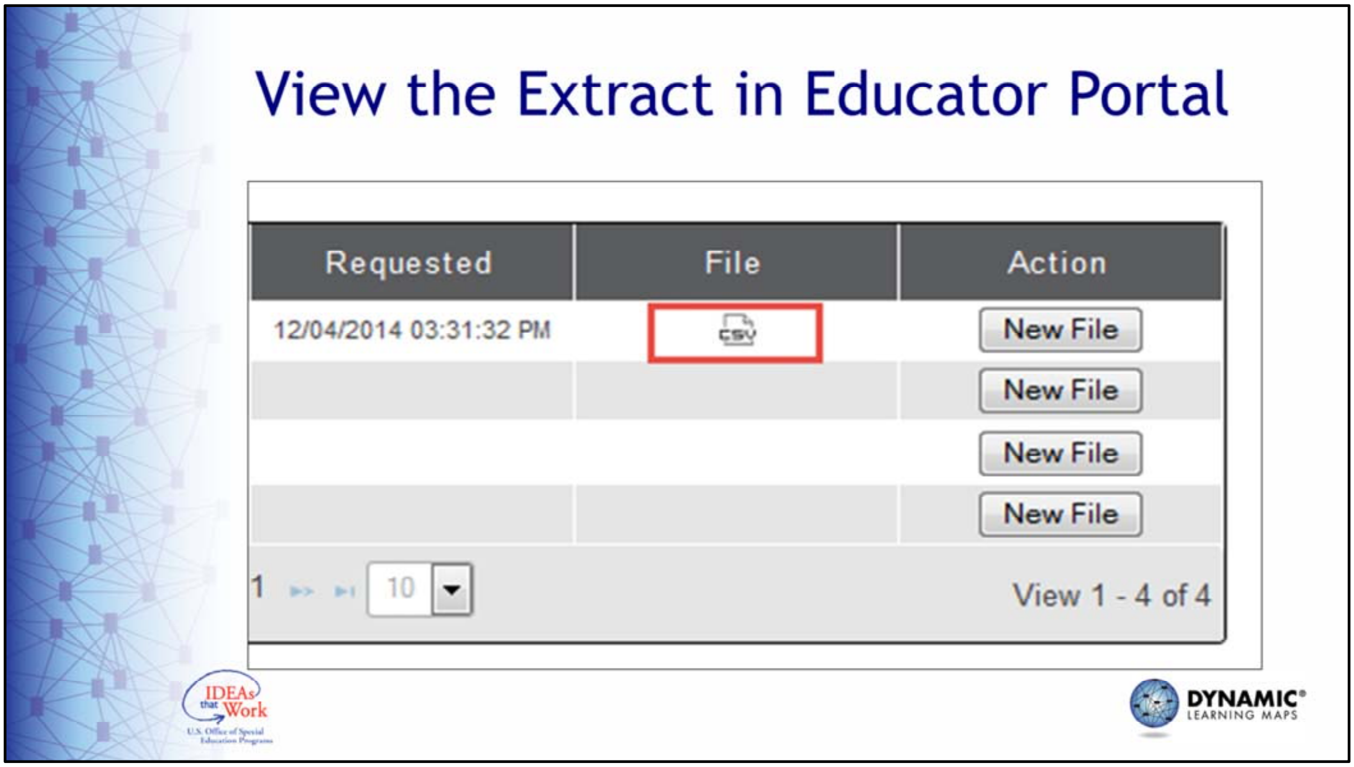


5. Depending upon your level of access, you may be prompted to select your organization (district or school).
6. Choose begin and end dates when applicable; click **Ok**.



7. If you accessed the report previously, you will receive this message. Click **Yes** to proceed.

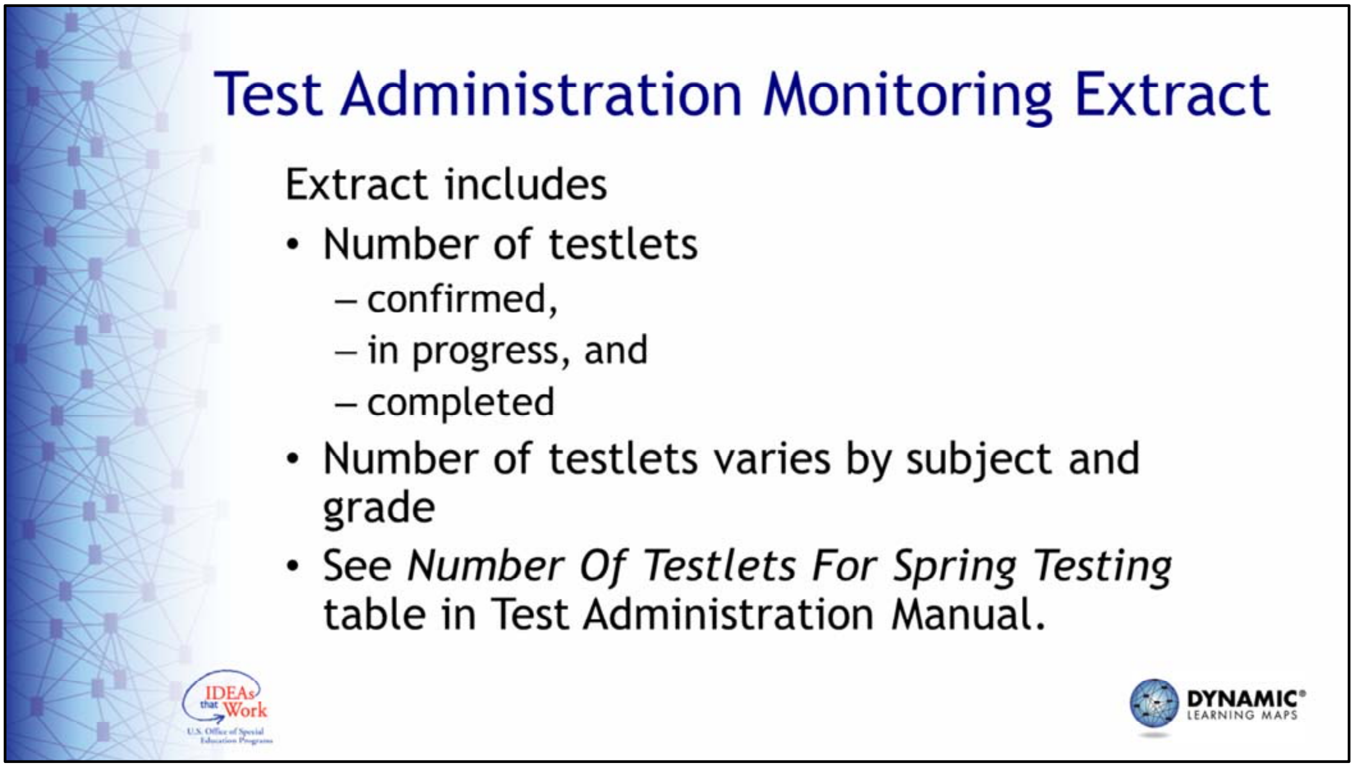
Hint: Each request for an extract replaces the previous extract. Save extracts to your computer if you require an archive. Extracts contain Personally Identifiable Information, so use care to protect the data securely.



8. The File field transitions from “In Progress” to a CSV icon or acronym.

9. Click the CSV icon
Hint: Think of a CSV file as a completely unformatted Excel file. The inability to apply formatting mostly impacts fields with leading zeroes.

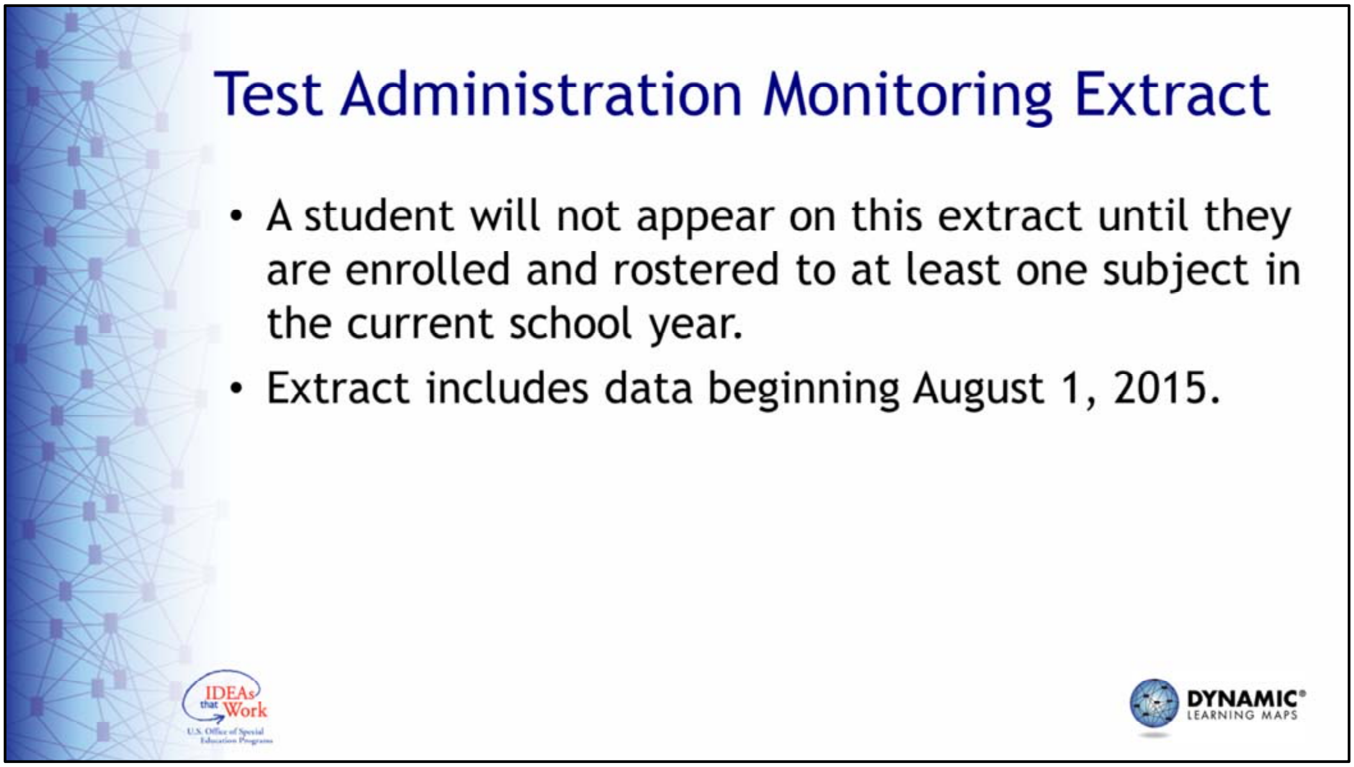
10. Follow your browser’s procedure for viewing/saving the file



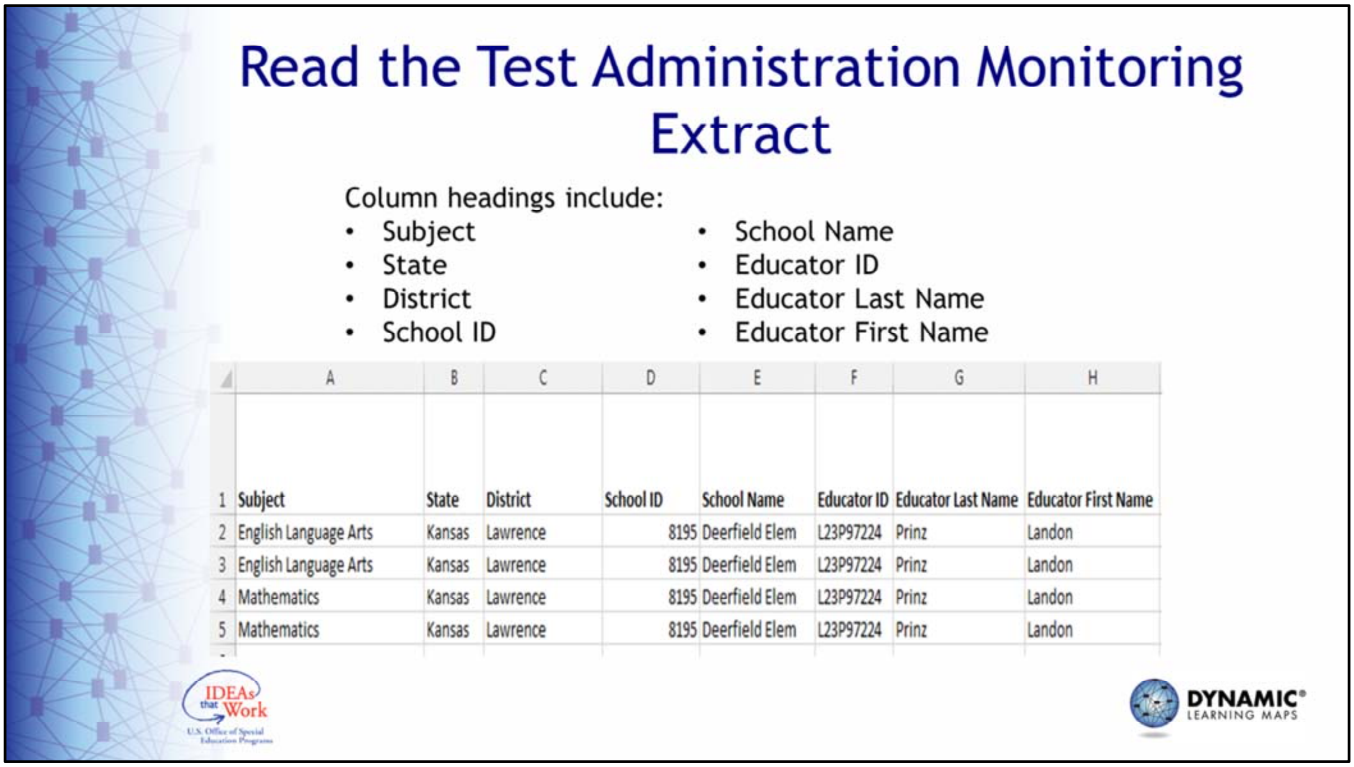
The test administration monitoring extract includes:
The number of testlets confirmed, in progress, and completed by a student.

Please remember, the number of testlets varies by subject and grade.

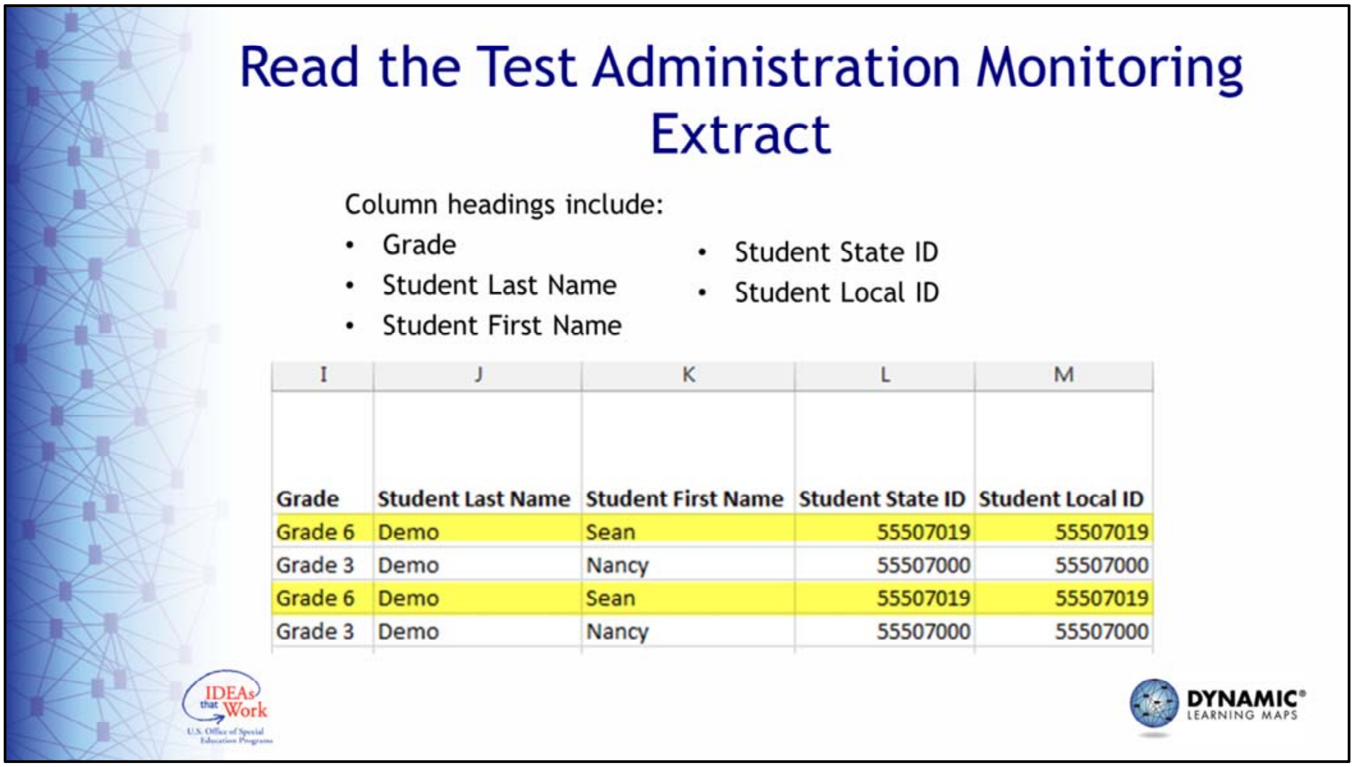
For more information , see the table titled Number Of Testlets For Spring Testing in the back of the Test Administration Manual.



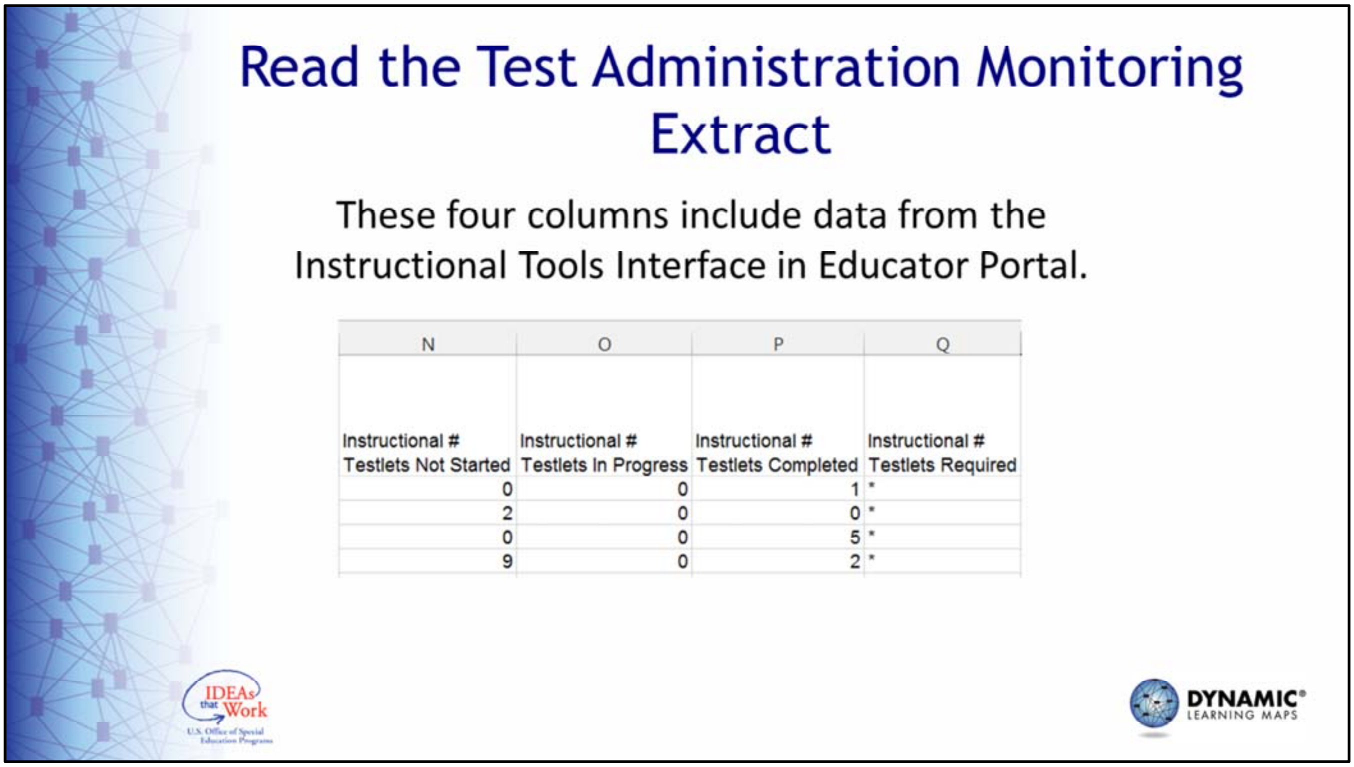
Other information to remember regarding the test administration monitoring extract is that a student will not appear on this extract until they are enrolled and rostered to at least one subject in the current school year. Also, information in the extract includes data beginning August 1, 2015.



This extract has many column headings. In the next four slides, we'll show you part of the extract.
The first columns include school, district, and educator data. Note how there are separate rows for each subject area.

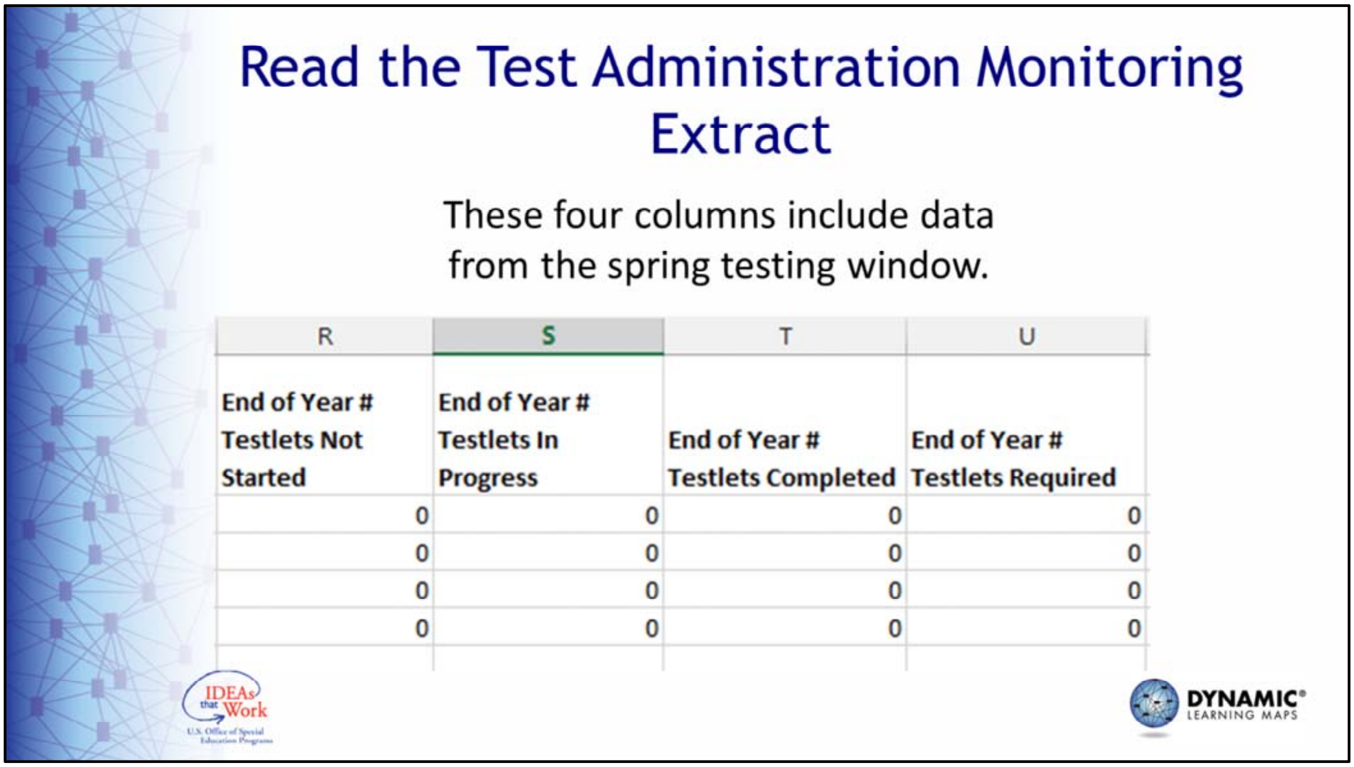


The next columns include student demographic data. Note how Sean and Nancy appear twice; one row is for math and one for ELA.



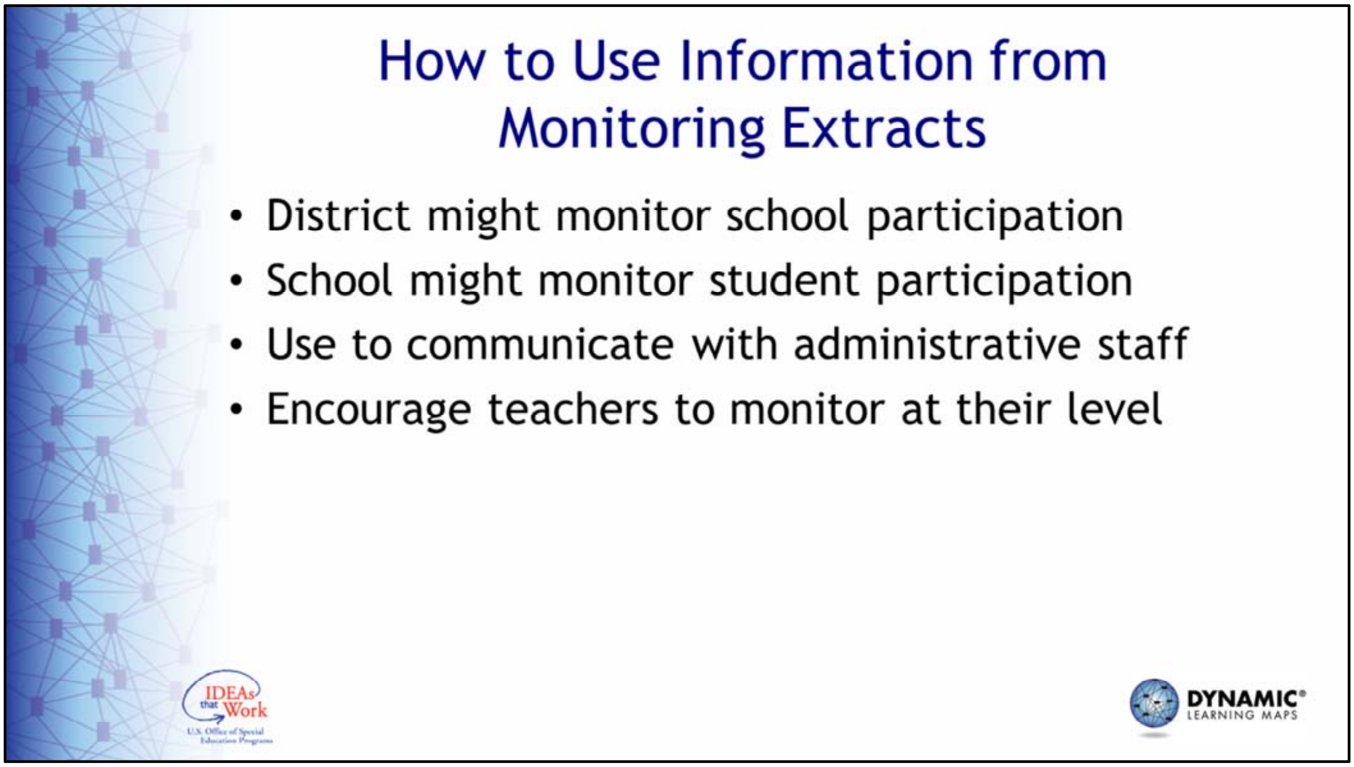
These four columns include data from the Instructional Tools Interface in Educator Portal, where a teacher chose an Essential Element, provided instruction, and administered testlets earlier in the school year.
Hint: The Instructional Begin and End dates you chose when downloading the report, impact the data in these columns.

N: The number of instructional plans confirmed for a student but which the student has not started.
O: The number of testlets which are in progress. (If you are pulling the report with a start date of March 16 or later, this should be zero, unless the teacher left an incomplete testlet open from an earlier testing phase.)
P: The number of instructional testlets completed by the student.
Q: Will have an asterisk because there is no standard number of testlets required across all states.

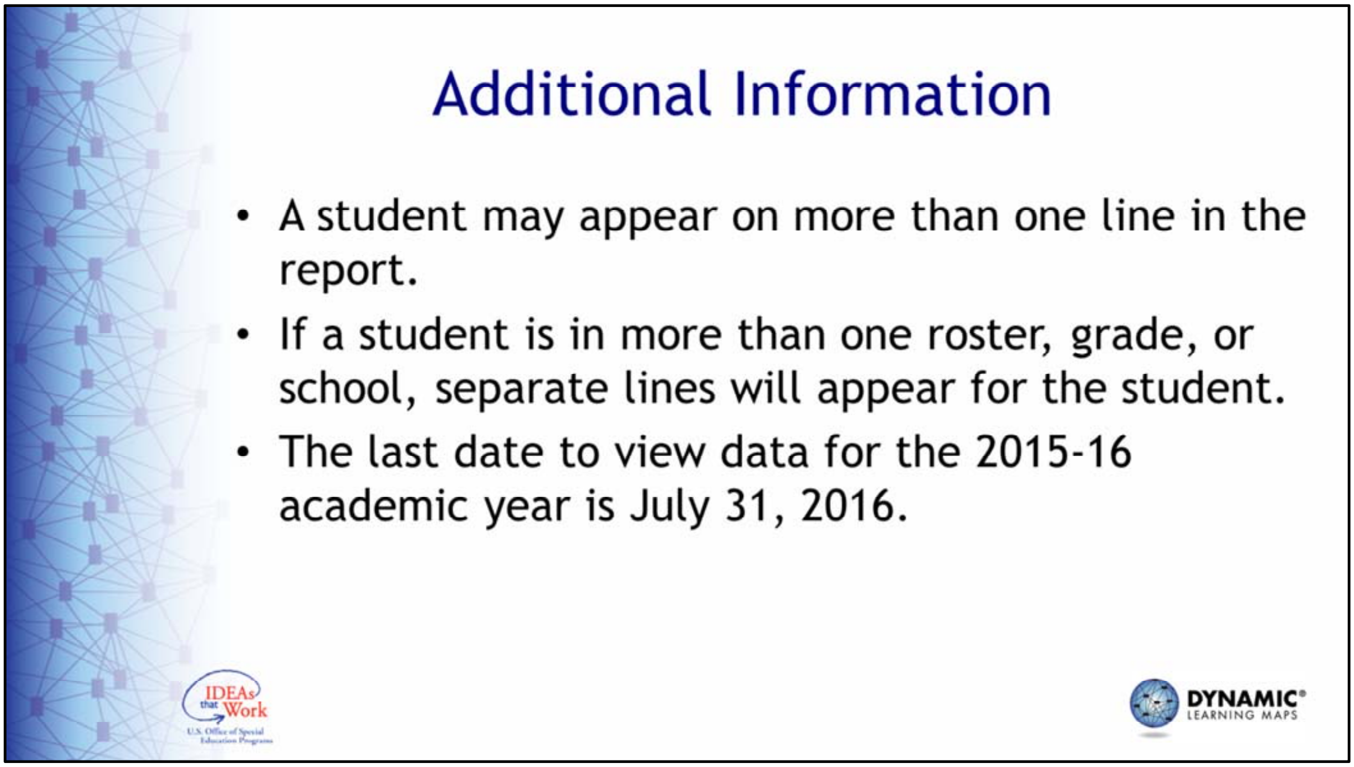


These four columns include data from the spring testing window.
Hint: The End of Year Begin and End dates you chose when downloading the report, impact the data in these columns.

R: The number of testlets assigned by the system for the spring testing window but which the student has not yet started.
S: The number of testlets which are in progress.
T: The number of testlets from the spring testing window which have been completed by the student. **By the end of the state's spring testing window, the numbers in this column should equal the number in the "End of Year # Testlets Required" column.**
U: The number of required testlets based on the blueprint for the subject.



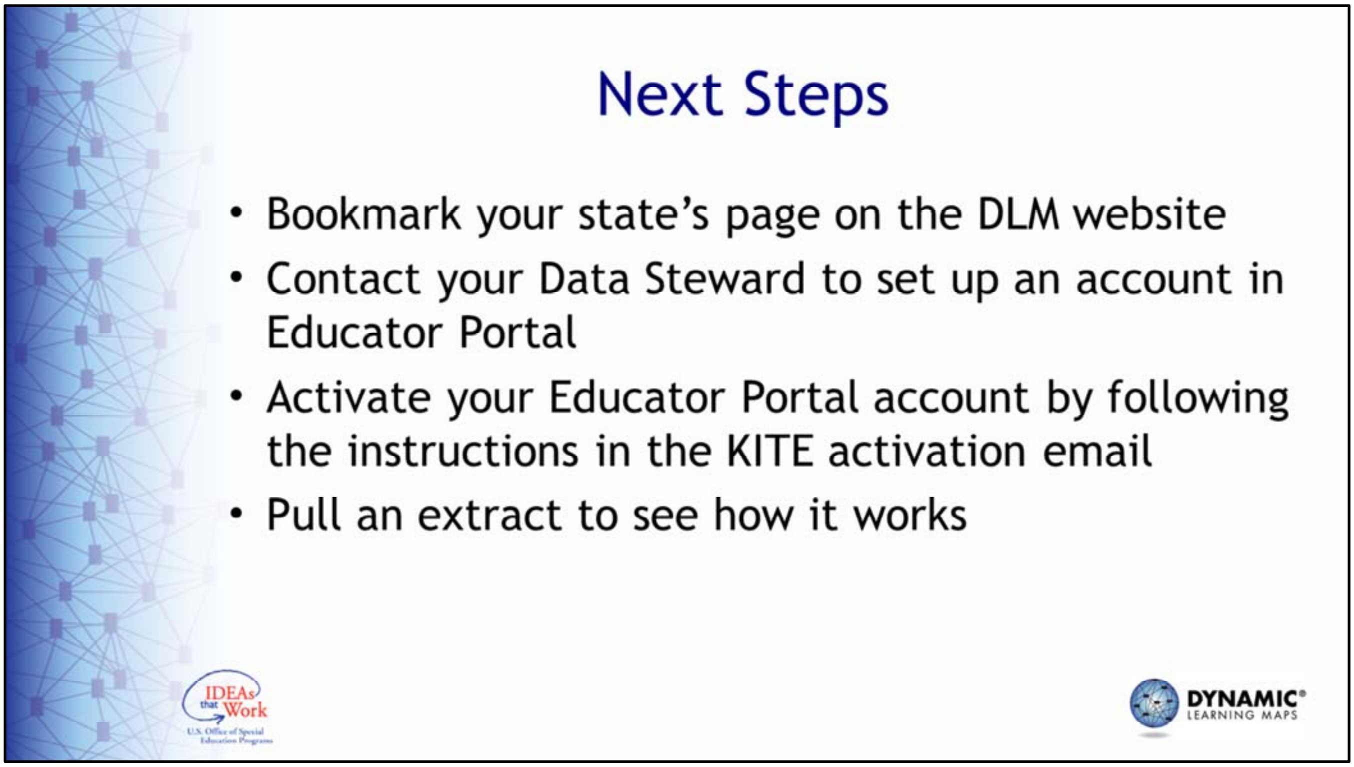
There are various reasons a building principal may want to use the information provided in the monitoring extracts. For instance, districts may want to monitor school or student participation. The extracts could also be useful to encourage teachers to monitor students rostered to them.



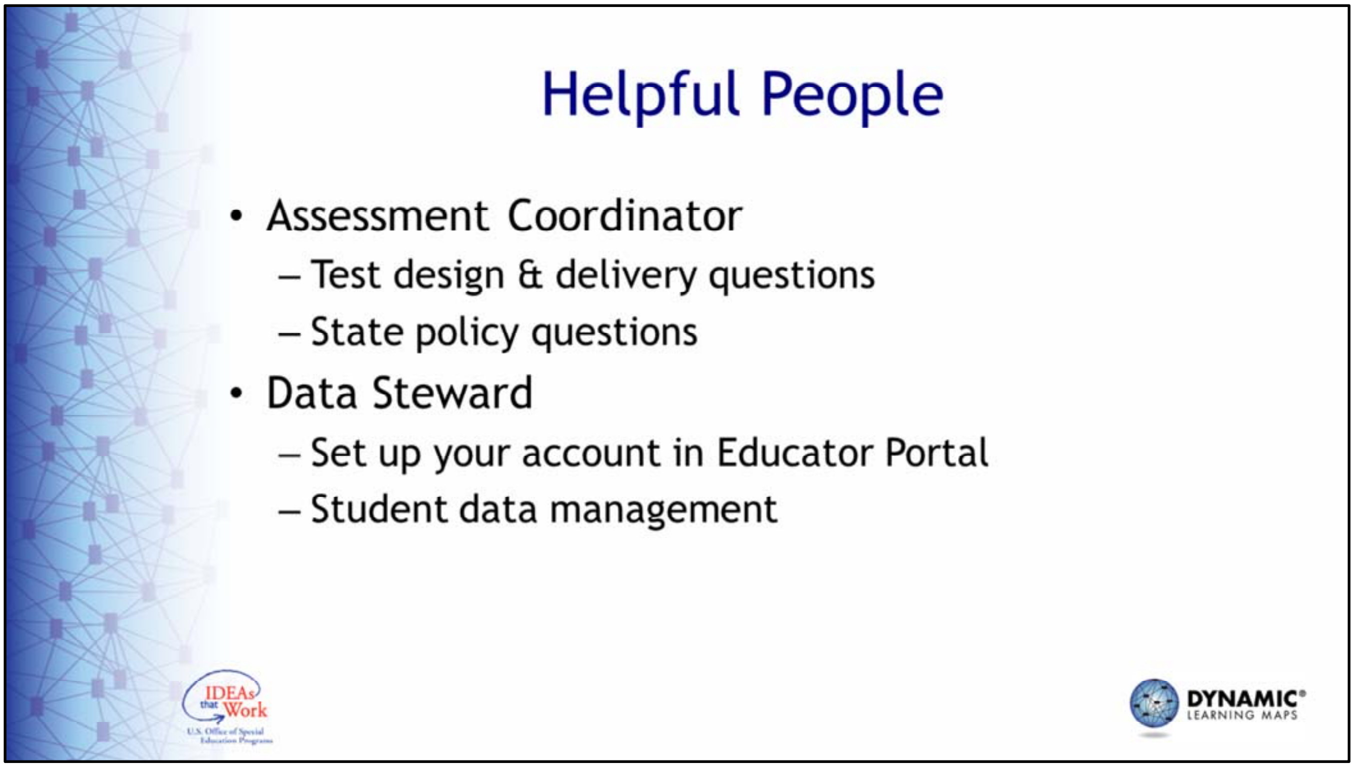
Here are a few important notes to highlight:

1. A student may appear on more than one line in the report
2. If a student is in more than one roster, grade or school, separate lines will appear for the student
3. The last date to view data for the 15-16 academic year is July 31, 2016.

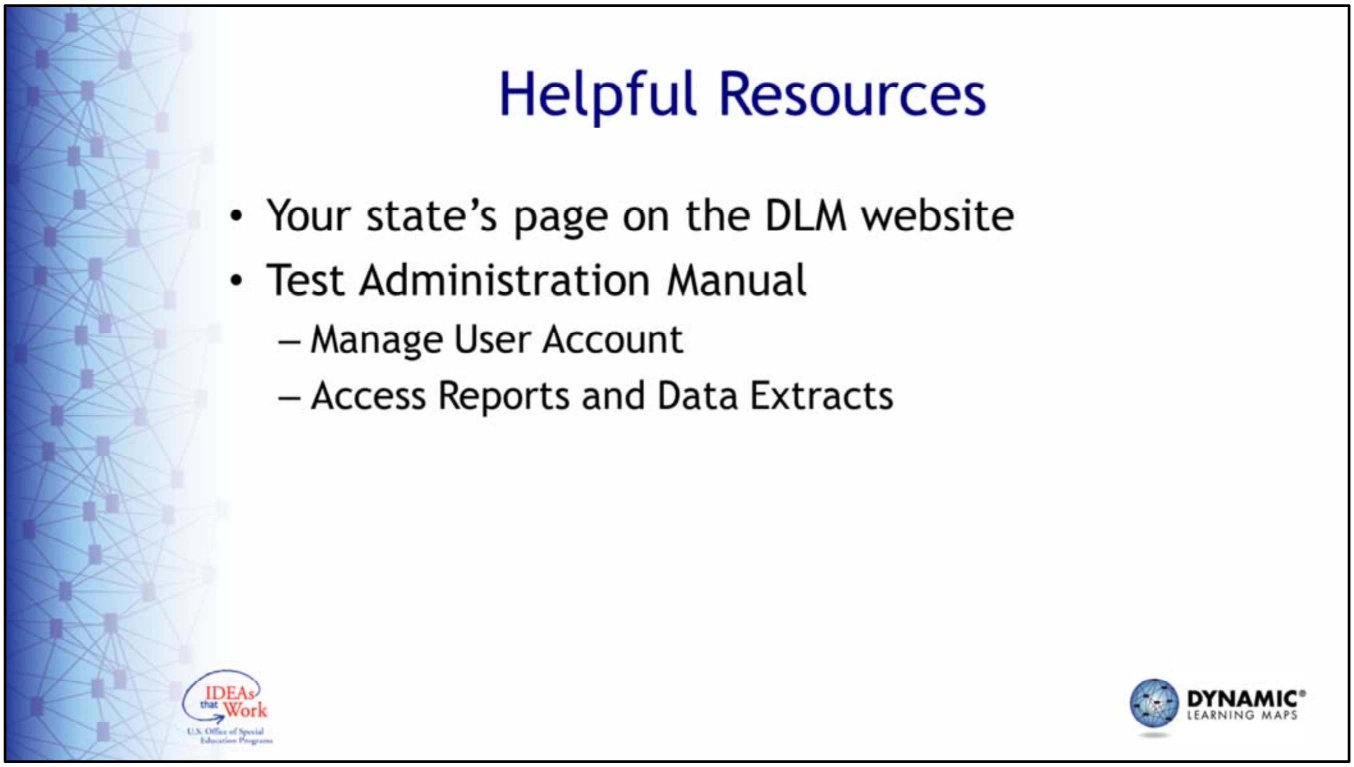
We will now go over some important next steps and helpful resources that DLM has provided.



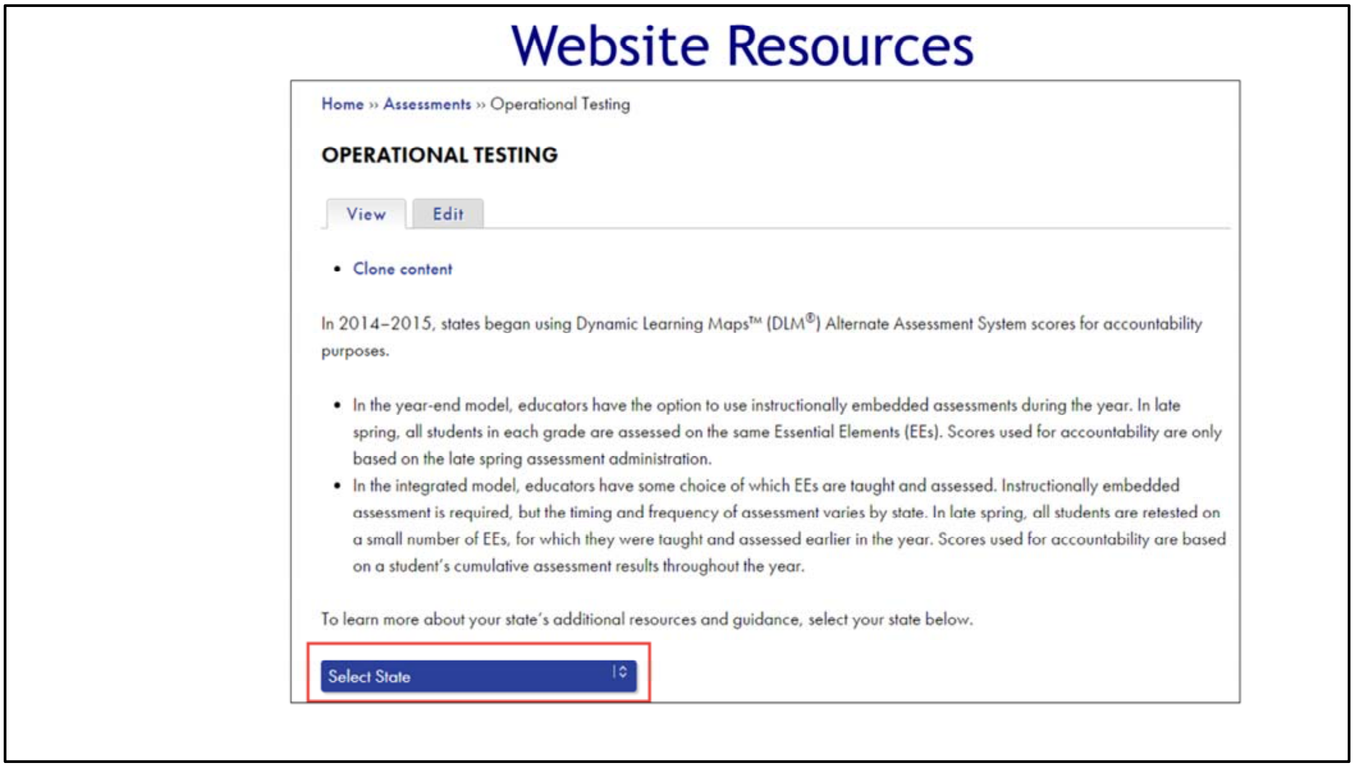
First, we suggest bookmarking your state's page on the DLM website. This is where all up-to-date information is housed and the most current versions of all the manuals where you can find the information covered in this webinar. Next, be sure to contact your district's Data Steward to set up an account in Educator Portal. You will be able to activate your Educator Portal account by following the instructions in the KITE activation email. Last, pull an extract to see how it works.



The Assessment Coordinator and Data Stewards in your district or building are helpful resources regarding DLM Assessments. The Assessment Coordinator will be able to answer questions regarding topics like the test design and state policies. Your Data Steward will be able to assist you in setting up your account in Educator Portal and managing student data.



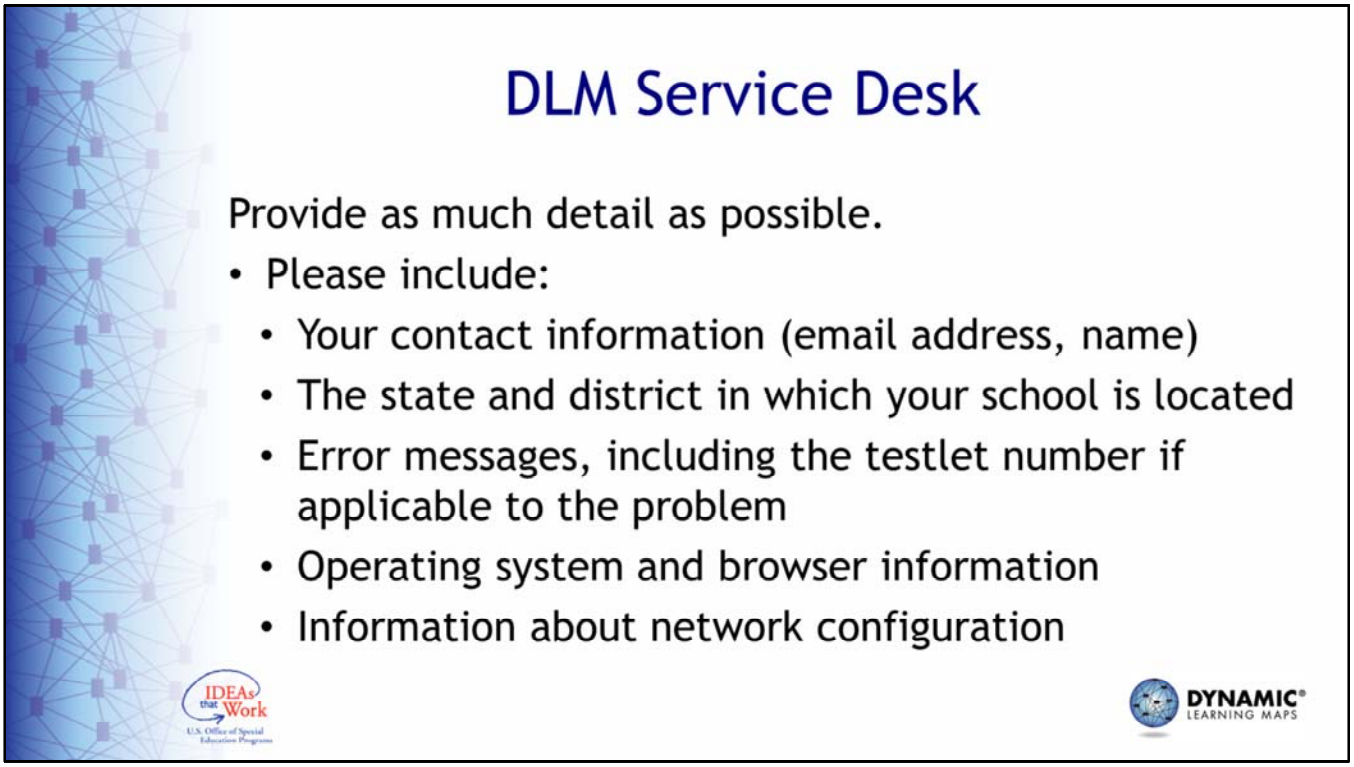
For additional questions pertaining to Accessibility, First Contact Survey, Educator Portal and KITE Client please see your state's DLM webpage. The Test Administration Manual also has more information about how to manage user accounts and accessing reports and data extracts.



To find your state's DLM webpage go to dynamiclearningmaps.org, click on Assessments then Operational Testing and select your state from the drop down.

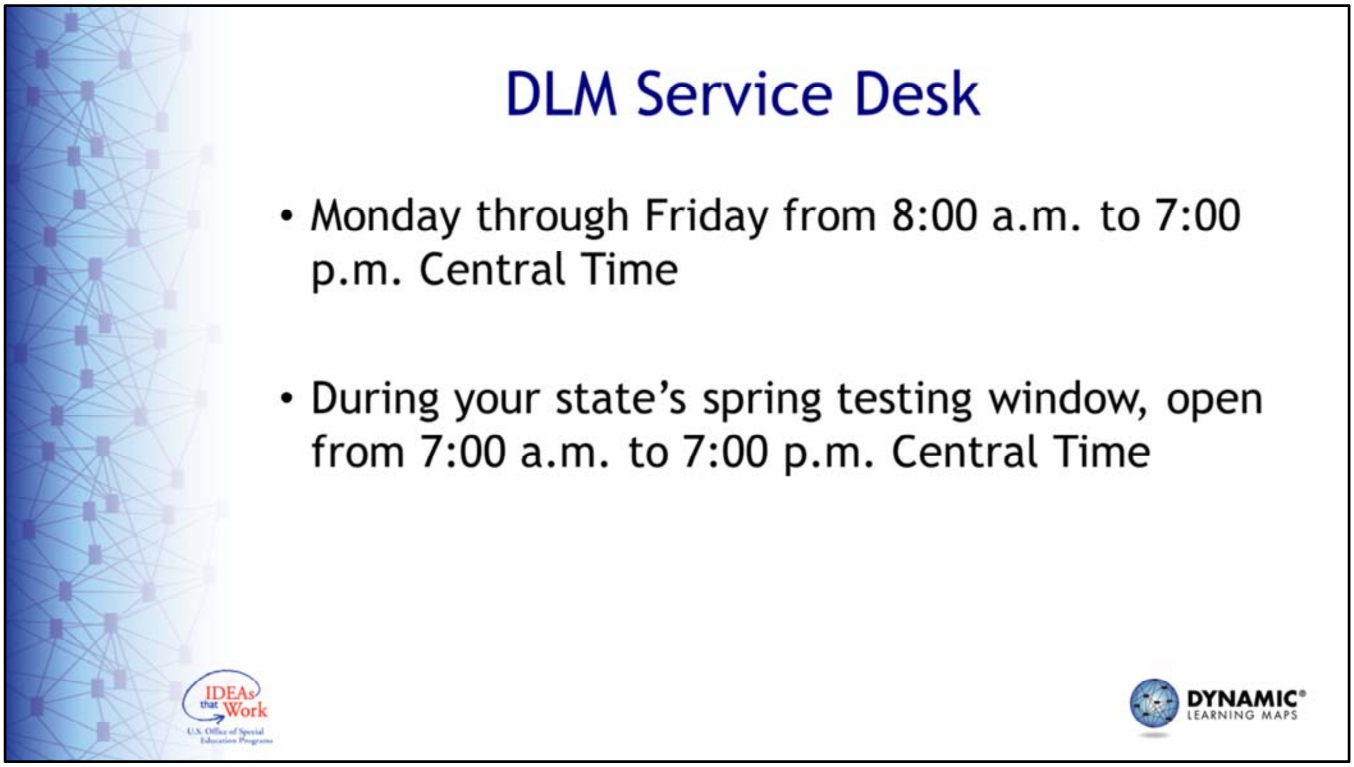
Once on your state's page, find the section on the right titled **District Staff Training Resources**. This is where district staff such as Assessment Coordinators, Data Stewards, and Technical Liaisons can learn about DLM responsibilities and procedures through training resources and events.

On screen you are seeing contact information for the DLM Service Desk. The Service Desk team is able to answer many questions, especially those related to Educator Portal and the KITE Client.



When contacting the Service Desk, provide as much detail as possible about the issues encountered and the system on which it occurred. Be sure to include information such as:

- Your contact information including email address and name
- The state and district in which your school is located
- Error messages, including the testlet number if applicable to the problem
- Operating system and browser information
- Information about network configuration



Hours of operation for the service desk are Monday through Friday, 8 am to 7pm central time. During your state's operational testing window, the service desk will be open from 7 am to 7 pm central time.


THANK YOU!
For more information, go to:
www.dynamiclearningmaps.org
For questions, please contact:
dlm-support@ku.edu
IDEAs that Work
The present publication was developed under grant 84.373X100001 from the U.S. Department of Education, Office of Special Education Programs. The views expressed herein are solely those of the author(s), and no official endorsement by the U.S. Department should be inferred.
DYNAMIC
LEARNING MAPS

Thank you!

Dynamic Learning Maps™ Participation Guidelines

Participation in the Dynamic Learning Maps Alternate Assessment requires a yes answer to each of the following questions. Each state participating in the Dynamic Learning Maps will determine whether its IEP teams must select alternate assessment as the appropriate option for all subjects or whether teams may decide a student's participation separately for each subject.

Check your state's DLM webpage to see if your state provided customized participation guidelines.

Participation Criterion	Participation Criterion Descriptors	Agree (Yes) or Disagree (No)? Provide documentation for each
1. The student has a significant cognitive disability	Review of student records indicate a disability or multiple disabilities that significantly impact intellectual functioning and adaptive behavior. **Adaptive behavior is defined as essential for someone to live independently and to function safely in daily life.*	Yes / No
2. The student is primarily being instructed (or taught) using the DLM Essential Elements as content standards	Goals and instruction listed in the IEP for this student are linked to the enrolled grade level DLM Essential Elements and address knowledge and skills that are appropriate and challenging for this student.	Yes / No
3. The student requires extensive direct individualized instruction and substantial supports to achieve measureable gains in the grade-and age-appropriate curriculum.	The student a. requires extensive, repeated, individualized instruction and support that is not of a temporary or transient nature and b. uses substantially adapted materials and individualized methods of accessing information in alternative ways to acquire, maintain, generalize, demonstrate and transfer skills across multiple settings.	Yes / No

The following are not allowable (or acceptable) considerations for determining participation in the Dynamic Learning Maps Alternate Assessment.

1. A disability category or label
2. Poor attendance or extended absences
3. Native language/social/cultural or economic difference
4. Expected poor performance on the general education assessment
5. Academic and other services student receives
6. Educational environment or instructional setting
7. Percent of time receiving special education
8. English Language Learner (ELL) status
9. Low reading level/achievement level
10. Anticipated student's disruptive behavior
11. Impact of student scores on accountability system
12. Administrator decision
13. Anticipated emotional duress
14. Need for accommodations (e.g., assistive technology/AAC) to participate in assessment process

DATA USE AGREEMENT BETWEEN

[Insert State Education Authority Name] (STATE)
and
University of Kansas Center for Research, Inc.(KUCR)

This Data Use Agreement is made and entered into as of August 1, 2015 by and between STATE, hereafter "Holder," the University of Kansas Center for Research, Inc., hereafter "Recipient."

1. This agreement sets forth the terms and conditions pursuant to which Holder will disclose certain protected educational information, hereafter "PEI" in the form of a Limited Data Set to the Recipient.

2. Terms used, but not otherwise defined, in this Agreement shall have the meaning given the terms in the **United States Department of Education Regulations** 20 U.S.C. § 1232g; 34 CFR Part 99, also known as FERPA.

3. The purpose of this disclosure is to support the development and implementation of the Dynamic Learning Maps Alternate Assessment System for [Insert State Name] students. This purpose falls under both FERPA section 99.31(a)(6)(i)(A) which allows such disclosure in order to "Develop, validate, or administer predictive tests," or "Improve instruction," and FERPA section 99.35(a)(1) which allows such disclosure for the evaluation of state and federal education programs.

   For purposes of this study, personally identifiable information about students with disabilities will be provided to the Recipient whenever Holder will want score reporting. For uses that do not require score reporting student names may be redacted at the sole discretion of the Holder and an identifier provided by Holder will be used to identify students during the administration of the Dynamic Learning Maps project.

4. Permitted Uses and Disclosures

   4.1 Except as otherwise specified herein, Recipient may make all uses and disclosures of the Limited Data Sets necessary to conduct the research described herein:

      4.1.1 Student data necessary for evaluation, test development, and support of instruction will include demographic information, education and disability status, indicators of current English/language arts and mathematics skills, and performance results on the Dynamic Learning Maps assessment. This information is intended to ensure test questions are useful and unbiased, inform the appropriate placement of the student in the computer-based assessment, and aid in the interpretation of the assessment results.

4.1.2 Common Measures for **teacher evaluation** include collection of demographic information, teacher experience, and teacher responses to a survey about their own and their students' experiences with the Dynamic Learning Maps assessment. This information is intended to inform the test development and professional development activities.

5. Recipient Responsibilities

5.1 The Recipient will not use or disclose the Limited Data Set for any purpose other than permitted by this Agreement pertaining to the Project, or as required by law. If disclosure of data of any kind is deemed necessary, it will take place only after prior notification of the Holder.

5.2 The Recipient will use appropriate administrative, physical, and technical safeguards to prevent use or disclosure of the Limited Data Set other than as provided for by this Agreement.

5.3 The Recipient will report to the Holder any use or disclosure of the Limited Data Set not provided for by this Agreement. The report should be made (to Holder, by Recipient) within 24 hours of its discovery.

5.4 The Recipient will ensure that any agent, including a subcontractor, to whom it provides the Limited Data Set, agrees to the same restrictions and conditions that apply through this Agreement to the Recipient with respect to the Limited Data Set.

5.5 The Recipient will not identify the information contained in the Limited Data Set. Any reports or materials developed by Recipient or subcontractors that use data provided under this Agreement, will not contain any personally identifiable information that is protected by the Family Educational Rights and Privacy Act (FERPA), 34 CFR 99.

5.6 The Recipient will not contact the individuals who are the subject of the PEI contained in the Limited Data Set.

6. Term and Termination

6.1 The terms of this Agreement shall be effective as of August 1, 2015 and shall remain in effect until all PEI in the Limited Data Set provided to the Recipient is destroyed or returned to the Holder.

6.2 Upon the Holder's knowledge of a material breach of this Agreement by the Recipient, the Holder shall provide an opportunity for Recipient to cure the breach or end the violation. If efforts to cure the breach or end the violation are not successful within the reasonable time period specified by the Holder, the Holder shall discontinue disclosure of the Limited Data Set to the Recipient if the Holder determines cure of the breach is not possible.

6.3 Both Holder and Recipient shall have the right to terminate this Data Use Agreement for any reason by providing sixty (60) days' notice of termination of this Data Use Agreement to the other party (Holder or Recipient).

7. General Provisions

7.1 The Recipient and Holder understand and agree that individuals who are the subject of Protected Educational Information are not intended to be third party beneficiaries of this Agreement.

7.2 This Agreement shall not be assigned by Recipient without the prior written consent of the Holder.

7.3 Each party agrees that it shall be responsible for its own acts and the results thereof to the extent authorized by law and shall not be responsible for the acts of the other party or the results thereof.

8. Data Confidentiality and Security

8.1 The Recipient shall implement and adhere to policies and procedures that restrict access to the Limited Data Set. A complete list of individuals with access to the Limited Data Set will be identified and maintained.

8.2 Persons retrieving data/using data from the Limited Data Set shall never copy any student-level data to a laptop/desktop hard drive for any reasons. Tables and charts to be included in a project report may be stored outside of the secure hard drive or other secure data storage where the Limited Data Set is stored.

8.3 All individuals permitted to use or receive the Limited Data Set for purposes of the Project agree to handle pupil data in a manner that maintains privacy and confidentiality. All individuals using or receiving the Limited Data Set must sign and return DLM's data access form, which will be maintained for the length of the project and will be shared with Holder.

9. Transmission of Data

9.1 All student data shall be sent to the Recipient via a secure File Transfer Protocol (FTP) or other method selected by the Holder.

9.2 During this transmission data shall be secured based upon a method selected by the Holder.

10. Data Storage

    10.1 Personally identifiable information shall be kept, for a period not to exceed ten years, Holder's membership in the Dynamic Learning Maps Alternate Assessment, or the date when the data are no longer needed for the purposes for which the component of the project was conducted, whichever is the shortest duration.

    10.2 Data will be stored in a secure electronic format by the Recipient. All personally identifiable information connected with this Project shall be destroyed per 10.1. Recipient shall give Holder written notice of planned destruction of records at least thirty (30) days prior to such destruction.

11. Data Elements

    11.1 Attached is a Data Request (Attachment A) listing variables to be provided by Holder to Recipient for use with the Project. All data remains the property of Holder.

IN WITNESS WHEREOF, the parties hereto execute this agreement as follows:

State of [Insert State Name]

Date: ___________________________ By: ___________________________________

Title

Date: ___________________________ By: ___________________________________

Title

University of Kansas Center for Research, Inc.
2385 Irving Hill Road
Lawrence, KS 66045

Date: ___________________________ By: ____________________________________

Kristi Billinger

Director of Research Administration

DLM Consortium Procedures for Data Breaches

REVISED: 4/29/15

Purpose

As the DLM consortium enters the operational phase, it needs to develop business practices to support various aspects of an operational assessment program. This document describes proposed practices regarding security and/or privacy incidents and breaches. There are three parts to this document:

1. Procedures the Assessment and Achievement Institute (AAI) will take when breaches are suspected and/or confirmed
2. States' instructions to AAI about state-specific procedures for communication about suspected and confirmed breaches
3. The expected standard contents of reports from AAI about suspected and confirmed breaches.

Security Incident: Any event or circumstance that jeopardizes or has the potential to jeopardize the availability, integrity, or confidentiality or an information system or the actual information that the system processes, stores, or transmits. Security incidents also include any event or circumstance that represents a violation (or the imminent threat of such a violation) of security policies or procedures, or acceptable use policies for information systems or the information stored therein.

For assessments and assessment systems, security incidents may include any instances in which unauthorized individuals attempt to access the system; any instances in which an electronic system fails to maintain adequate security; or any instances in which authorized system users fail to observe or follow documented procedures established through ethical codes (or other codes of conduct), test procedure agreements, and/or testing manuals. Such incidents may include, but are not limited to, accessing secure test materials, including an online system, without authorization; accessing or using secure test materials to retain, reproduce, paraphrase, or discuss in any manner the tests/testlets, excerpts from the tests/testlests, answers or response options, answer keys, or online submissions; using secure test materials to create review worksheets or any other test item related aids that would improve students' test scores; any other activity that may constitute cheating; using student information or test results for unauthorized purposes; aiding and abetting or assisting in any attempt at unauthorized access or use; system failures, vulnerabilities, or unplanned outages; or malicious attacks. Security incidents may also result in privacy incidents and data breaches.

Privacy Incident: Any incident, whether attempted or successful, in which access to, acquisition, disclosure, or use of personally identifiable information (PII) or other information about individuals is sought or gained without authorization. Privacy incidents may expose PII or other information to parties that are not authorized to access the information or may involve the misuse of PII or other information for purposes other than those that are explicitly permitted.

Data Breach: Any successful compromise or loss of control of data at any level, or any unauthorized access to, acquisition, disclosure, or use of data or data systems. Data breaches are a subcategory of privacy incidents.

Personally Identifiable Information (PII): Personally identifiable information (PII) includes any information that can be used, either alone or in combination with other information, to directly determine or find the identity of an individual person. PII can include a person's name, individual identification codes (such as a student identification number), address, and so on. It can also include distinct pieces of information that, when combined, can identify an individual. In the case of student education records, that might include a student's grade level, date of birth, and/or other personal information (e.g., gender, race, or ethnicity).

Sensitive PII: Sensitive PII includes any information that could be harmful to an individual if disclosed. In students' records, sensitive PII may include a student's name or other identifying information in conjunction with other information about the student and/or their performance, such as special education status, socioeconomic status indicators, or assessment results. In certain cases, as with the DLM database, if inclusion in a data set or data system is an indicator of a condition considered sensitive under this definition, then all PII is classified as sensitive PII.

Other definitions that may be of use (from NIST SP 800-53 [Rev 4]):

Adequate Security: Security commensurate with the risk resulting from the loss, misuse, or unauthorized access to or modification of information. [OMB Circular A-130, Appendix III, Adapted; NIST SP800-53(r4)]

Information Security: The protection of information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide confidentiality, integrity, and availability. [44 U.S.C., Sec. 3542]

> **Availability:** Ensuring timely and reliable access to and use of information. [44 U.S.C., Sec. 3542; NIST SP800-53(r4)]
>
> **Confidentiality:** Preserving authorized restrictions on information access and disclosure, including means for protecting personal privacy and proprietary information. [44 U.S.C., Sec. 3542; NIST SP800-53(r4)]
>
> **Integrity:** Guarding against improper information modification or destruction, and includes ensuring information non-repudiation and authenticity. [44 U.S.C., Sec. 3542; NIST SP800-53(r4)]

Security: A condition that results from the establishment and maintenance of protective measures that enable an enterprise to perform its mission or critical functions despite risks posed by threats to its use of information systems. Protective measures may involve a combination of deterrence, avoidance, prevention, detection, recovery, and correction that should form part of the enterprise's risk management approach. [CNSSI 4009; NIST SP800-53(r4)]

1. Procedures when breach is suspected

Upon Learning of a Breach – Initial investigation and Risk Assessment

Any breach of PII requires an immediate investigation and risk assessment. Given the sensitivity of unauthorized disclosure of PII, only members of AAI staff required to complete the initial investigation and risk assessment will be notified of the breach at the preliminary stage of investigation. Breaches can be identified internally or by an external user. Regardless of the source of information, at a minimum the following will be notified simultaneously or in order to initiate the initial investigation:

1. AAI Director
2. CETE Director
3. ATS Director
4. ATS Operations Manager
5. ATS Data Security Officer
6. DLM Project Director

Mitigation of Risks

The results of the Initial investigation shall be used by the Investigation Team to determine and enact procedures to mitigate ongoing risk of the unauthorized disclosure of PII. These procedures may include but are not limited to:

- Limiting user access
- Deactivating the system function(s) that caused the compromise
- Disabling or removing access to entire application(s)

These limits would be in place until the source of the problem is thoroughly understood and the solution is developed, tested, and implemented.

The Investigation Team will identify the steps that will prevent future breaches as quickly as possible and mitigate risks from breaches in progress. To facilitate prompt and proactive responses when a breach is suspected but not yet confirmed, the DLM consortium states grant AAI the authority to take the necessary initial steps to mitigate risks. (AAI will not consult with states prior to taking this type of action.)

2. States' Communication Expectations

Upon suspicion of a breach, AAI staff will implement a communication plan that maximizes timely delivery of information as it is discovered, according to channels approved by the states. Initial notification of any breach (suspected or confirmed) will occur as quickly as possible, but absolutely no later than 24 hour after the breach is discovered.

- Initial notification of a suspected breach will be to all consortium member states (including appropriate contacts as identified by each state) and will originate from the dlm@ku.edu account which is the communication method routinely used for communication with consortium member states.
- Subsequent reports will include general information about impacts and actions taken as described in the "Report Contents" section below.
- States whose data were involved in a suspected or confirmed breach will receive specific information about the individuals who may have had unauthorized access and the students whose data were inappropriately disclosed.

Staff will communicate with states on a daily to weekly basis to provide updates (as the response unfolds, the time between updates may increase) and keep consortium member states in the loop, even if those updates are "no new information is available at this time but we continue to do X, Y and Z to mitigate any potential risks."

We request each consortium state partner review and update its breach response communication plan (see Appendix A) annually by July 15. This plan can also be updated at other times of the year. AAI will use the communication plan in place for a state at the time of a suspected or confirmed breach. The member state and AAI will collaborate to develop an appropriate initial plan, based on eh template provided in the appendix and customized according to state needs. States will provide annual updates no later than July 15 and notify AAI promptly should any changes be necessary mid-year.

3. Report Contents

Depending on the specific incident, full information about a breach may not be available when the breach is first discovered. To the extent possible, the initial communication to affected states will include the following information:

- Date and time of breach
- Date and time of discovery
- Location of breach
- Description or list of specific data that were available to unauthorized user(s)
- List of specific students whose data were inappropriately disclosed (sent via encrypted file or other secure mechanism)
- Identification of the source of the problem

- Brief description of how the breach was discovered
- Identification of the unauthorized user(s) who were able to access PII
- An estimate of the length of time that PII was available to unauthorized user(s)
- A summary of any actions performed to contain and mitigate the incident
- Any other pertinent information from the initial investigation and risk assessment
- Contact information for AAI staff available to answer questions and provide more information

Information listed above that is not available at the time of the initial notification will be provided in periodic updates as new facts are discovered.

Once the incident has been resolved, a full summary report of the incident will be delivered to the designated contacts in each partner state. The written report will summarize the information listed above as well as:

- A timeline of events
- Steps taken to prevent similar breaches in the future
- Any additional security enhancement steps identified as a result of this incident, and the anticipated timeline for implementing those

Appendix A: State Breach Response Communication Plan

(Contents to be reviewed and updated at least annually)

Names, titles, email addresses, and phone numbers of individuals in the SEA who should be communicated with

Name, title, cell phone address, and email address of individual designated for weekend and evening communication about privacy and/or security (if needed)

Initial contact should be made with the state:

- When a system problem is suspected (potential breach)
- When a system problem has been confirmed and the state's involvement clearly identified (confirmed breach)

Identify any state laws or policy related to student data privacy or security. Provide a link or copy to the regulation.

Instructions to individuals with unauthorized access should come from:

- The state
- AAI

What additional information does your state require beyond the standard consortium report contents?

State Breach Response Communication Plan
(Contents to be reviewed and updated at least annually)

1. **Individuals in the SEA who should be communicated with:**

   Name (first and last): Click here to enter text.
   Professional Title: Click here to enter text.
   Department Name: Click here to enter text.
   Email: Click here to enter text.
   Phone Number: Click here to enter text.

   Name (first and last): Click here to enter text.
   Professional Title: Click here to enter text.
   Department Name: Click here to enter text.
   Email: Click here to enter text.
   Phone Number: Click here to enter text.

   Name (first and last): Click here to enter text.
   Professional Title: Click here to enter text.
   Department Name: Click here to enter text.
   Email: Click here to enter text.
   Phone Number: Click here to enter text.

2. **Individual designated for weekend and evening communication about privacy and/or security (if needed)**

   Name (first and last): Click here to enter text.
   Professional Title: Click here to enter text.
   Department Name: Click here to enter text.
   Email: Click here to enter text.
   Phone Number (best for evening/weekend contact): Click here to enter text.

3. **Initial contact should be made with the state:**

   ☐ **When a system problem is suspected (potential breach)**

   ☐ **When a system problem has been confirmed and the state's involvement clearly identified (confirmed breach)**

4. **Instructions to individuals with unauthorized access should come from *(choose one)*:**

   ☐ **The state**

   ☐ **University of Kansas, Achievement and Assessment Institute**

5. **Identify any state laws or policy related to student data privacy or security. Provide the text of the regulation below or insert a link to an online version.**

   Click here to enter text.

   Link: Click here to enter text.

6. **What additional information does your state require beyond the standard consortium report contents?**

   Click here to enter text.

DYNAMIC LEARNING MAPS

TAC Meeting Minutes

Meeting Name	**Technical Advisory Committee**	**Date**	**01/13/16 & 1/14/16**
Facilitator	Joint	**Time**	
TAC Members	Russell Almond, Karla Egan, Phoebe Winter, Jim Pellegrino, Greg Camilli, Ed Roeber, George Engelhard		
State Members			
DLM Staff & Guests	Meagan Karvonen, Sue Bechard, Brooke Nash, Amy Clark, Jonathan Templin, Jake Thompson, Michael Muenks, Lori Andersen, Christina Alexander, Russell Swinburne Romine, Annie Jatala, Jennifer Brussow		

EXCERPT BELOW FROM FULL TAC MEETING MINUTES

TOPIC:	**Forensic Analysis Plans – Amy Clark**

1. Background: 2014-15 data have start and end times captured, but there are some implausible timestamps which cast doubt on their accuracy. The unit of analysis is the student, but the teacher may have some impact due to administration methods/teacher assistance with answer entry.
2. Specific Issues for TAC to address: TAC was asked for their recommendations for methodology for forensic analysis.
3. Discussion: TAC members recommended a possible "minimum task" in future administrations to establish a baseline from which a ratio could be calculated. TAC members wanted to see a distribution of the data rather than a min/max/mean display, and they also wanted to see results by teacher. The data cleanup process will be very important for these data. The issue of cheating detection was raised, and TAC members discussed developing a model to predict response time according to person and item characteristics, then examining outlying residuals. This proposed model could also be nested within teachers in order to get teacher scores.
4. Recommendations/Decisions: DLM staff will collect mouse-click timestamps in the future and will offer states the option to review identified outliers. DLM staff will provide possible explanations for aberrant response times, but will not make any claims about cheating. TAC members recommend investigating times according to the proposed model discussed above and/or examining testlet variability and investigating testlets with wide variability according to student characteristics. DLM staff also plan to conduct future analyses of answer-changing behavior, the relationship between students' initial band and final LL, and students with only continuous upward movement.

Topic: Forensic Analysis Plans

Purpose:
____ Information only (no TAC action required)
____ Demonstration for TAC (no TAC action required)
__X__ Request that TAC: Address specific question(s) or issues
State its position on a specific issue or concern
Provide guidance or suggestions on how to proceed

Document Title: Data Forensics Plan

Specific section, page number, graphic, or table to look at:
All

Specific question(s) or issue(s) for TAC to address

1. Do you have recommendations for the method used to identify aberrant response times?
2. What recommendations do you have for data cleaning prior to analysis?
3. Are there other forensic analyses that should be conducted for 2014-2015 based on the available data?
4. What (additional) future studies would you like to see conducted?

Background:

Data available for forensic analysis are testlet start and end date/time. Plans for analysis include evaluation of response time in comparison to population taking testlet. Please see attached document for full background and detail.

Estimated time for presentation and discussion: N/A
Submitted By: Amy Clark

Data Forensics Analyses for 2014-15

There are a large number of possible forensic analyses available for investigating test data for possible security breaches, all of which are limited to the collection of specific types of data. Over time, testing programs develop and refine their data collection architecture and mechanisms for the purpose of doing more sophisticated and useful data forensics. As the 2015 spring administration was DLM's first operational year, not only are the data sources relatively limited for this purpose but the validity of results from forensic analyses may not be as well supported as they would in subsequent operational testing administrations. Even with ample field testing and practice opportunities, the DLM assessment system is a new approach to assessing the skills' of the population it serves. As such, there may be unanticipated administration situations both in the system itself as well as in the classroom. Furthermore, while the goal would be to collect data in the future to allow more meaningful analyses (e.g., keystroke data, item level timestamps, etc.), the data that was collected during the 2014-2015 operational year is fairly limited. Specifically, start and end times for all testlets were captured; however, the accuracy of these data are questionable due to implausible values found in the data. Overall, based on the limited data available as well as its accuracy, all forensic analyses proposed for the 2014-2015 data are purely exploratory in nature. Student-specific information will not be shared with states until more reliable data can be captured by the system.

Proposed Plan

- Response time will be evaluated at the testlet level to identify outliers in testing times.
  - Evaluating at the testlet level allows for consideration to be given to EEs or linkage levels that may require more or less time than average to respond.
  - We expect ELA testlets to take longer to complete than math testlets due to time it takes to read through the text twice.
  - Analysis at the testlet level also accounts for items being written similarly for the EE(s) (e.g. more or less time-intensive content, parallel construction of item stems, teacher-administered, etc.)
    - Note for YE, testlets contain multiple EEs, whereas for IM, testlets contain only a single EE.
- Aberrance may include shorter response times than expected or longer response times than expected, as identified by outliers. Possible methods to consider:
  - Common person fit statistic is l_z (Drasgow, Levine, & Williams, 1985), where a large value indicates misfit (comparing against the expected distribution of response times)
  - Flagging any response time that is beyond two standard deviations from the mean response time for that testlet.
  - Flagging any response time that is beyond two standard deviations from the mean response time for that testlet *and* was classified as mastering the LL for that testlet.
  - Flagging any student that had 50% or more of their testlets flagged for response time *and* has a total number of linkage levels mastered at the *at target* or *advanced* proficiency level.
  - Others?

- Results to be used for exploratory purposes only and potential baseline data for subsequent years.
- In future years, states will have the option to explore instances of aberrance. DLM staff will not make any claims about causes for aberrance (including test fraud) but will offer several general hypotheses for why outliers might exist.
    - Reasons for aberrant response times may be well-explained by situations in the testing experience rather than any threat to test security.

Issues to consider

- DLM system is adaptive across testlets; there are no fixed forms.
    - This limits the ability to evaluate outliers at the full test level.
- Each testlet contains between 3-8 items.
    - This limits the ability to conduct person fit analyses as it is presumably a much shorter form-length than typically used for such analyses
- Sample size: IM samples per testlet much lower than YE; larger samples at middle linkage levels than ends
    - This potentially limits the ability to evaluate response time distributions for testlets with fewer than 200 student responses.

Preliminary Summary of Response Time

- System is supposed to time out after 90 minutes of inactivity. If a student/teacher chooses “Exit Does Not Save”, the test status is supposed to return to “unused” status and the start time removed.
    - Values greater than 24 hours were removed – technically these shouldn’t be possible values
        - Should a different threshold be imposed for cleaning the data? What is a realistic length of time to assume the student was actively testing? Length of the school day?

The tables that follow include minimum, maximum, and mean response times (in minutes) for each grade, content area, and model

YE Testlet Response Times (in minutes)

Content Area	Grade	Min	Max	Mean
ELA	Grade 3	0.27	1439.46	36.30
ELA	Grade 4	0.36	1439.97	32.38
ELA	Grade 5	0.23	1439.65	32.92
ELA	Grade 6	0.26	1439.43	26.90
ELA	Grade 7	0.20	1439.65	31.26
ELA	Grade 8	0.19	1439.49	28.09
ELA	Grade 9	0.43	1439.36	21.37
ELA	Grade 10	0.40	1437.98	36.84
ELA	Grade 11	0.42	1438.52	32.22
Math	Grade 3	0.23	1439.75	35.05
Math	Grade 4	0.13	1439.95	30.53
Math	Grade 5	0.26	1439.98	36.46
Math	Grade 6	0.20	1439.31	22.43
Math	Grade 7	0.13	1439.10	22.68
Math	Grade 8	0.14	1439.88	23.55
Math	Grade 9	0.57	1231.36	47.01
Math	Grade 10	0.01	1439.89	24.28
Math	Grade 11	0.30	1336.06	41.37

IM Testlet Response Times (in minutes)

Content Area	Grade	Min	Max	Mean
ELA	Grade 3	0.10	1439.63	31.60
ELA	Grade 4	0.19	1439.64	35.25
ELA	Grade 5	0.04	1438.95	31.01
ELA	Grade 6	0.02	1439.99	27.44
ELA	Grade 7	0.07	1438.78	35.46
ELA	Grade 8	0.00	1439.02	28.61
ELA	Grade 910	0.25	1439.13	29.63
ELA	Grade 1112	0.05	1439.68	33.78
Math	Grade 3	0.00	1439.73	25.49
Math	Grade 4	0.02	1439.92	25.54
Math	Grade 5	0.10	1438.89	22.17
Math	Grade 6	0.01	1439.33	23.92
Math	Grade 7	0.00	1438.78	19.89
Math	Grade 8	0.01	1439.82	19.18
Math	Grade 912	0.02	1439.89	16.81

Future plans

- Potential future efforts may include evaluation of answer-changing behavior (e.g. wrong-to-right), but system data is not currently available for this analysis.

- Evaluation of relationship between First Contact complexity band and last linkage level tested and/or overall proficiency level. If strong relationships exist between these variables in the population, then identifying cases where a relationship does not exist may be of note (e.g., foundational level complexity band ends with a successor level testlet and/or advanced proficiency level).
- Identify students who were first assigned to a lower level complexity band (Foundational or Band 1) and continuously adapted upward one level on each section until reaching successor level (without fluctuation between levels).

Questions for the TAC

1. Do you have recommendations for the method used to identify aberrant response times?
2. If at the testlet level, what sample size recommendations do you have for identifying aberrant response times?
3. Are there other forensic analyses that should be conducted for 2014-2015 based on the available data?
4. What (additional) future studies would you like to see conducted?

Webpage with KITE System Requirements

Home ›› KITE™ Suite Requirements

KITE™ SUITE REQUIREMENTS

Accessing the KITE Educator Portal

The KITE Educator Portal is an application built for the administration of assessments including enrollment and monitoring. To access the Educator Portal, a new login needs to be created.

Access the KITE Educator Portal website.

KITE Educator Portal is accessed by using a web browser. For the best user experience, we recommend using:

- Firefox 24.3 ESR or above

The following browsers can also be used to access KITE Educator Portal:

- Safari 6.0.5
- Internet Explorer 8 and above
- Chrome 35 and above

KITE Client (Student Application)

KITE Client is the interface used by students for taking tests.

KITE Client Installation

To install KITE Client, please follow the instructions for your computer's operating system. Once launched, KITE Client prevents students from accessing unauthorized webpages or applications during testing.

Screen Requirements

The minimum screen resolution required for KITE is 1024x768.

Supported Platforms – KITE Client 2.1

- Windows 7, 8, 10 (desktops and laptops only)
- Mac OS X 10.7–10.11
- Chromebook (Available in the Chrome Web Store)
- iPad, iOS 7–9 (Available in the App Store)

2016 Incidents Summary

During the 2016 spring science operational testing window a few issues occurred that affected student experiences with operational tests. Issues had varied impacts, in terms of the scope of content and the number of students affected. In total, there were three issues that could potentially impact decisions about scoring and reporting. The list of three issues are summarized in the table below.

Incident Summary for Spring 2016 Operational Testing Window

#	Issue	Type	Summary	Impact
1	Potential misrouting due to use of the local caching server.	Technology: Administration	Use of the local caching server prevent item responses from being transmitted in real time. Thus, when a student testing on the local caching server would submit responses, a percent correct could not be calculated. In the system, the percent correct would default to 0, causing the student to always adapt down, regardless of performance on the testlet.	19 students across grades
2	Potential misrouting due to missing responses not scoring as incorrect.	Technology: Scoring	Items left blank on the assessment are scored as incorrect. However, when calculating percent correct for adaptation, missing responses were omitted, rather than scored as 0. Thus, the calculated percent correct did not always have the correct denominator, leading to potentially incorrect adaptations.	252 students across grades
3	Potential misrouting due to an item with an incorrect key.	Assessment Content	One item was marked in the system with an incorrect key, causing students who provided a correct response to be scored as incorrect and vice versa. As a solution, a manual scoring script was developed and underwent a quality control process by DLM psychometric staff to ensure scoring was accurate for score reporting for all students responding to this item prior to the key being corrected. However, the system score was used to determine routing to a subsequent testlet during the	1,381 students across grades

			operational window, leading to potentially incorrect adaptations.	

Resolutions

All issues were shared with consortium state partners upon discovery and scoring was corrected when applicable. To address the local caching server (LCS) issue, a technical solution was not available prior to the closing of states' testing windows. Districts were provided directions on how to remove the LCS from the test administration process and continue testing using a direct internet connection. Additionally, Agile Technology Solutions (ATS) provided state partners lists of their students who tested using the LCS and gave them the choice of whether to invalidate completed test sessions and have the student resume testing following the last correctly administered testlet or continue testing with the current system-assigned testlet recognizing the student may have been routed incorrectly. Only students who continued testing with the current testlet were included in the incident file as having been potentially misrouted.

To address the issue of the system not scoring missing responses as incorrect for adaptation, a software patch was issued to correct the adaptation calculation process. Again, ATS provided state partners lists of their students who had missing responses and gave them a choice on whether to invalidate completed test sessions and have the student resume testing following the last correctly administered testlet and or continue testing with the current system-assigned testlet recognizing the student may have been routed incorrectly. Only students who continued testing with the current testlet were included in the incident file as having been potentially misrouted.

Scoring for the third issue of potential misrouting due to an item with an incorrect key was corrected after the data were pulled from the system so that students' results would not be impacted by the incorrect key. The key was also corrected once the issue was identified to prevent additional students from potentially misrouting during the remainder of the window. During the summer and fall of 2016, the test development team performed an additional review of items and item data to ensure correctness of item keys.

2016 Standard Setting: Science

Technical Report #16-03

10/24/2016

Nash, B., Clark, A., Karvonen, M., & Brussow, J. (2016). *2016 standard setting: Science* (Technical Report No. 16-03). Lawrence, KS: University of Kansas, Center for Educational Testing and Evaluation.

Contents

List of Figures

List of Tables

Executive Summary

The Dynamic Learning Map™ Science Alternate Assessment standard setting event was conducted from June 15 – 17, 2016, in Kansas City, Missouri, following the first operational testing year in science. The standard setting was a Dynamic Learning Maps (DLM®) science consortium-wide event with the purpose of specifying a set of recommended cut points for the consortium's science assessment.

Panels consisting of representatives from partner states convened to recommend cut points. Separate panels were formed for fourth grade and fifth grade, which are assessed with the 3-5 grade band assessment; sixth grade and eighth grade, which are assessed with the 6-8 grade band assessment; the high school grade band; and the Biology course. Because expectations for students in lower grades within a grade span could reasonably be lower than expectations for students at higher grades within the same span, grade-specific achievement standards were needed for the lower grades. Three cut points were determined by each panel to differentiate between four performance levels.

A standard setting approach was implemented to classify student performance into four different levels: emerging, approaching the target, at target, and advanced. The approach was derived from existing methods, including generalized holistic and body of work, but modified to fit DLM's assessment design and scoring system. For DLM, the standard setting approach leveraged the linkage levels (i.e., levels of complexity) within each Essential Element (i.e., content standards) and the statistical modeling approach for determining student mastery classifications. DLM used a student profile approach to classify student mastery into performance levels. Profiles provided a holistic view of student performance across the Essential Elements and linkage levels. Cut points were determined by evaluating the total number of linkage levels mastered, similar to assigning a cut point along a scale score continuum.

Student profiles were developed to show student mastery (mastered/not mastered) for each of the three linkage levels for each Essential Element. There were two steps to determine overall student mastery. The first step used criteria for determining linkage level mastery classifications based on students' item responses. The second step was to calculate total numbers of linkage levels mastered in the subject. Profiles were then selected based on these values to be used as exemplars for standard setting.

Panelists were recruited to participate in the standard setting event from DLM partner states participating in the science assessment across all assessed grade levels. The majority of panelists were educators with experience in science and/or in teaching students with significant cognitive disabilities. Once panel selections were complete, panelists completed an online training module before the on-site standard setting event. This training provided a general overview of the DLM assessment system and was

supplemented by additional on-site training on the standard setting panel procedures. Once on site, panelists were familiarized with the standard setting materials and methods, and then were given folders containing exemplars of student profiles to practice the rating process.

The standard setting process followed two basic steps: range finding and pinpointing. The purpose of range finding was for panelists to assign general divisions between performance levels after reviewing a limited set of exemplar profiles. After panelists determined the ranges of profiles where cut points were likely to be found, they moved on to the pinpointing process. During pinpointing, additional profiles were provided at levels within the range determined from the range-finding process. The purpose of pinpointing was for panelists to evaluate the additional exemplar profiles and hone in on specific cut points to distinguish the four performance levels. Within the range-finding and pinpointing phases, panelists had multiple opportunities to make independent evaluations. Further, at the end of the meeting panelists were asked to provide feedback as to their confidence with their group's recommended cut points and independently indicate a final recommended cut point if they were dissatisfied with the group's results.

By the end of the standard setting event, all panel-recommended cut points had successfully been identified. In all instances, the median individual recommended cut points and the group recommended cut point were the same. This suggests that overall the group process was effective for using expert judgment to classify student profiles into the DLM performance levels and identify corresponding cut points. Furthermore, a member of the DLM Technical Advisory Committee (TAC) was on-site for the standard setting event and reported back to the TAC on the overall quality of the event. Evaluations of panelists' experience with DLM standard setting as well as DLM TAC members' review of processes, outcomes and feedback from the observing member provide further evidence that the methods and process used were effective for achieving the goals of the meeting.

Following the panelist process, a statistical adjustment technique was applied to reduce the impact of panelist sampling on the cut points. Impact data was used to evaluate the distributions of students in each performance level category, with and without the statistical adjustments. The adjusted cut points and impact data across all grade levels were then presented to a vertical articulation panel convened during the standard setting event. The panel used content-based rationales to recommend that the statistically adjusted cuts be accepted for all cut points except for the grade 6 Emerging/Approaching cut point. This was the only cut point that increased as a result of the adjustment and the panel recommended retaining the non-adjusted lower cut point. The vertical articulation panel recommendation was accepted as the DLM staff recommended cut points. The DLM TAC and science state partners reviewed the panel recommended cut points as well as the DLM staff recommended cut points. After review, the TAC provided support for the statistical adjustment technique and overall standard setting process, and the state partners accepted the DLM staff recommended cut points.

The final set of cut points and impact data follow.

Table 1. DLM Recommended Cut Points for Science

Assessment Band	Grade	Emerging/ Approaching	Approaching/ Target	Target/ Advanced	Maximum Number of Linkage Levels
3-5	4	9	15	21	27
3-5	5	10	17	25	27
6-8	6	9	15	21	27
6-8	8	10	16	23	27
HS	9-12	8	16	23	27
HS Bio	Biology	9	15	22	30

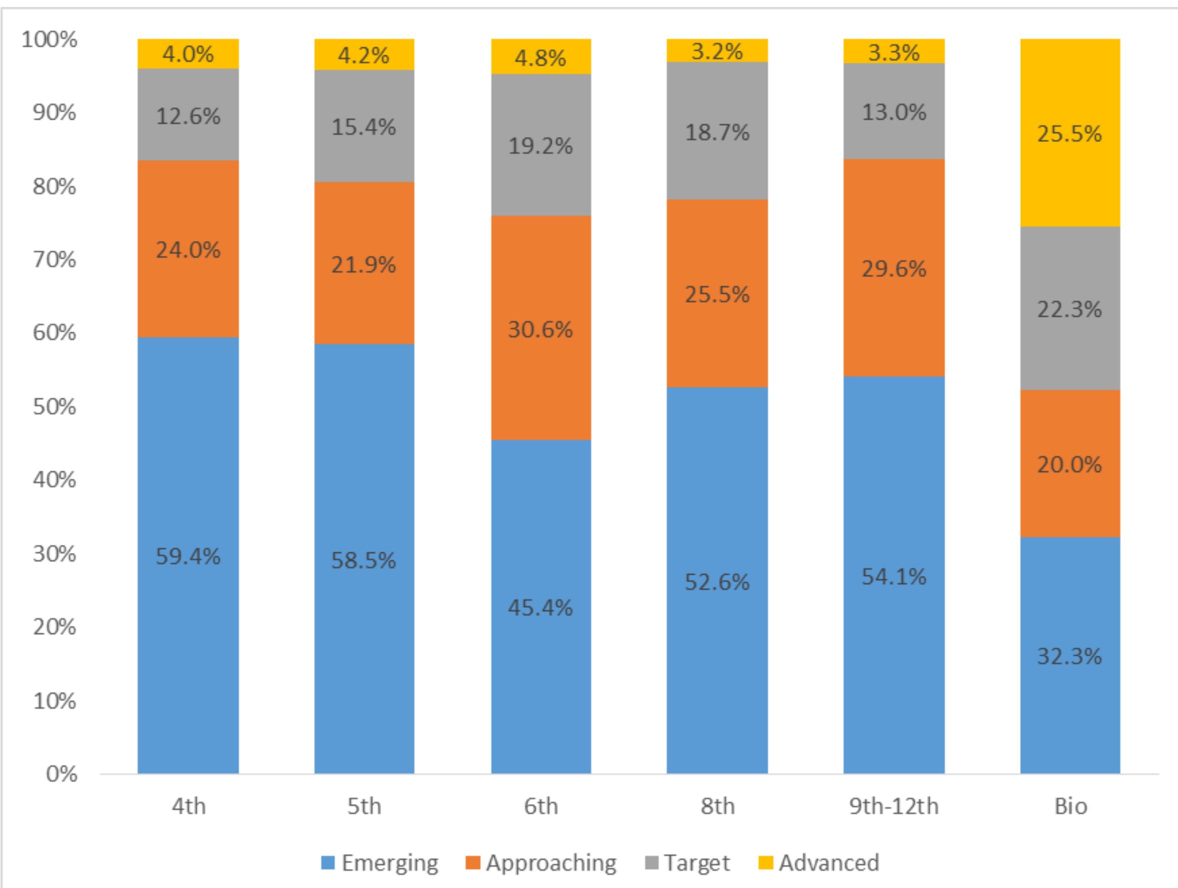


Figure 1. Impact Data Using DLM Recommended Cut Points for Science

Chapter 1: Introduction

The standard-setting process for the DLM science assessment consisted of the adoption of the existing DLM performance-level descriptors by the science states, a three-day standard-setting meeting, and follow-up evaluation of impact data and cut points by the state partners. This report provides an overview of the DLM assessment system and details the methods, preparation, procedures, and results of the science standard-setting meeting, including the follow-up evaluation of the impact data and cut points.

The purpose of the standard-setting activities was to derive recommended cut points for placing students into four performance levels based on results from the 2015-16 DLM science assessment. The intended audience for this standard-setting technical report is the DLM TAC, DLM state partners' state boards of education, and federal peer review committee members.

The 2015-2016 school year was the first operational testing year for DLM science assessments. The consortium operational testing window ended on June 10, 2016, and standard setting was conducted from June 15 – 17, 2016, in Kansas City, Missouri. The standard-setting event was a DLM consortium-wide event with the purpose of establishing a set of cut points for the science assessment. Although science state partners voted on acceptance of final cut points, individual states had the option to adopt the consortium cut points or develop their own independent cut points.

Overview of DLM Science Assessment Design

Assessment Content

The DLM science assessment is based on Essential Elements (EEs) and linkage levels. The DLM EEs for science are specific statements of knowledge and skills linked to the grade-level expectations identified in the *Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas* (National Research Council, 2012; *Framework*) and the *Next Generation Science Standards, for States by States* (NGSS Lead States, 2013; NGSS). The purpose of the EEs is to build a bridge from those content standards to academic expectations for students with the most significant cognitive disabilities.

EEs for science consist of three linkage levels or access points to grade-level standards for students with the most significant cognitive disabilities. The linkage levels are Initial, Precursor, and Target. The Target linkage level aligns directly with the EE, while the other two linkage levels provide content at a reduced depth, breadth, or level of complexity. See the following example of science EE content at the three linkage levels.

Essential Element: EE.5-LS1-1 Target Level: Provide evidence that plants need air and water to grow.
Precursor Level: Provide evidence that plants grow.
Initial Level: Distinguish things that grow from things that don't grow.

DLM science EEs are organized by science domain. Three domains are currently assessed: life science, physical science, and earth and space science. Each EE incorporates a topic and a scientific practice from the NGSS. In the above example EE, the topic is *organization for matter and energy flow in organisms* and the scientific practice is *engaging in argument from evidence*.

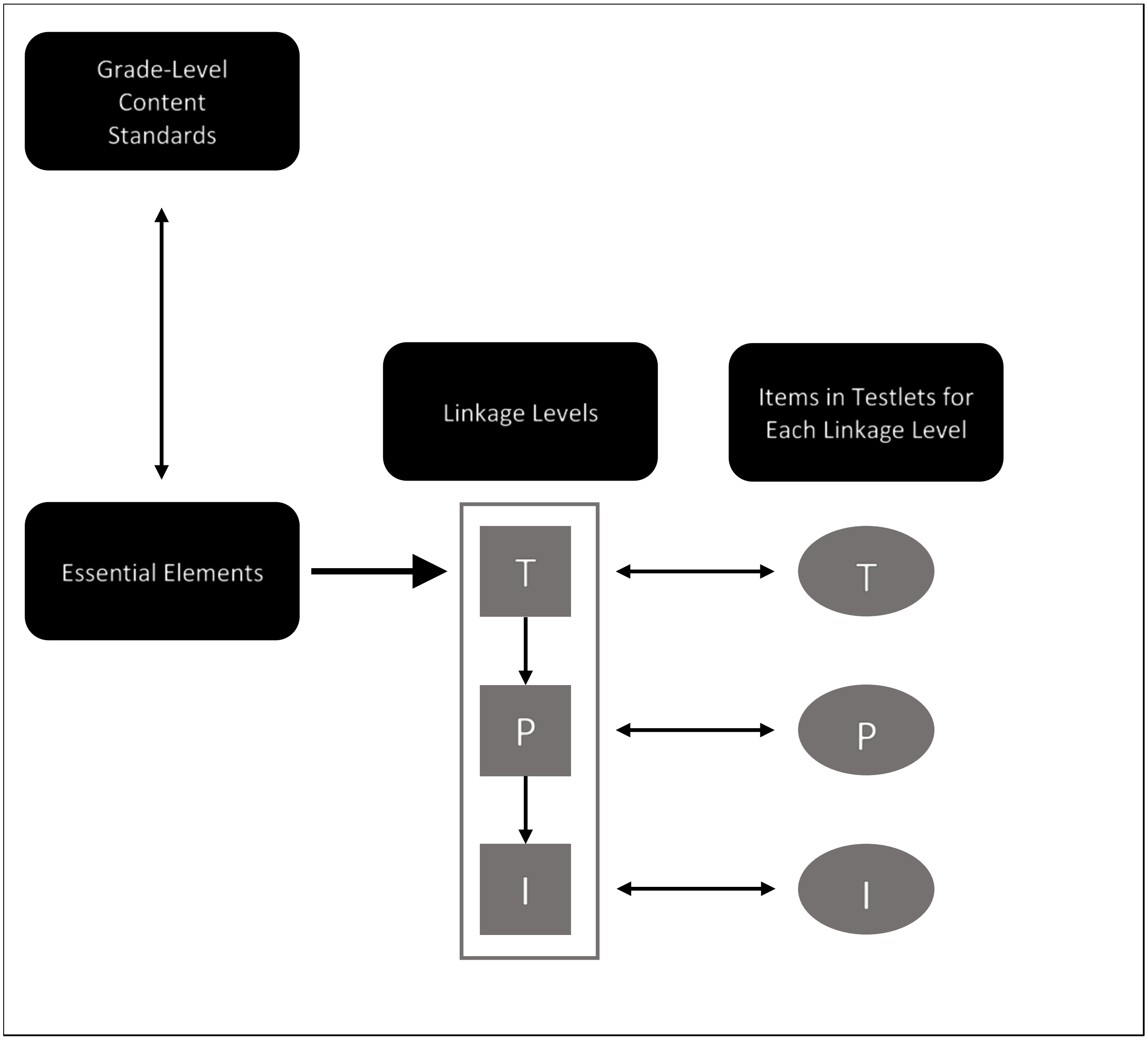
The science assessment system follows a year-end blueprint testing model, which has a consistent blueprint that is covered in its entirety in the spring testing window. Assessments are available in grade spans (3-5, 6-8, high school) and end-of-instruction (EOI) biology [1]. EEs were designed to be targets reached by the end of the grade span. Each science state requires assessment at different grade levels within the grade spans. As such, expectations for students in lower grades within a grade span could reasonably be lower than expectations for students at higher grades within the same span. Therefore, grade-specific achievement standards are needed. Based on TAC recommendation and a partner state vote, cut points were set at tested grade levels within the elementary and middle school grade spans (fourth, fifth, sixth, and eighth grades). In general, DLM science standard setting followed the same modified body of work methodology as was used in 2015 for the English language arts (ELA) and mathematics year-end and EOI models. For a detailed technical report on the methods used for the DLM ELA and mathematics standard setting process, please see *2015 Year-End Standard Setting: English Language Arts and Mathematics (Technical Report No. 15-03)*.

Assessment Design and Delivery

Each grade-level assessment is designed to assess a specific set of EEs. The EEs included in each blueprint can be found at http://dynamiclearningmaps.org/.

DLM assessments are delivered in testlets. Each testlet is comprised of items that align with a particular linkage level, as illustrated in Figure 2.

[1] States had the option of choosing which high school assessment to administer.



Note. T = Target; P = Precursor; I = Initial

Figure 2. Relationship between EEs, linkage levels, and items in testlets.

For the science assessment, the blueprint requires that all students be assessed on the same EEs. All students are assessed on testlets associated with the same EEs, but they are assigned testlets at different linkage levels so each student has an opportunity to independently demonstrate knowledge and skills. During the spring window, the linkage level of the student's first testlet was determined by the educator's responses to First Contact Survey items regarding the student's expressive communication skills. Each subsequent testlet linkage level was based on the student's performance on the previous testlet. If the student answered too few items correctly, the next testlet was at the next lowest linkage level. If the student answered all items correctly, the next testlet was at the next highest linkage level.

Scoring

Diagnostic Classification Modeling (DCM) is used to translate student responses to items into judgments about student mastery for each linkage level. For 2015-2016, students were considered masters of a linkage level if either: (1) their posterior probability from the DCM was greater than or equal to .80, or (2) the proportion of items that they answered correctly within the linkage level was greater than or equal to .80. Consistent with the ELA and mathematics scoring model, students who did not achieve mastery status for any tested linkage level were assigned mastery status for the linkage level that was two levels below the linkage level in which they were tested (unless the linkage level tested was either the Initial or Precursor levels, in which case, students were considered non-masters of all linkage levels within the EE). The scoring method for all content areas was discussed and approved by the DLM Technical Advisory Committee (TAC) during a conference call on July 21, 2015. [2]

Linkage level mastery status values were summed within and across EEs to obtain the total number of linkage levels mastered. Although the total number of mastered linkage levels is not a raw or scale score and should not be interpreted as an interval scale, the number of linkage levels mastered across EEs assessed was the metric translated into performance levels. Profiles used for standard setting were categorized by the number of linkage levels mastered across EEs. Further details on the development of profiles and the profile evaluation process are provided in subsequent sections.

Performance Levels and Policy Performance Level Descriptors

DLM science state partners chose to use the existing DLM performance levels and policy performance level descriptors (PLDs) originally developed for ELA and mathematics for science.

DLM state partners developed policy PLDs through a series of conversations and draft PLD reviews between July and December 2014. In July 2014, the state partners discussed general concepts that should be reflected in the PLDs and reviewed several examples of descriptors for three, four, and five performance levels. In fall 2014, the state partners indicated the number of levels they would require and gave feedback on additional iterations of PLDs that had been revised based on previous input. By December 2014, the PLDs were finalized. All states participating in the 2014-2015 operational assessment required four performance levels. The final version of policy PLDs are summarized in Table 2 below. The consortium-level definition of proficiency was At Target.

[2] More information about the psychometric model used for 2015-16 operational scoring is provided in Appendix A.

Table 2. Performance Level Descriptors.

Performance Level Descriptors
The student demonstrates ***emerging*** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.
The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is ***approaching the target***.
The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is ***at target***.
The student demonstrates ***advanced*** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

Policy PLDs served as anchors for the standard-setting panelists during the panel process. This procedure is described in Chapter 2. The high-level process for developing grade- and content-specific PLDs is described in Chapter 6.

Organization of the Report

The remaining chapters of this report are organized into the following categories: methods, which includes a description of the overall approach and procedures; meeting preparation steps, which includes panelist recruitment and training; results, which includes panel-recommended cut points and associated impact data; statistical adjustment procedures and vertical articulation panel results; evaluations of panel recommendations; panelist evaluations of the meeting; and final recommended cut points.

Chapter 2: Standard Setting Methods

Rationale and General Approach

There is a history of selecting a standard-setting method based on the type of assessment. Because the DLM assessment is a unique alternate assessment system, the approach to standard setting was developed to be consistent with the DLM design while still relying on established methods, best practices recommended in the literature, and the *Standards for Educational and Psychological Testing* (2014).

There are several assessment design features that impacted the DLM standard-setting approach. A student-based standard-setting approach was judged to be more appropriate than an item-based approach for the following reasons:

- Modeling is used to support the order of linkage levels. Item difficulty statistics are not used to ensure correct ordering of content, so an item-based approach would not match the design of the test.
- DLM assessments are adaptive across testlets. Considering adaptive delivery and different forms for each EE/linkage level, it would be rare for students to receive completely identical testing experiences.
- A student-based approach supports the panelists' ability to make judgments about the student's mastery of the full range of skills rather than performance on a limited subset of items.
- The methods used for science are consistent with the methods used for other subject areas within the DLM assessment system.

For DLM assessments, the standard-setting approach leverages mastery classifications from the DCM model. The panel process draws from several established methods, including generalized holistic (Cizek & Bunch, 2006) and body of work (Kingston & Tiemann, 2012) but is unique to the DLM assessment. Other holistic approaches, such as the performance profile method (Perie & Thurlow, 2011), which takes into account the specific content mastered, would have been difficult to apply due to DLM partners' goal of reporting an overall performance level for each subject rather than subscores.

The DLM standard-setting approach relied on aggregation of dichotomous classifications of mastery of the knowledge and skills across EEs in the blueprint. This is different from assessments that use score scales, where standard setting involves identifying cut scores that are imposed on a theoretical, unidimensional continuum of knowledge in a subject.

Drawing from the generalized holistic and body of work methods, the DLM standard-setting process used a profile approach to classify student mastery into performance levels. Profiles provided a holistic view of student performance by summarizing mastery across the EEs and linkage levels. Cut points were determined by evaluating the total number of linkage levels mastered. Although the number of linkage levels mastered is not an interval scale, the process for identifying DLM cut points is roughly analogous to assigning a cut point along a scale score continuum.

Before making a final decision whether to use the profile approach, the DLM TAC reviewed a preliminary description of the proposed methods. At the TAC's suggestion, DLM staff conducted a mock panel process using this profile-based approach to evaluate the feasibility of the rating task and the likelihood of obtaining sound judgments using this method.

Although the DLM standard-setting approach is a unique hybrid of existing methods, the guidance in the *Standards for Educational and Psychological Testing* and recommended practices for developing, implementing, evaluating, and documenting the standard setting was followed (Cizek, 1996; Hambleton, Pitoniak, & Copella, 2012). For example, this report summarizes the rationale and procedures used to establish cut points (Standard 5.21), including evidence that the judgmental process should be designed so that the participants providing the judgments can bring their knowledge and experience to bear in a reasonable way (Standard 5.23).

The following steps were used in the process and are described more fully in subsequent sections of this report.

1. Determine mastery and developing profiles
    a. Determine linkage level mastery
    b. Develop profiles of EE/linkage level mastery
2. Profile selection
3. Panelist profile ratings
4. Statistical analysis of panelist ratings
5. Review of impact data
6. Adjust cut points for cross-grade consistency

Determining Mastery and Developing Profiles

Because of the unique nature of the DLM assessment, student performance on linkage levels within EEs must be aggregated to create profiles of student learning. There were two steps in the standard-setting process to determine student performance level. First, student mastery at the linkage level was determined for each EE using the DCM approach. Then, profiles of student linkage level mastery were used during the standard-setting process to set cut scores. The first step addressed mastery thresholds that can be applied wholesale, and the second step set performance level cut points using the panel process. The threshold criteria were originally developed for the DLM ELA and mathematics assessments. To be consistent, science applied the same criteria wherever relevant. Descriptions of the criteria used in each step for science are provided in the following sections. For further detail on the rationale for the criteria used for ELA and mathematics, please see Karvonen, Clark & Nash (2015).

Define Mastery at the Linkage Level

Mastery classifications were derived from applying an agreed-upon criterion to students' posterior probabilities from the DCM calibration. These posterior probabilities are referred to as linkage level mastery probabilities.

A student's classification as master or non-master was made with a level of certainty that was reflected in the posterior probability. The acceptable level of certainty (i.e., the posterior probability) had to be identified before additional judgments could be made in the standard-setting process. Maximum uncertainty occurs when the probability is .50, and maximum certainty when the probability approaches 0 or 1. Considering the risk of false positives and negatives, the threshold used to determine mastery classification was .80. That is, students with linkage level mastery probabilities ≥ .80 were considered masters of the level while students with probabilities < .80 were considered non-masters of the level.

For each linkage level, a mastery status of 0 or 1 was obtained based on the student's probability of linkage level mastery. Using.80 as the cutoff for linkage level mastery, all students with a probability greater than or equal to.80 received a linkage level mastery status of 1, or mastered. All students with a probability lower than .80 received a linkage level mastery status of 0, or not mastered. Students were also considered masters of a linkage level if the proportion of items that they answered correctly within the linkage level was greater than or equal to .80. If the student tested but did not master a linkage level, then mastery status would be assigned at two levels down from the tested level.

Develop Profiles of EE/Linkage Level Mastery

The threshold values from step one were applied to create profiles of student mastery, which summarize linkage level mastery by EE. Profiles were created using data for each grade span. Each profile listed all the EEs from the blueprint containing between nine and ten EEs. The three levels of mastery were included as columns on the profile, ranging from the Initial linkage level up to the Target linkage level. Green shading indicated that a linkage level was mastered (the threshold was met) for students matching that profile. Blue shading indicated that the EE was tested but no linkage level was mastered, and no shading indicated that the EE was not tested.

Appendix B: Sample Profile Based on Judgments about Linkage Levels: Middle School Science provides an example of a science profile for a middle school student. The profile demonstrates one example of the possible skills mastered for a student who has mastered 14 linkage levels, as evidenced by the green shading in 14 boxes.

The maximum linkage level mastery value was determined by the blueprint: the count of EEs times three linkage levels was considered the highest total linkage level value. All grade spans in science have nine EEs, with 27 as the highest total linkage level value, with the exception of end-of-instruction biology, which has 10 EEs, for a total of 30 possible linkage levels.

Profile Selection

In order to select exemplar profiles for inclusion in standard setting, a program was written in *R* to determine the highest linkage level the student mastered for each EE and sum them to get the total linkage level mastery value. As a quality control effort, psychometric staff members ensured that the results of the program were expected based on the input data. Specifically, checks were conducted to determine that the program accurately applied mastery thresholds and correctly determined the highest linkage level mastered by the student.

Profiles were available for all students who participated in the spring window by May 12, 2016 (N = 20,448, $n_{3\text{-}5}$ = 5,455, $n_{6\text{-}8}$ = 5,622, $n_{9\text{-}12}$ = 5,098, n_{Bio} = 1,312). A program was written in *R* to identify the frequency with which each precise profile (i.e., pattern of linkage level mastery) occurred in this population. Based on these results, the three most common profiles were selected for each possible total linkage level mastery value (i.e., total number of linkage levels mastered) for each grade span. For example, the program identified the three most common ways to have mastered 18 linkage levels for the elementary grade span. To ensure that the exemplar profiles were not overly similar, the program identified profiles where different linkage levels were mastered for at least three EEs.

In instances where data was not available at a specific linkage level value, (e.g. no students mastered exactly 26 linkage levels for a grade and content area), profiles were based on simulated data. The science content team used adjacent profiles for reference and created simulated profiles that represented likely patterns of mastery. This approach was consistent with the process used for ELA and mathematics standard setting in 2015. Fewer than 4% of all the profiles developed were simulated. Simulated profiles were not distinguishable from those based on real student data.

Profile Rating Procedures

Exemplar profiles of student mastery were compiled in folders for panelist ratings. Two types of folders were prepared for standard setting: range-finding folders and pinpointing folders. After panelists familiarized themselves with performance levels during training, the range-finding process followed. The purpose of range finding was for panelists to assign general divisions between performance levels after reviewing a limited set of profiles from points along the distribution of total linkage levels mastered. These samples were comprised of profiles at intervals of five linkage levels mastered (e.g., a total of 5, 10, 15, and 20 linkage levels mastered). After panelists determined the ranges of linkage levels mastered where cut points were likely to be found, panelists completed the pinpointing process. The purpose of pinpointing was for panelists to evaluate the additional exemplar profiles with the goal of identifying specific cut points. Profiles for seven adjacent levels within the range determined from the range-finding process were distributed to the panelists for pinpointing. For both the range-finding and pinpointing phases, panelists completed an independent round of ratings, reviewed their results and discussed them, then completed a second round of independent ratings. The results at the end of the second pinpointing round served as the group-recommended cut points. Finally, panelists independently evaluated the group-recommended cut points and indicated their level of confidence with each cut point. Additional detail about these procedures is provided in the Procedures section of Chapter 4.

Statistical Analysis of Panelist Ratings

Both the range-finding and pinpointing exercises utilized logistic regression analyses to identify appropriate ranges and calculate cut points, respectively. Logistic regression models the relationship between an independent variable, number of linkage levels mastered in this case, and the probability of being classified into a category, such as performance level **approaching** or above.

The primary goal of using logistic regression as the analytical procedure is to identify the number of linkage levels mastered where the likelihood of being assigned to a given performance level equals or exceeds that of being assigned to the next performance level or higher (where $p = .50$). In other words, rather than determining the likelihood of resulting in a specific level, given a number of linkage levels mastered, the goal was to find the likelihood of being assigned to a level **or higher**, given a number of linkage levels mastered. For example, if logistic regression indicated that the likelihood of panelists assigning a profile with 20 linkage levels mastered to performance level **approaching** or higher is 7 out of 12 (about 58%), it could be concluded that 20 linkage levels mastered would be a good cut point to differentiate **emerging** from **approaching**.

For pinpointing, the range of profiles was calculated by taking the value determined during range-finding plus and minus three for a total of seven different profiles each representing a different number of linkage levels mastered. Using this narrowed but more informative range of exemplar profiles, logistic regression was again used during the pinpointing process to determine the point at which the probability of being assigned to each performance category or higher was .50. The predicted values from this process were used as the recommended cut points for each level.

In some cases, the logistic regression analysis did not yield a useful result. Because this analysis largely depends on identifying areas of maximum disagreement between panelists across two performance categories to identify the point at which the probability is .50, logistic regression failed for any case where all of the panelists within a group had unanimous agreement on profile ratings. In these cases, on-site psychometricians reviewed the panelist group ratings and visually identified where the obvious inflexion point occurred. The value where the shift in ratings moved from one category to the adjacent category was used as the recommended group cut point.

The regression analyses to obtain the cut points were carried out in Excel using the same facilitator workbooks in which the original data were tallied and transformed to logistic functions. The facilitator workbooks are discussed in more detail in the Procedures section of Chapter 4.

The panelists' independent evaluations of the group-recommended cut points were summarized and evaluated using descriptive statistics. The purpose of evaluating the independent ratings was to identify any places where the median independent recommended cut points differed from the group-recommended cut points.

Impact Data

Impact data was calculated by grade based on total number of linkage levels mastered. The percent of students who would be classified at each performance level based on the panelists' recommended cut points was calculated and presented to the panelists at the conclusion of the final pinpointing ratings. No further discussion was held at that time; rather, a subsequent step was conducted, in which a cross-grade panel reviewed and discussed impact data patterns across all grade levels (discussed in the next section).

State partners served as the policy group for reviewing impact data. The state partners, who are members of the DLM science consortium governing board, have varying roles within the special education and assessment departments in their state education agencies. These partners were not only knowledgeable of the DLM assessment system, but also of their own states' educational policies and student populations. State partners discussed recommended cut points and impact data with their internal stakeholders and reviewed input from the DLM TAC before participating in consortium-level discussions. Additional details regarding recommended cut points, impact data, and cut point adjustments are provided in Chapter 5.

Vertical Articulation Panel

Once the panel-recommended cut points were set, two representatives from each panel (except end-of-instruction biology [3]) convened to conduct a cross-panel review and

[3] End-of-instruction biology was not included in the vertical articulation process, as it was not expected that students in one course were representative of the students in the general high school grade span and there was no reason to expect that a single EOI biology assessment was somehow contiguous to a previous grade-level, multi-domain assessment.

discussion of the panel-recommended cut points, statistically adjusted cut points (methodology discussed in a subsequent section), and the associated impact data for each. The process began with a discussion of panelists' content-based rationales for their ratings and their panel's recommended cut points across grade levels. Next, panel-recommended cut points and statistically adjusted cut points (procedures for adjustment are described in Chapter 5) with impact data for each were presented for all grade-level panels and high school. After a whole group discussion about the system of cut points focusing on content-based rationales for results, the panel's conclusions and final recommendation were documented.

Evaluation Procedures

The standard-setting procedures were evaluated using procedural, internal, and external criteria as described by Hambleton & Pitoniak (2006). Each category contains several sub-categories. Relevant sub-categories are addressed individually.

Procedural Criteria

Explicitness. The standard-setting process was explicitly defined prior to the standard-setting event. Facilitators used a guide with detailed instructions for each step in the process. As part of the training for the event, all facilitators went through a mock standard setting where they used the intended process to ensure that there was an understanding of how the process should occur.

Practicability. To evaluate the use of the intended standard-setting approach, a mock panel convened to test the process and evaluate its ease of use and likelihood of generating the intended results. In instances where the outlined procedures were inadequate (e.g., the logistic regression failed due to unanimous panelists recommendations), solutions were quickly implemented without creating confusion for the facilitators or panelists.

Implementation of Procedures. The selection of panelists was completed in the most objective way possible while also ensuring adequate coverage of content areas and grade levels. During the panel meeting, staff used a step-by-step guide to ensure fidelity of implementation. Where procedures had been revised since the ELA/Math standard setting that was conducted in 2015, staff and panelists were trained on the revisions. Additionally, DLM staff members who were not facilitating specific panels observed the standard-setting event to verify that the specified procedures were being implemented correctly. Panelist selection and assignment is described in Chapter 3. The training of the panelists is detailed in Chapter 4.

*Panelist Feedback***.** After receiving training for the standard-setting event, nearly all panelists reported "Good" or "Excellent" understanding of important and relevant ideas. This included the purpose of standard setting, how DLM assessments assess content knowledge, and how scores are calculated and reported. Notably, no panelists reported "Poor" understanding for any of the key ideas assessed. Further details are presented in Chapter 4.

Documentation. When developing this standard-setting method, documentation was kept on the proposed techniques, associated rationales, and TAC and state feedback. Documentation was also kept on all stages of the process, including panelist recruitment and selection, training, and implementation. This technical report is largely based on source documentation.

Internal Criteria

Consistency Within Method. The variability of panelists' final pinpointing ratings and their final independent ratings were reported. Standard errors are presented in Chapter 5.

Interpanelist Consistency. Due to the nature of the standard-setting method used (i.e., logistic regression to identify areas of maximum disagreement as potential cut points), interpanelist consistency was not the desired outcome. However, there was an expectation that panelists would converge towards an increasingly narrow range of profiles to identify the cut point. Evidence of convergence is described in Chapter 5.

External Criteria

Reasonableness of Performance Levels. The panel-recommended and adjusted cut points, with the corresponding impact data, were presented to state partners to ensure their reasonableness. Further details of this process may be found in Chapter 5.

Reasonableness of Standard-Setting Process. The proposed standard-setting process was presented to the TAC prior to the event to ensure its reasonableness, and a TAC member attended the standard-setting event to ensure its fidelity to the proposed process.

Chapter 3: Standard Setting Panel Meeting Preparation

Panelist Recruitment

DLM staff drafted and distributed a recruitment letter to participating DLM states in March 2016. The recruitment letter is included in Appendix C: Standard Setting Panelist Recruitment Letter and Survey. Participating states for standard setting included those that were operational in 2015-2016. States were responsible for distributing the letter within their state to recruit potential panelists. Some states elected to distribute the list narrowly to constrain the number of potential panelists to only those they recommended. Others distributed the call more broadly within the states.

DLM staff sought panelists with content knowledge and expertise in the education and outcomes of students with significant cognitive disabilities, including educators as well as school and district administrators. Other subject matter experts, such as higher education institution faculty or state/regional educational staff, were also suggested for consideration.

All potential panelists were asked to complete a survey. Survey items included basic demographic information as well as areas of expertise and years of experience. In addition, volunteer panelists were asked to indicate whether they were willing to commit to advance training (up to four hours during the first two weeks in June) and whether they would be available to attend the on-site meeting from June 15– 17, 2016. See the survey in Appendix C: Standard Setting Panelist Recruitment Letter and Survey.

Selection of Panel Participants

DLM staff received 164 total responses to the survey. All survey responses were evaluated in April 2016 to assign volunteers to panels. Panelists' home state; diversity of experience in education; and levels of expertise with science content, education, and students with severe cognitive disabilities were given priority in the selection of panelists. Race/ethnicity, gender, and urbanicity were also considered.

Forming Panels

Six panels were created from the pool of volunteers, with representation as spread across the states as possible. Specifically, a panel was created for each of the following grades, grade span, and course: 4, 5, 6, 8, high school (9–12), and biology.

Each panel (with the exception of high school and biology) consisted of four panelists that had teaching experience and expertise at their assigned grade level or grade span. The high school panel consisted of eight panelists. The end-of-instruction biology panel consisted of eight panelists from Oklahoma, since it is the only consortium member state that participated in the end-of-instruction biology assessment.

Panelist Characteristics

The 32 panelists who participated in standard setting represented varying backgrounds, as summarized in Table 3. Most of the selected panelists were classroom educators. Panelists had an average of 16.2 years of experience in the field of education and had a range of years of experience with science content and working with students with significant cognitive disabilities. The maximum, minimum, and mean years of experience are presented in Table 4. The number of panelists who taught or worked with students in each disability category are displayed in
Table 5.

Table 3. Panelist Demographic Characteristics

Demographic Characteristics	*n*
Gender	
Female	29
Male	3
Race	
African American	3
American Indian/Alaska Native	3
Asian	2
Hispanic/Latino	2
Native Hawaiian/Pacific Islander	1
White	21
Professional Role	
Classroom Teacher	23
Building Administrator	0
District Staff	6
State Education Agency Staff	2
University Faculty/Staff	2
Other	8
Total	32

Table 4. Panelist Years of Experience

Experience Type	*M*	Min	Max
Students with Significant Cognitive Disabilities	14.3	2.0	30.0
Science	13.2	1.0	30.0

Table 5. Number of Panelists Who Taught Students in each Disability Category

Disability	Count
Blind/Low Vision	22
Deaf/Hard of Hearing	20
Emotional Disability	26
Mild Cognitive Disability	28
Multiple Disabilities	30
Orthopedic Impairment	24
Other Health Impairment	28
Severe Cognitive Disability	30
Specific Learning Disability	25
Speech Impairment	29
Traumatic Brain Injury	24

Note: More than one disability category could be selected.

Nearly half of the participants had experience with setting standards for other assessments (15). Some panelists already had experience with DLM, either from writing items (8) or externally reviewing items and testlets (10). Only one panelist reported having less than one year or no experience with alternate assessments; that panelist was university faculty/staff with 19 years of experience with science content.

Panel Facilitator Training

All staff, including facilitators, room leads, and supporting staff, participated in a one-hour orientation meeting regarding the purposes and outcomes of standard setting. Staff reviewed a high-level overview of the procedure. Following orientation, facilitators read a description of the training range-finding and pinpointing procedures. During the next training session, panel facilitators received a detailed agenda and scripts to be used for the standard-setting process. Five of the six facilitators had previously served as a facilitator during the 2015 standard-setting event for ELA and mathematics. The new facilitator had previous experience with standard settings that followed similar procedures, as well as the 2015 mock run-through of the standard-setting process. All facilitators practiced leading a group using the agenda and scripts and learned how to enter panelist ratings in the facilitator workbook. The agenda and scripts were adjusted prior to the standard-setting panel meeting based on this run-through. Debriefs were also held each day of the panel meeting to review any remaining questions.

Chapter 4: Standard Setting Panel Meeting Procedures

Panelist Training

Advance Panelist Training

All panelists participated in a training module in advance of the standard setting meeting. The purpose of this training was to give panelists a general overview of the DLM assessment system ahead of time so that on-site training could focus on the panelists' specific grade/content area assignment and panel procedures. After introducing the purpose of standard setting and expectations for confidentiality, the advance training addressed the following topics:

1. Students who take DLM assessments
2. Content of the assessment system, including EEs for science, domains and topics, linkage levels, and alignment
3. Accessibility by design, including the framework for the DLM assessment's cognitive taxonomy and strategies for maximizing accessibility of the content; the use of the Personal Needs and Preferences (PNP) profile to provide accessibility supports during the assessment; and the use of First Contact Survey to determine linkage level assignment
4. Assessment design, including item types, testlet design, and sample items from various linkage levels in science
5. An overview of the assessment model, including test blueprints and the timing and selection of testlets administered
6. A high-level introduction to two topics that would be covered in more detail during on-site training: the DLM approach to scoring and reporting and the steps in the standard setting process.

The advance training was available online, on demand during the ten days prior to the standard-setting meeting. All panelists completed the required training before arriving for the on-site panel meeting.

After viewing the training videos, panelists completed a survey where they rated their understanding of key topics. The results are summarized in Table 6. Panelists reported feeling most comfortable with areas referencing the characteristics of students taking DLM assessments, the expectations for maintaining security of information during the training, and standard setting. Since most panelists were also educators who administered DLM assessments, these were likely areas where they had direct experience. Panelists reported being less comfortable with the more technical aspects of how testlets measured content and calculation and reporting of results.

Table 6. Panelist Self-Assessments after Completing Advance Training

Understanding of:	Poor	Fair	Good	Excellent
Characteristics of students who take DLM assessments	0	0	7	29
The purpose of standard setting	0	1	13	22
Essential Elements and linkage levels	0	2	13	21
Expectations for maintaining security of information during training and standard setting	0	0	1	35
How testlets measure the intended content	0	2	15	19
How testlets are made accessible to students from across the DLM population	0	0	11	25
What a student is expected to do during a DLM assessment	0	0	10	26
How results are calculated and reported	0	1	23	12

Panelists also rated their overall preparation for the next phase of training and whether their understanding was sufficient to make judgments about student results. All panelists ranked themselves as either **very prepared** (23) or **somewhat prepared** (13) for the next training at standard setting, and 100% of panelists believed their knowledge to be sufficient to make judgments about student performance and assessment results.

On-Site Panelist Training

Additional panelist training was conducted onsite. The purposes of on-site training were twofold: (1) to review advance training concepts that panelists had indicated less comfort with, and (2) to prepare panelists for their responsibilities during the panel meeting. Since the majority of panelists indicated a high degree of comfort with advance training concepts, the first part of on-site training was a high-level review of expectations for confidentiality and test security, the organization of academic content, and testlet design. Prior to training on the standard-setting procedures, panelists were prompted to ask questions about any of the topics from the advance training.

Training on the standard-setting panel procedures included the following topics:
1. How results are calculated and displayed in mastery profiles for standard setting, including guidance about appropriate interpretations of the contents of mastery profiles
2. An overview of the standard-setting process including the policy PLDs, terms used during the standard-setting process, the key question panelists would ask themselves when completing ratings, and the range-finding and pinpointing procedures
3. An overview of the event's activities, from training to final evaluation
4. Roles and responsibilities of everyone present for the panel meeting
5. Discussion of the contents and use of the policy PLDs
6. Presentation of the resource materials panelists should refer to when familiarizing themselves with mastery profiles

After the large group presentation on these topics, the trainer introduced the practice activity to be completed at each panel table. The training activity consisted of range finding using training profiles for just a few total linkage levels mastered (e.g., 5, 10, 15, 20). Each table trained using sample profiles for the grade/course for which the panelists would be setting standards. Table facilitators walked panelists through the process of using their resource materials to familiarize themselves with the EEs and linkage levels for that grade/course. Once panelists were ready, the facilitator then introduced the contents of the training folder (i.e., the training profiles and rating forms) and reminded panelists how to complete the rating form. Once all panelists completed the practice activity, they had opportunities to debrief at the table. Two smaller group discussions were also conducted (based on timing of completion of the practice activity) to discuss the process and provide guidance on expected patterns of ratings across ranges of profiles.

Since all panels were expected to work on range finding during the first day, more in-depth training on the pinpointing procedure was reserved for the second day. Training on the second day also covered procedures for capturing information to be used for grade-specific PLDs.

Additional detail about on-site training is provided in the agenda and training slides in Appendix D: Panel Training and Materials.

Materials

Panelist Resources

Each panelist received a resource notebook with materials to use in training and during the rating process. The resource notebook contained

- a standard-setting flowchart,

- an annotated sample mastery profile,
- a PLD handout,
- hints for making ratings,
- instructions for completing rating forms,
- diagrams of the elements of the DLM system, and
- a glossary of DLM and standard-setting terms.

When familiarizing themselves with each grade's EEs and linkage levels, panelists also used the following resources:

- EE tables that outlined each EE's associated state standard for general education (using the NGSS coding system), connections to science practices, crosscutting concepts as well as connections to DLM ELA and mathematics EEs
- The science and engineering practices (adapted from the Next Generation Science Standards; Achieve, 2013) that are embedded in the DLM science EEs
- A blank mastery profile for that grade (i.e., one that contained EEs and linkage level descriptions but no mastery shading)
- The blueprint for that grade

Panelists also had access to sample testlets for any EE/linkage level assessed in a grade. Upon request, facilitators displayed sample testlets in the online content management system.

Training Materials

Training folders were prepared with exemplar profiles of student mastery for grade-specific panels. The training folders included six exemplar profiles: two profiles with 7 levels mastered, two profiles with 14 levels mastered, and two profiles with 21 levels mastered. Two examples were included at each linkage level mastery amount to show how students with the same number of linkage levels might achieve that number by mastering different EEs or linkage levels. The training folders also contained sample rating sheets.

Range-Finding Materials

Range-finding folders were prepared with exemplar mastery profiles from across the range of student performances for the specific grade being reviewed. The number of profiles varied depending on the number of linkage levels on the blueprint. All grade spans, with the exception of the end-of-instruction biology blueprint, have nine EEs and 27 linkage levels; biology has 10 EEs and 30 linkage levels. Exemplar profiles were provided in five-number increments. For example, in a grade with nine EEs and therefore 27 linkage levels, the range-finding folder included profiles for students who mastered 5, 10, 15, 20, and 25 linkage levels.

Profiles were ordered in the folder according to the total number of linkage levels the student mastered. There were three exemplar profiles for each available level of mastery. In the previous example for a grade with 27 possible linkage levels, a total of 15 profiles would be included in the folder spanning the five possible linkage level values included.

All exemplar profiles were numbered to ease discussion.

Pinpointing Materials

The pinpointing folders contained profile exemplars for a reduced range of levels around potential cut points. For each cut point, exemplar profiles were included at seven levels, including the number closest to the suggested cut point determined in range finding and three above and below that number. For example, if range finding identified that a given cut point should be somewhere around 20 linkage levels mastered, the folder would contain profiles with 17, 18, 19, 20, 21, 22, and 23 linkage levels mastered. A folder contained three profiles for each number of linkage levels mastered (i.e., multiple ways students have actually demonstrated the same number of linkage levels mastered), for a total of 21 profiles at the seven levels. Any profiles that were used in range finding were reused in pinpointing (e.g. the three profiles reviewed for 20 linkage levels mastered during range finding were also included in the pinpointing folder).

Rating Forms

Rating forms for each of the range-finding and pinpointing processes were provided in the panelists' folders. One range-finding rating form and one pinpointing rating form were provided for each subject and grade-level set of cut points. Each form contained columns for round one (first) and round two (final) ratings. Example range-finding and pinpointing rating forms are provided in Appendix E: Example Rating Forms for Range Finding and Pinpointing.

Evaluation Form

An evaluation form was provided to panelists for the purpose of obtaining panelists' independent evaluations of group recommended cut points and panelists' evaluations of the overall standard-setting training and meeting. The evaluation was provided to panelists on the closing day of the standard-setting meeting and is provided in Appendix F: Panelist Meeting Evaluation Form.

Procedures

Both the range-finding and pinpointing procedures consisted of two rounds of ratings. Panelists reviewed the exemplar profiles, independently rated each profile for round one ratings, discussed ratings as a group, and then independently rated each profile again for round two ratings. Throughout both range finding and pinpointing, panelists were instructed to use their best professional judgment and consider all students with significant cognitive disabilities to determine which performance level best described each profile.

Details of the final procedures used for determining cut points is provided in the subsequent sections.

Range Finding

During the range-finding process, panelists reviewed a limited set of profiles to assign general divisions between the performance levels. The goal of range finding was to locate ranges (in terms of number of linkage levels mastered) where panelists agreed that approximate cut points should exist.

These are the procedures the panelists followed for range finding.

1. Panelists independently evaluated the profiles in the range-finding folder and identified the performance level that best described each profile. They recorded their decision for each exemplar profile on their rating sheet.
2. Once all panelists completed their ratings, the facilitator obtained the performance level recommendations for each profile by a raise of hands. The facilitator recorded the counts in the facilitator workbook, which was projected for the group to view. One panelist at each table was assigned to check that the values were entered correctly to ensure accurate data entry.
3. After table discussion of how panelists chose their ratings, the panelists were given the opportunity to adjust their independent ratings if they chose. A second round of ratings were recorded and shared with the group. Again, the facilitator entered values in the facilitator workbook, and the designated panelist confirmed their accuracy.
4. Using the round two ratings, built-in logistic regression functions calculated the probability of a profile being categorized in each performance level conditional on number of linkage levels mastered, and the most likely cut points for each performance level were identified.
5. Psychometricians reviewed every workbook before the group began the pinpointing process to ensure no errors were present and to check that the logistic regression had successfully determined a reasonably appropriate approximate cut point. In instances where the logistic regression function could not identify a value (e.g. the group unanimously agreed on the categorization of profiles to

performance levels), psychometricians evaluated the results to determine the approximate cut point based on the panelist recommendations.

Pinpointing

During pinpointing, panelists reviewed additional profiles to refine the cut points. The goal of pinpointing was to pare down to specific cut points in terms of number of linkage levels mastered within the general ranges determined in range finding, not relying on conjunctive or compensatory judgments.

These are the procedures the panelists followed for pinpointing.

1. Folders containing the profiles for the seven levels, including and around the cut point value identified during range finding were distributed to the panelists.
2. Panelists independently evaluated the profiles in each folder and assigned each a performance level—those in the higher level and those in the lower level. Panelists entered their recommendations on their pinpointing rating sheet.
3. Once all panelists completed their ratings, the facilitator obtained the recommendations for each profile by a raise of hands. These counts were entered into the projected facilitator Excel sheet. The identified panelist checker confirmed all values were entered correctly.
4. After discussion of the ratings, a second round of rating commenced. Panelists were given the opportunity to adjust their independent ratings if they chose.
5. The facilitator collected final ratings by show of hands. The panelist checker confirmed values were entered correctly.
6. Using the second round's ratings, built-in logistic regression functions calculated the probability of a profile being categorized in each performance level conditional on number of linkage levels mastered, and the most likely cut points for each performance level were identified.
7. Psychometricians reviewed every workbook at the close of the pinpointing process to ensure values were obtained accurately. In instances where the logistic regression function could not identify a value (e.g. the group unanimously agreed on the categorization of profiles to performance levels), psychometricians evaluated the results to determine the final recommended cut point based on the panelist recommendations.

Chapter 5: Results

This chapter summarizes the panel-recommended cut points, evaluation evidence regarding the panel process, impact data, and the final results.

Panel-Recommended Cut Points and Associated Impact Data

Table 7 includes a summary of the cut point recommendations reached by the panelists following the range-finding and pinpointing process. Note that the last column represents the maximum number of linkage levels that are possible based on blueprint requirements for each grade.

Table 7. Panel Recommended Science Cut Points

Grade	Emerging/ Approaching	Approaching/ Target	Target/ Advanced	Maximum Number of Linkage Levels
4	9	16	22	27
5	11	18	25	27
6	9	15	22	27
8	11	16	23	27
9-12	9	17	24	27
Biology	9	15	22	30

Impact data was calculated using the linkage level mastery status and total number of linkage levels mastered on each tested EE for all students. Duplicate student records, which could have occurred based on school or district data management practices, were removed using the following rule:

> *Remove duplicates when the following fields were all identical across rows: student ID, state, grade level, and number of linkage levels mastered.*

This step prevented the same student's linkage level mastery status from being used multiple times in the calculation of the impact data. This means that if a student was rostered to multiple educators, the data were only included once. Students who were rostered in the system but did not test on any EEs were not excluded from the data file. However, because these students had no scores, their inclusion did not influence the frequency distributions of the impact data. Once duplicate records were removed, the frequency distributions of students at each performance level were calculated for grade level.

Table 8 displays the frequency distributions associated with the panel-recommended cut points. The majority of students were categorized as either Emerging or Approaching the Target performance levels with the exception of end-of-instruction biology, where there was a more even distribution across the four performance levels. The distribution of students observed in biology is was consistent with those in DLM ELA and mathematics end-of-instruction courses. The limited number of states participating in end-of-instruction courses (i.e., one state in science) may have contributed to a lack of representation of the student population. As noted previously, panelists were presented the impact data after their final pinpointing ratings were complete but no further discussion was conducted at that time.

Table 8. Percentages of Students in Each Performance Level Based On Panel Recommended Cut Points

Grade	Emerging (%)	Approaching (%)	Target (%)	Advanced (%)	Target/Adv (%)
4	59.4	27.0	10.6	2.9	13.5
5	62.9	20.3	12.5	4.2	16.7
6	45.4	30.6	21.0	3.0	24.0
8	57.7	20.4	18.7	3.2	21.9
9-12	59.6	26.6	12.0	1.8	13.8
Biology	32.3	20.0	22.3	25.5	47.8

Convergence

The purpose of range finding and pinpointing was to identify the specific number of linkage levels mastered that would differentiate student performance into each of the four performance levels. Through each round of discussion and ratings, panelists narrowed in on the range in which the cut point could be identified. Due to the nature of the statistical analysis method used, inter-panelist consistency was not the desired outcome for a single round; however, there was an expectation that panelists would converge toward an increasingly narrow range of profiles to identify the cut point. To illustrate the degree to which panelists converged upon an agreed upon cut point, box and whisker plots are displayed in Appendix G: Convergence Plots for Range-Finding and Pinpointing Ratings. These plots convey the median, first and third quartiles, and range of the frequencies with which each number of linkage levels mastered was classified into each of the four performance levels.

Overall, the plots support the claim that the panel process worked as intended. In general, the ranges of profiles categorized into each performance level narrowed from round one to round two during both range finding and pinpointing.

Standard Errors of Pinpointing Ratings

Following the standard-setting event, standard errors were computed to evaluate the results. This method was based on the frequency distributions of panelists' final pinpointing ratings and was accomplished by dividing the standard deviation of the frequencies of panelists' final pinpointing ratings by the square root of the number of total ratings. Table 9 displays the standard errors for the distribution of final pinpointing ratings.

Table 9. Standard Errors for Science Final Pinpointing Ratings

	G4	G5	G6	G8	G9-12	Biology
Emerging	0.184	0.174	0.000	0.204	0.115	0.140
Approaching	0.330	0.228	0.215	0.217	0.191	0.162
Target	0.202	0.210	0.215	0.267	0.157	0.161
Advanced	0.163	0.104	0.184	0.162	0.073	0.109

Statistical Adjustment

Procedure

Despite evaluative evidence that was generally supportive of the panel-recommended cut points, these recommendations are based on the work of single panels. Each panel is a sample of possible experts. In theory, some variability in recommended cut points would be expected with a different sample, and each sample's recommendation would be an estimate of the true cut point.

To mitigate the effect of sampling error and issues related to a system of cut points across a series of grade levels, many testing programs consider impact data in the grade at question *and* contiguous grades. The logic is that under most circumstances (especially when there is no significant shift in demographics), students in bordering grades should have similar distributions within performance levels. Dramatically different distributions are likely due to sampling error and not differences in true cut points.

While the DLM science assessments were designed and administered at three grade spans (elementary, middle school, and high school) and one end-of-instruction biology assessment, standards were set for grade-specific panels for grades 4, 5, 6, and 8. Statistical adjustments were made to the grade-specific panel-recommended cut points in an effort to systematically smooth distributions within the system of cut points being considered. No adjustments were made for EOI since there was no reason to expect that the students taking biology were in any way representative of the students in the general high school grade span. Similarly, there was no reason to expect that a single EOI biology assessment was contiguous to a previous grade level, multi-domain assessment.

The following steps were applied to each grade level.

1. Create a frequency distribution of the number of linkage levels mastered (from low to high). The number of possible linkage levels is 27 for each grade.

2. Calculate cumulative proportions from low to high.
3. Perform a probit transformation (z-score associated with the cumulative proportion of students) for each number of linkage levels mastered. Because at the top of the distribution (proportion equal to 1) a finite z-score cannot be calculated, to perform subsequent calculations, top z-scores were defaulted to 3.5.
4. Find the z-score associated with the raw cut point of interest (for example, Approaching/Target).
5. Create a weighted rolling average of z-scores for the cut point of interest using a weight of 0.5 for the grade of interest and 0.25 for contiguous grades.
$$\sum w_i Z_i \Big/ \sum w_i$$
At the ends (grades 4 and high school) there cannot be a symmetric set of three grade levels involved in the rolling average.
6. Using the table of probit-transformed cumulative proportions, look up the raw number of linkage levels mastered for which the z-score is closest to the weighted rolling average of z-scores. The closest z-score was selected instead of the lowest z-score to prevent systematically decreasing the proportion of students in the higher category over the system of cut points.

Adjusted Cut Points and Associated Impact Data

Table 10 and Table 11 summarize the adjusted cut points that used the methods described above and the impact data for those adjusted cut points. Frequency distributions for the impact data of the adjusted cut points were calculated using the same process as described for the panel-recommended cut points.

The approach used did decrease the between-grade variability as expected. All but one adjustment lowered the cut point by one point. The sixth grade cut point between Emerging and Approaching was the only cut point that increased one point as a result of the statistical adjustment.

Table 10. Statistically Adjusted Science Cut Point Recommendations

Grade	Emerging/ Approaching	Approaching/ Target	Target/ Advanced	Maximum Number of Linkage Levels
4	9	15	21	27
5	10	17	25	27
6	10	15	21	27
8	10	16	23	27
9-12	8	16	23	27

Note. Cut points for biology were not statistically adjusted.

Table 11. Percentages of Students in Each Performance Level Based on Adjusted Cut Point Recommendations

Grade	Emerging (%)	Approaching (%)	Target (%)	Advanced (%)	Target/Adv (%)
4	59.4	24.0	12.6	4.0	16.6
5	58.5	21.9	15.4	4.2	19.5
6	51.7	24.4	19.2	4.8	24.0
8	52.6	25.5	18.7	3.2	21.9
9-12	54.1	29.6	13.0	3.3	16.3

Note. Cut points for biology were not statistically adjusted.

Vertical Articulation Panel Process

The vertical articulation panel was comprised of representatives from each panel (except end-of-instruction biology) who were tasked with evaluating both the panel recommended and statistically adjusted sets of cut points and associated impact data. In reviewing and considering the cut points and impact data across all grade levels and thinking about how skills are taught from one grade to the next, the vertical articulation panel made a strong cross-grade content-based rationale for recommending all of the adjusted cut points, with the exception of one cut point. Specifically, they recommended retaining the panel recommended cut point for the sixth grade cut between Emerging and Approaching the Target. As the adjusted cut points at this level for sixth and eighth grades were the same, they chose to retain the panel recommended cut to maintain a higher performance expectation for students in the eighth grade. For a summary of the panel's main discussion points, see Appendix I: Vertical Articulation Panel Discussion .

DLM Recommended Cut Points and Impact Data

DLM staff accepted the recommendations made by the vertical articulation panel and recommended those cut scores for all subsequent reviews made by the TAC and DLM science states. That is, DLM staff recommended the acceptance of the panel-recommended (raw) cut point for the sixth grade Emerging/Approaching cut and the statistically adjusted cut points for all other cuts. DLM staff further recommended the acceptance of the panel-recommended cut points for end-of-instruction biology. Table 12 and
Table 13 below display the full set of the DLM-recommended cut points and associated impact data, respectively. The panel-recommended cut points were carried forward as the DLM staff recommended cut points. Figure 3 summarizes the percent of students in each performance level for each grade based on the DLM cut point recommendations.

Table 12. DLM-Recommended Cut Points for Science

Grade	Emerging/ Approaching	Approaching/ Target	Target/ Advanced	Required Linkage Levels
4	9	15	21	27
5	10	17	25	27
6	9	15	21	27
8	10	16	23	27
9-12	8	16	23	27
Biology	9	15	22	30

Table 13. Percentages of Students in Each Performance Level Based on DLM-Recommended Cut Points

Grade	Emerging (%)	Approaching (%)	Target (%)	Advanced (%)	Target/Adv (%)
4	59.4	24.0	12.6	4.0	16.6
5	58.5	21.9	15.4	4.2	19.5
6	45.4	30.6	19.2	4.8	24.0
8	52.6	25.5	18.7	3.2	21.9
9-12	54.1	29.6	13.0	3.3	16.3
Biology	32.3	20.0	22.3	25.5	47.8

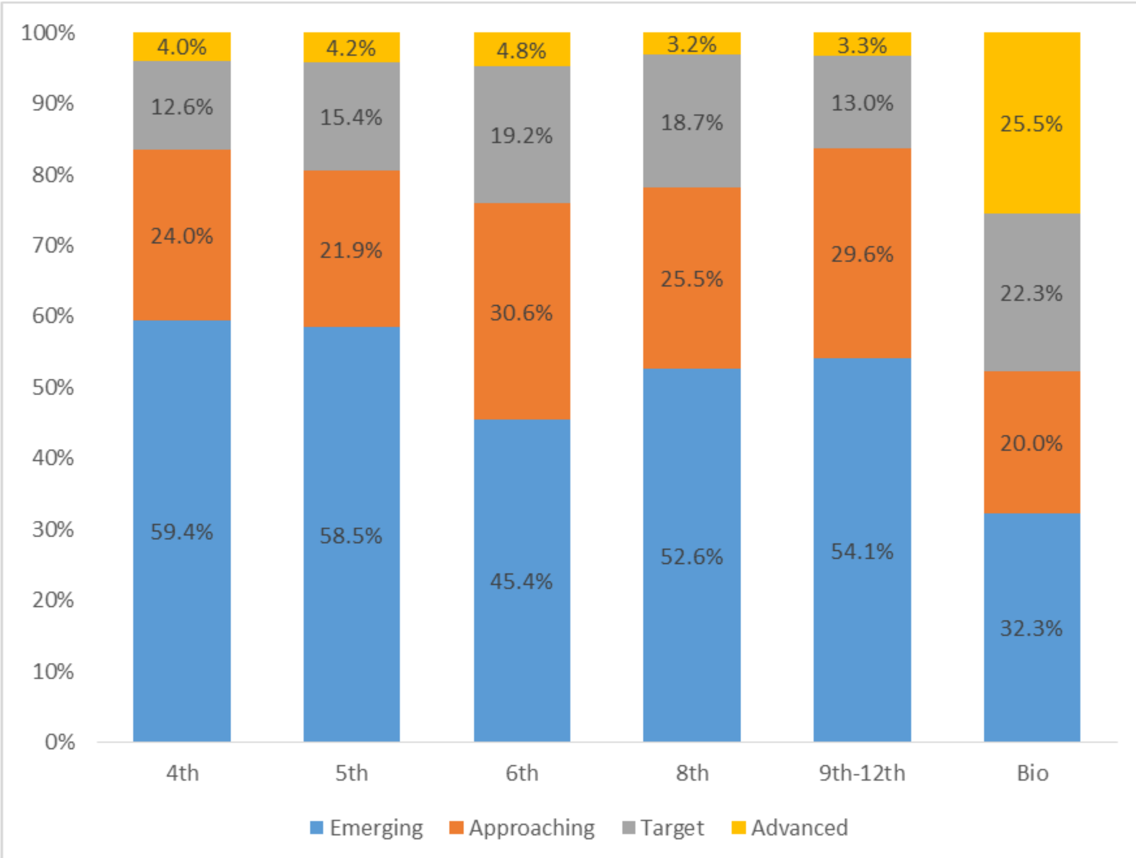


Figure 3. Impact Data Using DLM-Recommended Cut Points for Science

Evaluations

At the conclusion of the standard-setting meeting, panelists completed evaluations of the process. The questionnaire included panelist evaluation of the panel-recommended cut points, as well as their evaluation of the panel meeting process and overall feedback on their experience.

Independent Panelist Evaluations of Panel-Recommended Cut Points

As part of the evaluation process, panelists were asked to provide their final independent rating of the panel-recommended cut points. For each cut point, a scale of -7 to 7 was provided for the panelist to indicate how they would adjust the panel-recommended cut point. If the panelist agreed with the panel's recommendation, zero was circled, otherwise the panelist could indicate the value by which they recommended adjusting the value set by the panel. Table 14 summarizes panelist responses from their final independent rating of the cut points. Note that the percent included in the table is based on all three cut points. Panelists were asked whether they would choose to adjust the cut points three times: once for the Emerging/Approaching cut, once for the Approaching/Target cut, and once for the Target/Advanced cut.

Table 14. Panelist Comfort with Group Recommended Grade and EOI Cut Points

Grade	*N* Panelists	*N* Ratings*	*n* No Adjustment	Percent No Adjustment
4	4	12	10	83.3
5	4	12	12	91.7
6	4	12	11	100.0
8	4	12	12	100.0
9-12	8	24	24	100.0
Biology	8	24	24	100.0

Note: * = n Panelists × n Cut Points Evaluated

Across all panelists, panels, grades/courses, and cut points (N=96), 96.9% of panelists (n = 93) indicated that they would not choose to adjust the cut point. Only 3.1% of responses (n = 3) indicated that they would choose to adjust the group-recommended cut point. Complete panelist agreement with the recommended cut point was found in 16 out of 18 cuts (88.9%) across all grades and courses. There were three instances where a panelist indicated they would adjust the cut point if given the option: Grade 4 Emerging/Approaching, Grade 4 Approaching/Target, and Grade 6 Target/Advanced. In each instance, the indicated adjustment was -1 linkage level. Unanimous panelist comfort with all three recommended cut points was found for four out of six cut point panels (66.7%).

Panelist Evaluations of the Meeting

In addition to providing recommendations on the panel's cut points, panelists also evaluated the overall panel meeting process. The evaluation included self-evaluation of readiness to rate profiles, understanding of the tasks, and evaluation of outcomes. Panelists rated their responses to the 22 questions on a Likert scale, choosing either "Strongly Disagree" (SD), "Disagree" (D), "Agree" (A), or "Strongly Agree" (SA). For the last three questions, "Not applicable" was an additional option.

Table 15 shows that the majority of panelists agreed or strongly agreed that the meeting was well organized; they understood their tasks and felt confident to complete them, and they thought the cut points were defensible and valid. Furthermore, panelists believed that the meeting was a good experience in terms of professional development and for planning instruction with students with the most significant cognitive disabilities.

Table 15. Percentages of Science Panelist Responses to Evaluation Items

Question	SD	D	A	SA
1. The overall goals of the standard-setting panel meeting were clear.	0	0	5	27
2. The panel meeting was well organized.	0	0	4	28
3. The training and practice exercises provided the information I needed to complete my tasks.	0	0	5	27
4. It was clear what knowledge, skill, or ability a student would need to demonstrate to achieve a certain profile.	0	1	13	18
5. The profiles were representative examples of one or more of my students' knowledge, skills, and abilities.	0	1	7	24
6. Evaluating profiles was an effective way to set cut points for the performance levels.	0	0	5	27
7. I considered the *performance level descriptors* when I rated each profile.	0	0	7	25
8. I considered the *assessment items* when I rated each profile.	0	0	6	26
9. I considered the *other panelists' opinions* when I rated each profile.	0	1	6	25
10. I considered *my experience in the field* when I rated each profile.	0	0	6	26
11. I understood how to rate each profile.	0	0	9	23
12. I had enough time to complete the tasks.	0	0	3	29
13. I felt confident when rating the profiles.	0	0	9	23
14. The procedure for recommending cut points was free from bias.	0	0	5	27
15. Overall, I was satisfied with the ratings made by panelists in my group.	1	0	7	24
16. I am confident that the meeting produced valid cut point recommendations.	1	0	9	22
17. Overall, I believe my opinions were considered and valued by the group.	1	0	4	27
18. Overall, my group's discussions were open and honest.	1	0	3	28
19. Participating in the process increased my understanding of the DLM assessment.	1	0	3	28
20. Overall, I valued the panel meeting as a professional development experience.	1	0	2	29
21. This experience will help me plan and provide instruction for my students with significant cognitive disabilities.	1	0	3	27
22. This experience will help me use the DLM assessment more effectively.	1	0	4	26

Technical Advisory Panel (TAC) Evaluation of Panel Process

A member of the DLM TAC was on-site for the duration of the standard-setting event. The goal was to observe the process and provide feedback to the TAC and consortium state partners regarding any relevant observations of the event. Overall, the DLM TAC member believed that the standard-setting meeting was well planned and implemented, the staff were helpful to the panelists, and the panelists worked hard to set standards. The full TAC evaluated the evidence about the standard-setting process, including the TAC member's observations, panelist evaluations, and the relationship between panel and independent cut points. The TAC accepted the resolution about the adequacy, quality of judgments, and extent to which the process met professional standards. A copy of the memorandum and resolution is provided in Appendix H: TAC Resolution on DLM Standard Setting.

Final Results

The panel-recommended cut points, DLM-recommended cut points, and associated impact data for both sets of cut points were presented to the TAC and partner states for review. The TAC approved the DLM adjustment method and the process used by the standard-setting panelists and vertical articulation panel. Following the states' review process and discussion with the DLM team, the states voted to accept the DLM-recommended cut points as the final consortium cut points with no further adjustment.

Chapter 6: Future Steps

This technical report describes the steps in standard setting from developing policy-level PLDs through consortium adoption of cut points. Since the chosen standard-setting approach was student-based rather than item-based, grade-specific PLDs were not developed for use during the panel process. Instead, grade-specific PLDs will be developed from the work done by panelists as they evaluated profiles. Starting with raw notes about critical skills and understandings for each performance level and the associated rationales, DLM test development content teams will draft PLDs for each grade. These drafts will go through rounds of review and input from the partner states before they are finalized.

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Appendix A: DLM 2015-2016 Scoring Model Description for Science

Essential Elements (EEs) are academic content standards for students with the most significant cognitive disabilities. For each tested EE in science, assessments are available at one of three linkage levels that represent the relative progression toward the academic standard. For each part of the assessment, the student receives a testlet at a linkage level.

The DLM scoring model used for operational purposes in 2015-16 for science was constructed based on information obtained from students at each linkage level separately and then aggregated to produce student linkage level mastery estimates.

Students taking testlets at a linkage level within an EE were considered masters of that linkage level if one of two conditions were met:

1. The posterior probability of mastery determined from the diagnostic classification model estimated for the linkage level was greater than or equal to .80.
2. The proportion of items answered correctly within the linkage level was greater than or equal to .80.

Students were considered masters by meeting either condition in order to prevent consequences associated with false negatives. Linkage levels were treated hierarchically in that masters of higher linkage levels (based on the two criteria above) were automatically assumed to be masters of lower linkage levels. Students who did not demonstrate mastery at any linkage level were assumed to be masters of linkage levels at least two categories below the highest linkage level where they tested. Students who did not meet mastery criteria and whose highest level tested was either the Initial or Precursor levels were considered non-masters of all linkage levels.

The diagnostic classification model used to classify students within each linkage level was the "Noisy Inputs, Deterministic Or gate" (NIDO) model (e.g., Rupp, Templin, & Henson, 2010; Templin, 2006). In this model, all items from each linkage level within each EE are treated as measuring one binary latent variable that represents mastery status for a student. All items within a linkage level are treated as exchangeable or fungible, a condition made necessary due to many items not being administered to large numbers of examinees. Fungibility (from the NIDO model) means that within a linkage level, all item parameters are constrained to be equal, providing the same item intercept and main effect parameters.

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Appendix B: Sample Profile Based on Judgments about Linkage Levels: Middle School Science

End of Year Learning Profile

DYNAMIC® LEARNING MAPS

SUBJECT: Science
MODEL: Year-End

GRADE: Middle school science
PROFILE ID: 0122

YEAR: 2015-16
TOTAL LL: 14

Essential Element	Level Mastery 1	2	3 (Target)
SCI.MS.PS.1.2	Identify change	Gather data on properties before and after chemical changes	Interpret data on properties before and after chemical changes
SCI.MS.PS.2.2	Identify ways to change movement	Investigate and identify ways to change motion	Investigate and predict changes in motion
SCI.MS.PS.3.3	Identify objects and materials that minimize thermal energy transfer	Investigate objects/materials and predict changes in thermal energy transfer	Refine a device to minimize or maximize thermal energy transfer
SCI.MS.LS.1.3	Recognize major organs	Model how organs are connected	Make a claim how structure and function support survival
SCI.MS.LS.1.5	Match organisms to habitats	Identify factors that influence growth	Interpret data to show that resources influence growth
SCI.MS.LS.2.2	Identify food that animals eat	Classify animals by what they eat	Identify producers and consumers in a food chain
SCI.MS.ESS.2.2	Identify differences in weather conditions from day to day	Identify geoscience processes that impact landforms	Explain how geoscience processes change Earth's surface
SCI.MS.ESS.2.6	Interpret weather information to identify conditions	Interpret weather information to compare conditions	Interpret weather information to make predictions
SCI.MS.ESS.3.3	Recognize resources that are important for life	Recognize ways that humans impact the environment	Monitor and minimize an impact on the environment

Levels mastered this year — No evidence of mastery on this Essential Element — Essential Element not tested

Page 1 of 1

Appendix C: Standard Setting Panelist Recruitment Letter and Survey

Dear Colleagues,

[State] is a state partner in the Dynamic Learning Maps (DLM) Science Alternate Assessment Consortium. DLM science assessments are designed for students with the most significant cognitive disabilities and measure student mastery of content in science. The 2015-2016 academic year is the first year the DLM science assessment is operational. Student responses obtained during this first operational testing window will be used to determine what level of mastery is associated with certain performance levels. This process is referred to as standard setting.

As a partner state, we have the opportunity to recruit educators to serve on one of four panels that will help set standards:

- Elementary (grades 3-5)
- Middle (grades 6-8)
- High school (grades 9-12)
- High school biology (end-of-instruction 9-12)

We are writing to invite volunteers from [state or district] to serve on these four DLM standard-setting panels. We seek educators with a broad array of perspectives and backgrounds, although we especially seek individuals with content expertise in science and in education and assessment for students with significant cognitive disabilities. Other subject matter experts and individuals who work at establishments that employ individuals with significant cognitive disabilities are also encouraged to volunteer to serve on high school panels.

We ask that panelists commit to up to four hours of training in advance of the meeting and to attend and on-site standard-setting meeting in Kansas City, MO, June 15-17, 2016. Panelists must be present for the entire on-site meeting. Panelists who participate outside the scope of their usual job requirements will be paid a stipend of $600 to complete advance training and participate in the entire on-site meeting.

Volunteers are invited to complete a background survey online by following the link provided (https://kansasedu.qualtrics.com/SE/?SID=SV_bIZapjxIBg3xDql). The deadline to volunteer to participate in a standard-setting panel is Friday, April 8, 2016. DLM staff will notify volunteers who are selected to serve on panels.

We would appreciate your assistance with recruiting volunteers to serve as standard-setting panelists.

Questions about the standard-setting process should be directed to dlm@ku.edu.

Thank you for your assistance with the recruitment process!

Sincerely,

Intro DLM Standard Setting Panel Survey
Provided via Qualtrics

Please tell us about yourself and your interest in participating as a standard-setting panel member. Thank you!

Q1 First name

Q2 Last Name

Q3 E-mail Address

Q4 Preferred Phone Number

Q5 Full Mailing Address
Street Address 1
Street Address 2
City
State
Zip

Q6 What is your current role?
- Classroom Teacher
- Building Administrator
- District Staff
- State Education Agency Staff
- University Faculty/Staff
- Community Member
- Other ____________________

Q7 Please adjust the bars to indicate your years of p-12 educational experience in each of the following areas.
______ Science
______ Students with Significant Cognitive Disabilities
______ p-12 Education Overall

Q8 Which of the following types of students with disabilities have you taught/worked with in the past ten years? (Mark all that apply)
- ❑ Blind/Low Vision
- ❑ Deaf/Hard of Hearing
- ❑ Emotional Disability
- ❑ Mild Cognitive Disability
- ❑ Multiple Disabilities
- ❑ Orthopedic Impairment

- ❑ Other Health Impairment
- ❑ Severe Cognitive Disability
- ❑ Specific Learning Disability
- ❑ Speech Impairment
- ❑ Traumatic Brain Injury
- ❑ None of the Above

Q9 Which grade(s) did you teach in 2014-15?

- ❑ Grade 3
- ❑ Grade 4
- ❑ Grade 5
- ❑ Grade 6
- ❑ Grade 7
- ❑ Grade 8
- ❑ Grade 9
- ❑ Grade 10
- ❑ Grade 11
- ❑ Grade 12
- ❑ I did not teach in 2014-15

Answer If *Which grade(s) did you teach in 2014-15?* None Is Selected
Q9b Please indicate the grade band(s) at which you believe you have expertise to participate in standard setting.

- ❑ Grades 3-5
- ❑ Grades 6-8
- ❑ Grades 9-12

Q11 How many years of experience do you have teaching at these grade levels?
______ Years of Experience

Q12 Do you have previous experience with a standard setting process for another large-scale assessment besides DLM assessments?

- ● Yes
- ● No

Q13 How many years of experience do you have with Alternate Assessments based on Alternate Achievement Standards (AA-AAS)?

- ● None
- ● Less than 1 year
- ● 1-5 years
- ● 6-10 years
- ● 11+ years

Q14 Have you written items for DLM assessments?

- Yes
- No

Q15 Have you previously served as an external reviewer for DLM assessments?
- Yes
- No

Q16 Please list all licensures/certifications you hold.

Q17 Please check all of the following statements that apply to you.
- ❏ I have/had a leadership role in curriculum planning in my school or district.
- ❏ I have/had a leadership role in special education in my school or district.
- ❏ I have worked on my state's alternate assessment (e.g., scoring, range finding).
- ❏ I have written items for a statewide assessment.

Q18 What is your gender?
- Male
- Female

Q19 What is your ethnicity?
- Hispanic/Latino
- Non-Hispanic/Latino

Q20 What is your race? (Choose one or more)
- ❏ White
- ❏ Black/African-American
- ❏ Asian
- ❏ American Indian/Alaska Native
- ❏ Native Hawaiian/Other Pacific Islander

Q21 What state do you work in?
- AK
- CO
- IL
- IA
- KS
- MI
- MS
- MO
- NH
- NJ
- NC
- ND
- OK

- PA
- UT
- VT
- VA
- WI
- WV
- Other

Answer If *In which state do you work?* Other Is Selected
Q21b If "Other" was selected, please list the state in which you work.

Q22 Which best describes the population density in your school/workplace?
- Rural (population living outside settlements of 1,000 or less inhabitants)
- Suburban (an outlying residential area of a city of 2,000-49,000 or more inhabitants)
- Urban (city of 50,000 inhabitants or more)

Q23 Will you be able to commit to completing up to four hours of advance training prior to the on-site standard-setting meeting?
- Yes
- No

Q24 Will you be able to attend the entire on-site standard-setting meeting on June 15-18, 2015?
- Yes
- No

Thank you for completing the survey. DLM staff plan to notify volunteers who have been selected to serve on panels within 14 days after a recruitment phase ends.

Appendix D: Panel Training and Materials

Large file – separate attachment to be included in final document

Appendix E: Example Rating Forms for Range Finding and Pinpointing

DLM Standard Setting
Rating Form – Range Finding

Panelist ID: ___________ **Table ID**: _________ **Subject**: Science **Grade/Course**: 5th

			Round 1 Rating				Round 2 Final Rating			
	Profile ID	# LLs	EM	AP	T	ADV	EM	AP	T	ADV
1	0013	5								
2	0014	5								
3	0015	5								
4	0028	10								
5	0029	10								
6	0030	10								
7	0043	15								
8	0044	15								
9	0045	15								
10	0058	20								
11	0059	20								
12	0060	20								
13	0073	25								
14	0074	25								
15	0075	25								

DLM Standard Setting
Pinpointing Form: AP/T

Panelist ID: __________ **Table ID**: ________ **Subject**: Science **Grade/Course**: ____________

			Round 1 Rating				Round 2 Final Rating			
	Profile ID	# LLs	EM	AP	T	ADV	EM	AP	T	ADV
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										

EM = Emerging AP = Approaching Target T = At Target ADV = Advanced

Appendix F: Panelist Meeting Evaluation Form

Table ID: ________ **Subject**: Science **Grade/Course: ____________** **Panelist ID: _________**

Dynamic Learning Maps Science Standard Setting Panelist Questionnaire

June 2016

I. Panel Meeting Evaluation

Please consider the statements below and place an "X" in a box to indicate the level of agreement or disagreement you have with each statement. A rating scale ranging from strongly disagree to strongly agree is provided. Please mark only one of the options for each statement.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. The overall goals of the standard-setting panel meeting were clear.				
2. The panel meeting was well organized.				
3. The training and practice exercises provided the information I needed to complete my tasks.				
4. It was clear what knowledge, skill, or ability a student would need to demonstrate to achieve a certain profile.				
5. The profiles were representative examples of one or more of my students' knowledge, skills, and abilities.				
6. Evaluating profiles was an effective way to set cut points for the performance levels.				
7. I considered the ***performance level descriptors*** when I rated each profile.				
8. I considered the ***assessment items*** when I rated each profile.				
9. I considered the ***other panelists' opinions*** when I rated each profile.				
10. I considered ***my experience in the field*** when I rated each profile.				
11. I understood how to rate each profile.				
12. I had enough time to complete the tasks.				
13. I felt confident when rating the profiles.				
14. The procedure for recommending cut points was free from bias.				

In the space below, please feel free to:

- Add comments regarding any of the responses to the questions above
- Make suggestions to improve future standard setting workshops
- Tell us what you liked and/or did not like about the workshop

II. Cut Point Evaluation

Indicate your final, independent recommendation for each of your panel's recommended cut points.

- If you agree with the panel recommendation, circle 0.
- If you disagree with the panel recommendation, circle a number above or below 0 to indicate the direction and distance away from your panel's recommendation where you believe the cut point should be set.

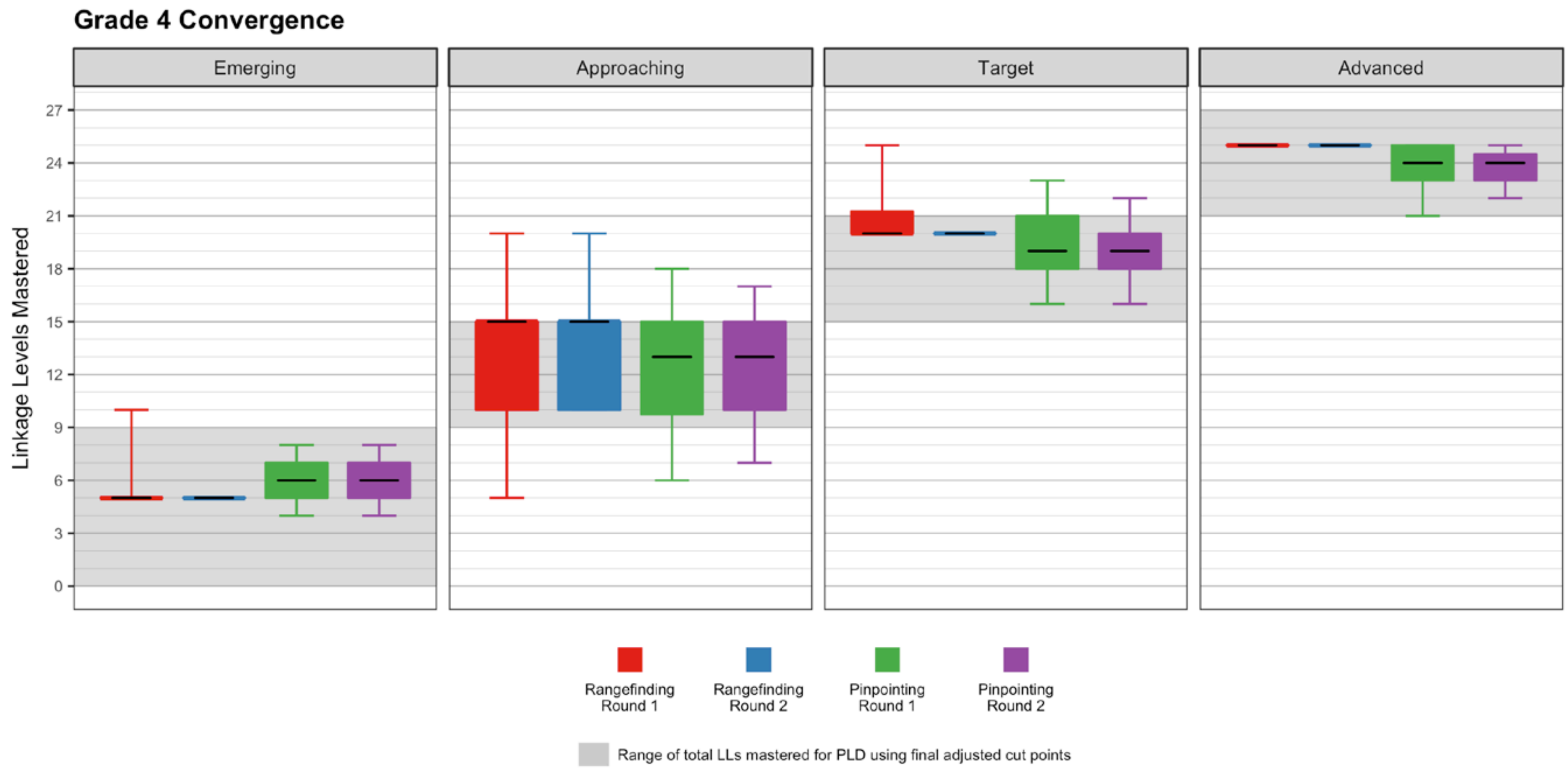
EM/APP	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7
APP/T	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7
T/ADV	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	+6	+7

III. Overall Evaluation

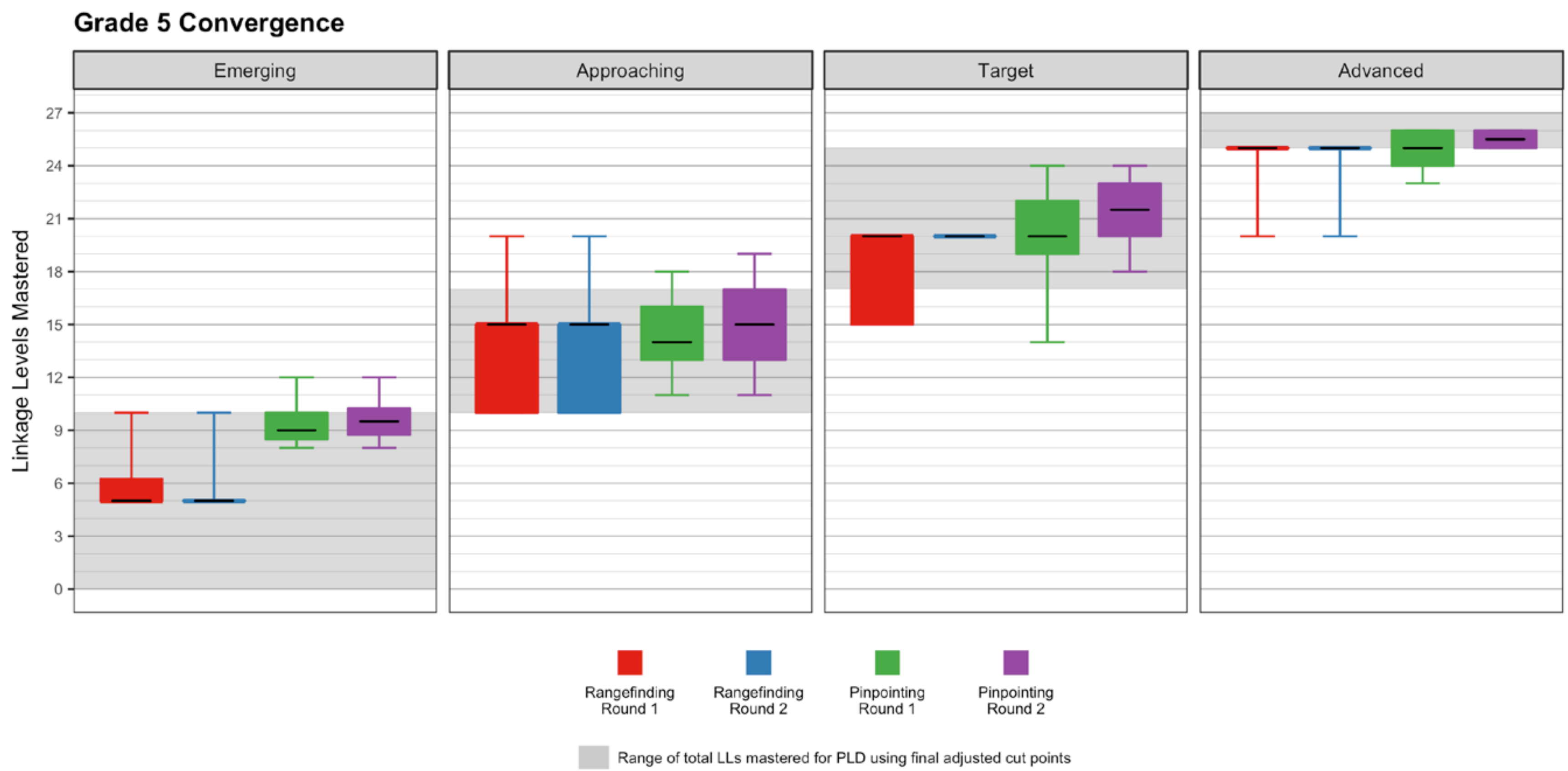
Please consider the statements below and place an "X" in a box to indicate the level of agreement or disagreement you have with each statement. Please mark only one option for each statement.

	Strongly Disagree	Disagree	Agree	Strongly Agree	Not Applicable
1. Overall, I was satisfied with the ratings made by panelists in my group.					
2. I am confident that the meeting produced valid cut point recommendations.					
3. Overall, I believe my opinions were considered and valued by the group.					
4. Overall, my group's discussions were open and honest.					
5. Participating in the process increased my understanding of the DLM system.					
6. Overall, I valued the panel meeting as a professional development experience.					
7. This experience will help me plan and provide instruction for my students with significant cognitive disabilities.					
8. This experience will help me use the DLM system more effectively.					

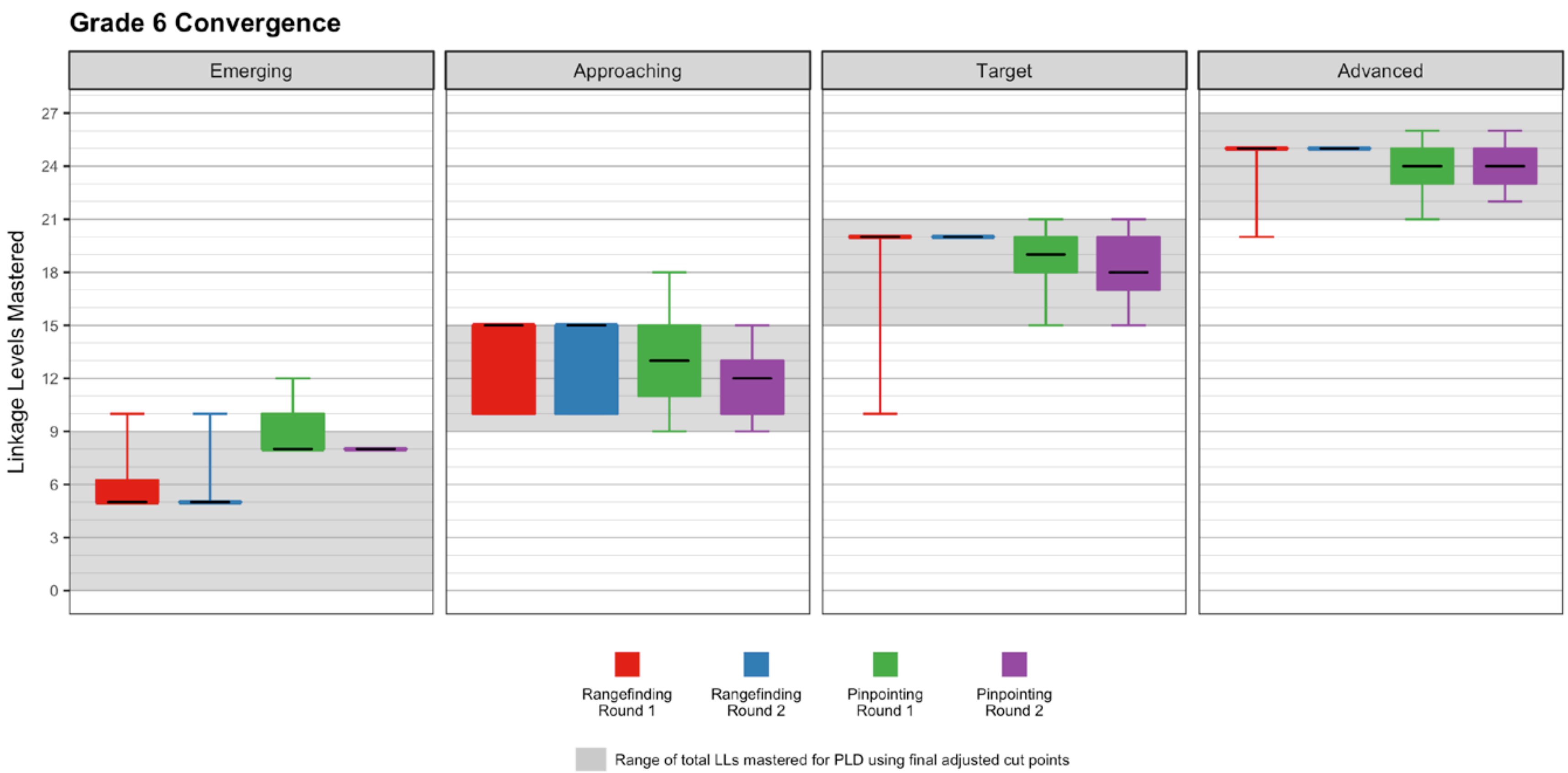
Appendix G: Convergence Plots for Range-Finding and Pinpointing Ratings



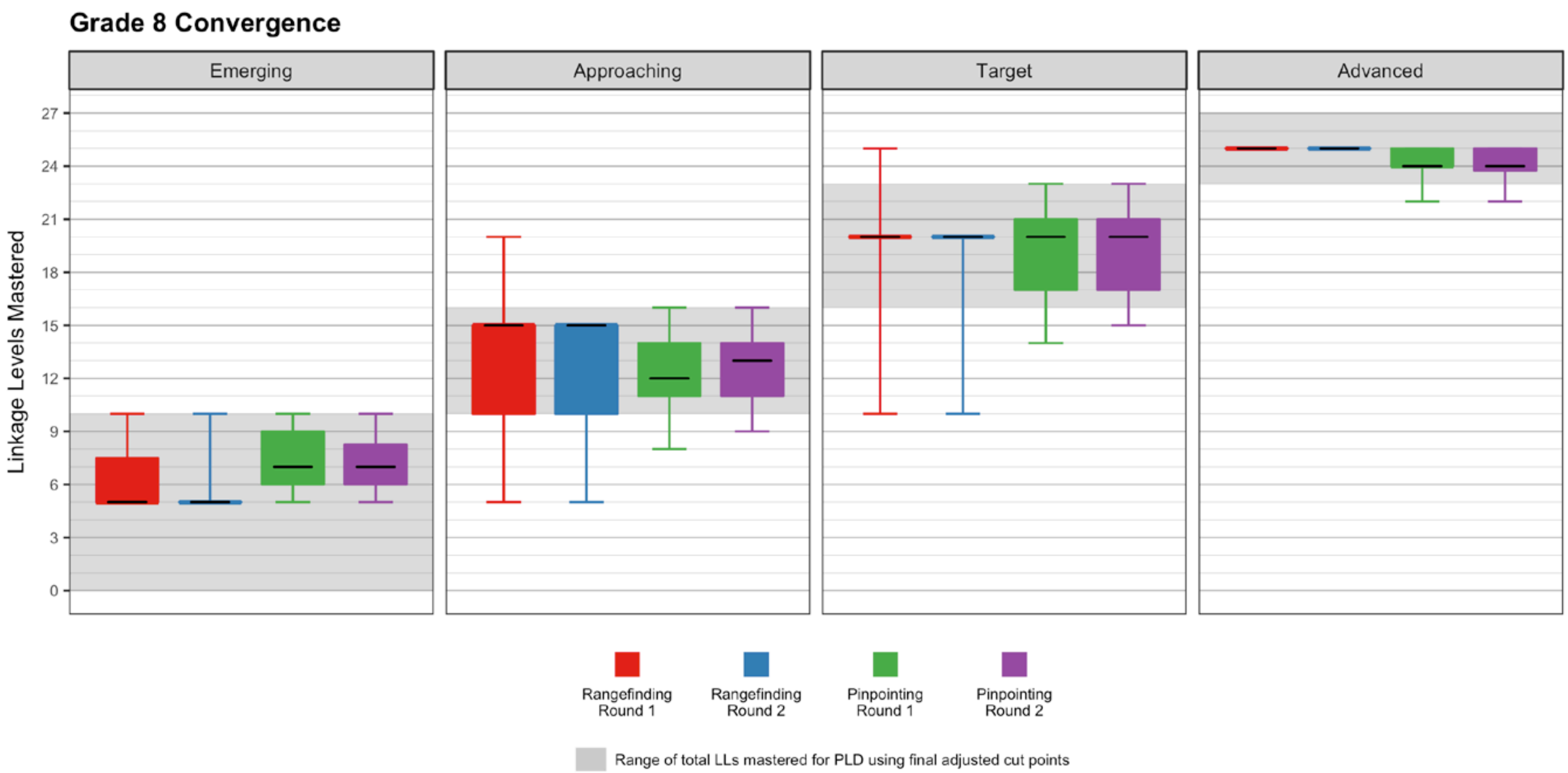
Note. The cut points represent the lowest value included in the higher performance level. For example, a cut point of 9 means that a LL mastery of 9 or greater is considered Approaching.



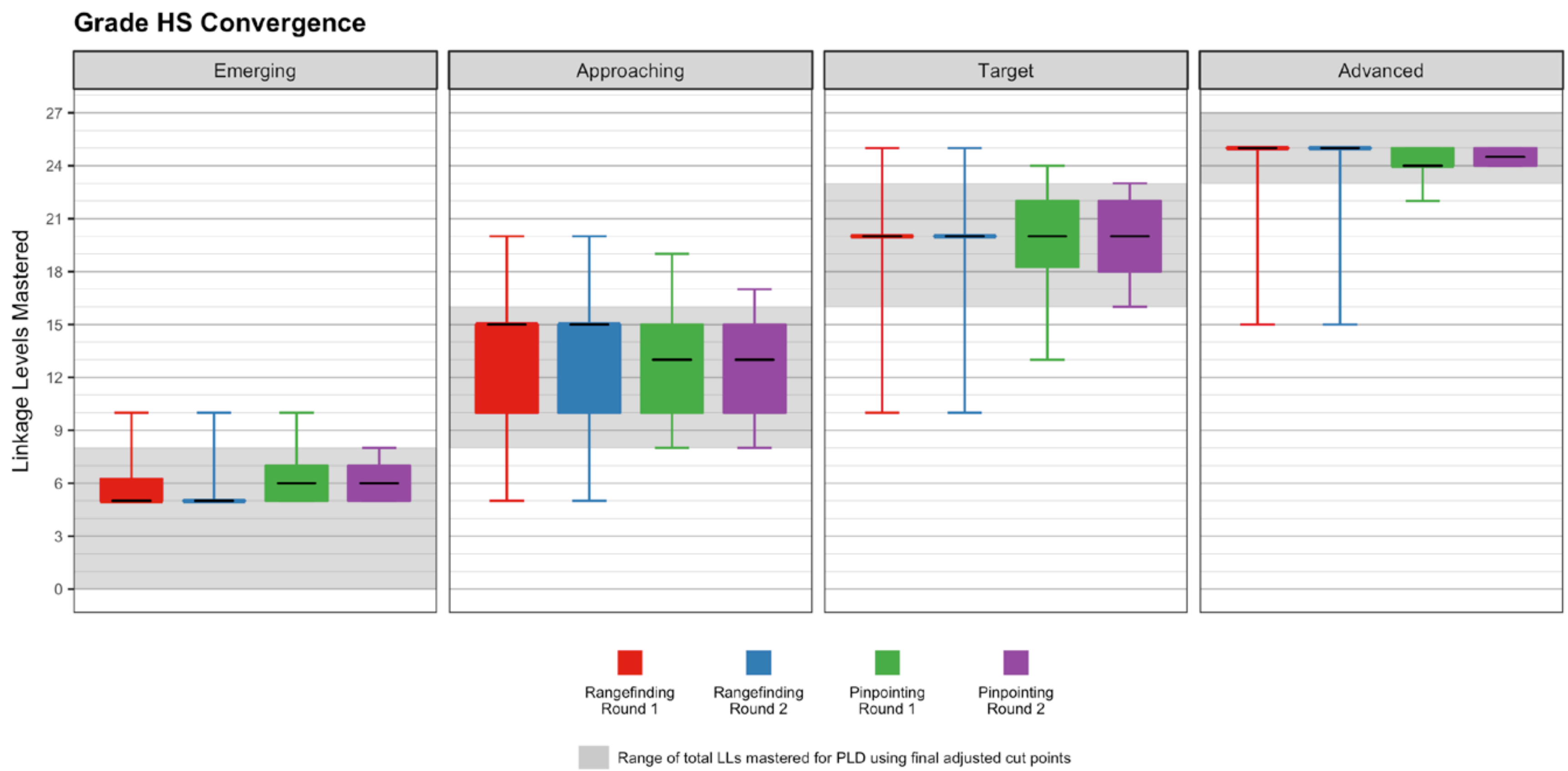
Note. The cut points represent the lowest value included in the higher performance level. For example, a cut point of 9 means that mastery of nine or more linkage levels is considered Approaching.



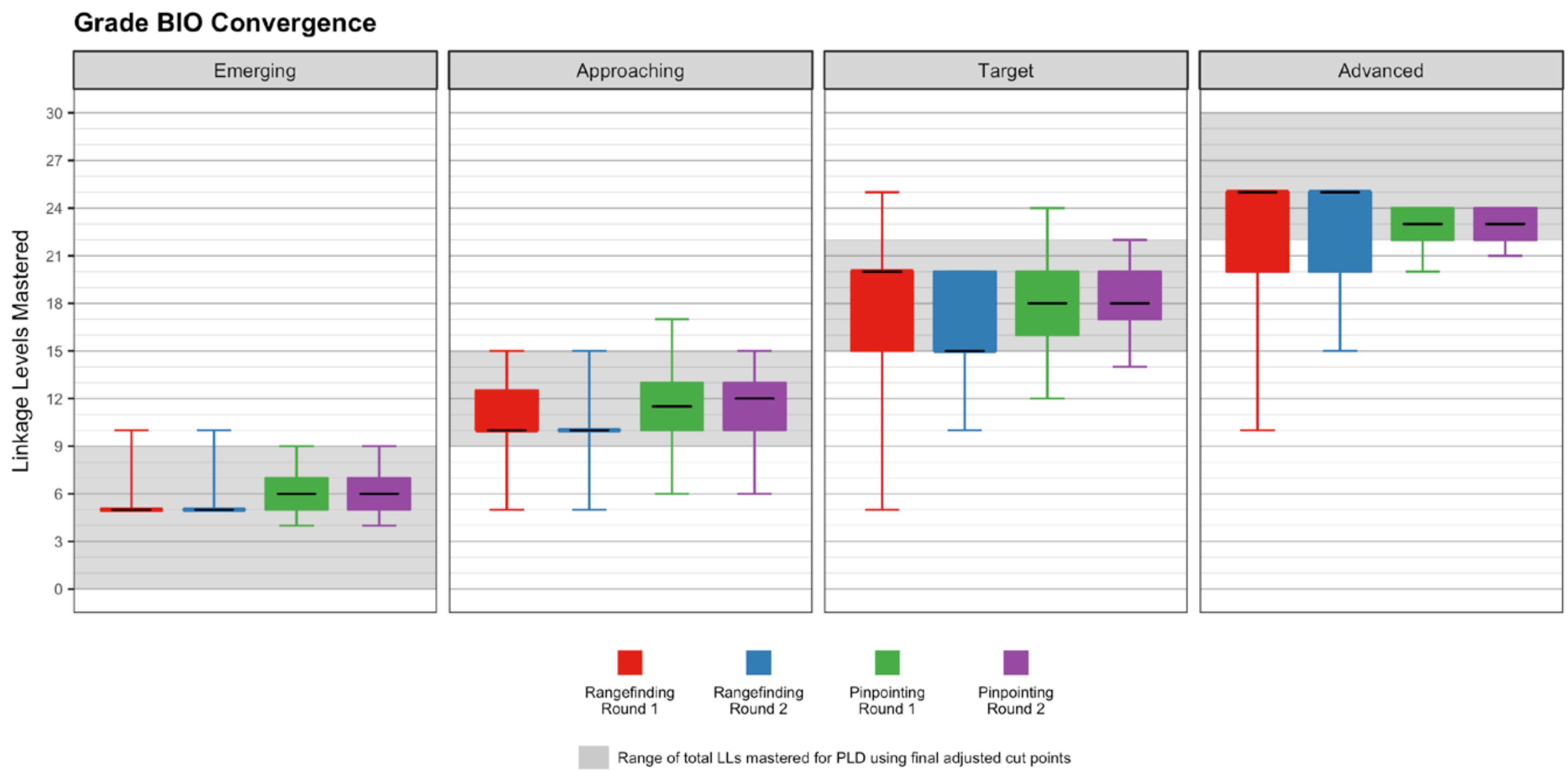
Note. The cut points represent the lowest value included in the higher performance level. For example, a cut point of 9 means that mastery of nine or more linkage levels is considered Approaching.



Note. The cut points represent the lowest value included in the higher performance level. For example, a cut point of 9 means that mastery of nine or more linkage levels is considered Approaching.



Note. The cut points represent the lowest value included in the higher performance level. For example, a cut point of 9 means that mastery of nine or more linkage levels is considered Approaching.



Note. The cut points represent the lowest value included in the higher performance level. For example, a cut point of 9 means that mastery of nine or more linkage levels is considered Approaching.

Appendix H: TAC Resolution on DLM Standard Setting

MEMORANDUM

To: DLM Staff and Participating States

From: Greg Camilli, member
DLM Technical Advisory Committee

Date: August 17, 2016

Subject: TAC Overview and Commentary on the DLM Science Standard Setting Process

As the representative of the DLM TAC, I was in attendance during the entire meeting conducted to set standards on the DLM science assessment which was conducted from June 15 through June 17, 2016. I provide observations below of the standard-setting process. These observations were shared with both the full TAC at the June 22 conference call as well as with the state members at their bi-monthly partner conference call.

The science assessment system follows the year-end model, which has a consistent blueprint that is covered in its entirety in the spring testing window. Assessments are available in grade spans (3-5, 6- 8, HS) and EOI Biology. Based on recommended TAC feedback and science states' input, cut points were set at fourth, fifth, sixth, and eighth grades as well as high school and high school biology. These are the specific grades in which DLM science states currently test for accountability purposes.

Overview of the Standard Setting Process for Science

1. The basic method of standard setting previously applied to ELA and mathematics was modified for science. The two main modifications were (1) the inclusion of impact data, and (2) a discussion with a cross-panel group of modifications for potential modifications to either raw or adjusted cut points.
2. Six panels of educators were convened by DLM staff representing fourth, fifth, sixth, and eighth grades as well as high school and high school biology.
3. Each panel had 4 to 8 members and set cut points for one of the 6 levels.
4. Considerable pre-meeting training (two-and-a-half hours) available by internet was required of all participants. Pre-conference training was delivered via video presentation. I considered the videos to be effective. I did not observe any panelists who seemed uncomfortable or unfamiliar with the procedures based on participation on group discussions. A key part of training was to orient panelists to EEs, linkage levels, and testlets corresponding to LLs. In particular, they were asked to form an understanding of what kinds of items and responses correspond to each EE/LL combination. Also incorporated was the general framework of policy-level PLDs to

anchor an understanding of performance. Supporting reference materials included notebook with glossary, blank profile forms, and tables listing and describing EEs.

5. A training folder was provided with 6 profiles for identifying performance level prior to actual range finding. Panelists were debriefed on training and allowed time for discussion of the process and for addressing questions.
6. The actual standard-setting event was carefully scripted. The facilitators were familiar with the procedures based on the previous standard settings in ELA and mathematics. Scripts were available for training, range finding, pinpointing, and recommended cut points and consideration of impact data. However, the impact data could only influence cut points based on cross-panel discussion, which occurred after individual groups had completed their work. Group facilitators collected and recorded all judgment data which was verified by one panelist. Facilitators were trained in the content of the standard setting as well as group dynamics.
7. I found that final recommendations were primarily driven by content rather than impact data.
8. The standard-setting meeting was carried out effectively and all groups finished early on the third day.

Day 1

1. The meeting began with introductions of the DLM staff present, the state observers, and the TAC observer. A signed test security and confidentiality statement was required. Meeting logistics were detailed, and required paperwork was distributed and collected.
2. Initial training provided on day 1 was designed to serve as a refresher of the online training each participant had gone through. Panelists had no questions regarding the process. A brief psychometric overview of the assessments was given. This type of presentation would benefit greatly from more intuitive explanations (e.g., what does the "probability of mastery represent") and more effective graphics. A technical overview in 30 minutes is a difficult task.
3. Panels were instructed what would not be provided—no raw scores and no scale scores. The standard setting was grounded in terms of *total linkage levels*. One panelist questioned whether number of linkages levels was being used in lieu of a total score. Training activities included sample diagrams and sample student profiles. The linkage levels (LLs) mastered (that is, assessed and mastered) were shown in shaded green. LLs on which students were assessed but did not show mastery (Mastery is through either 80% correct or through the DCM mastery probability > .80 threshold) were shaded blue. The learning profiles that did not have any shading for linkage levels indicated no evidence of mastery. Some profiles also showed evidence that students only partially completed the assessment (i.e., rows for some EEs were entirely unshaded).
4. The initial instructions for interpreting blanks were somewhat confusing. This confusion was resolved on day 2 to the satisfaction of the panelists. In essence, the directive to "ignore blank cells" was amended to "blank cells do not provided evidence of mastery even if other LLs suggest mastery is plausible." Panelists were instructed

that four performance levels would be established—Emerging (EM), Approaching Target (AT), Target (T), and Advanced (ADV).

5. The steps in the process of setting standards were reviewed—two rounds of range finding with 10 student profiles that ranged from 5 to 25 in steps of 5, followed by two rounds of pinpointing with 21 profiles for each round (3 profiles for each of 7 LLs). Each round of pinpointing considered adjacent levels for each of three cut points. I observed panelists referring to PLDs, linkage level descriptors, and actual items at each LL in an iterative process.
6. Panelists were instructed to use the answer to this question to set standards: "Using your best professional judgment and considering all students with significant cognitive disabilities, which performance level best described this profile?"
7. Panelists were told that cut scores would be set by the number of LLs mastered. The number of LLs in range finding went from 5 to 25.
8. Panelists' ratings for range finding were indicated by panelists raising their hands to self-report their ratings and a summary tally with verification for each performance level. Data were entered into a predefined spreadsheet that contained the student profile number and profile scores (that corresponded to paper profiles prepared for each panelist in a group). The spreadsheet was projected on a wall for ease of viewing for the panelists. In round 1 of range finding, the scores entered served to trigger an indication in a separate table as to whether the level of agreement or disagreement warranted further discussion. Panelists were instructed to focus on these, as well as any other ratings that they wanted to discuss. During this activity, facilitators pointed out areas of discrepancy with regard to panel classifications as well as the vertical articulation of EM, AT, and ADV cut points. Panelists were reminded they were not required to agree on their judgments.
9. Once the round 1 ratings had been discussed, the panelists were instructed to enter their round 2 ratings. This resulted in a calculation of a suggested cut point. Based on the results of round 2 of range finding, a new set of profiles was provided to each group. To determine cut points, a logistic regression procedure was programmed into the spreadsheet.
10. I did see some disagreement about cut points, but this disagreement was primarily content based, and led to further discussion of key skills. Panelists were asked to classify profiles into proficiency groups independently and without discussion. (This was generally the case for each round of ranging finding and pinpointing.) However, it was mentioned that a consensus was desirable based on group discussion and presentation of rationales.
11. Pinpointing also consisted of two rounds using a potential LL range of 2 to 27 (2 to 30 in Biology). The pinpointing results (the cut points suggested by the panel) differed from range-finding results primarily for the EM/AT cut point. This the pinpointing step appears to be a necessary component of the standard-setting procedure. All panels had completed range finding by the end of the first day.
12. The issue of "blank space interpretation" was covered the staff debriefing on June 15, 2016, and a plan was devised for addressing panelist confusion.

Day 2

1. At the start of day 2, DLM staff addressed the "blank space issue" with the full group. Following some discussion, it appeared that panelists were able to understand the original intent.
2. The primary activity of day 2 was to complete pinpointing, to review impact data, and to identify key skills for performance levels. Panels were provided cut point ranges by DLM psychometricians (to avoid suggesting a particular cut point), and runners then provided panels with pinpointing folders that included additional profiles tailored to the cut point ranges and pinpointing forms.
3. In some panels, a few sentences were written to describe each of the performance levels as a precursor to grade-level PLDs: specifically, the KSAs addressed at each performance level. Other panels prepared a list without summary prose. I was informed that the DLM staff would take bulleted skills and prose and develop these into statements. This activity occurred primarily at the end of pinpointing. Near the beginning of day 2, panels were informed that skill identification would be a key task for facilitators, and they should refer to their notes and other materials for this discussion.
4. At the end of day 2, the staff debrief covered timing logistics. Most panels had completed or nearly completed the skill identification for proficiency levels. It was decided to provide all panels a brief amount of time to complete and review this activity at the beginning of day 3.
5. A special procedure was devised for the potential result that lower grades had higher cuts points than higher grades. However, this inconsistency did not emerge at the end of range finding and pinpointing.

Day 3

1. After finishing identification of key skills at the beginning of day 3, two members of each panel were identified to form a cross-panel, vertical articulation group for the purpose of evaluating cut scores set by the group as a whole. While this group met, the remaining panelists were debriefed, including DLM staff expressing appreciation of their work. For the vertical articulation panel, panelists were shown final cut points, adjusted cut points, and impact data.
2. Panelists were asked to consider the raw cut points and cut points smoothed across grades. Then they were asked if they were in agreement with those cut scores, and if not, what their cut score recommendations would be.
3. Cross-panelists were asked to focus on the following questions:
    - Do the percentages of students in each category roughly match what you would expect, based on your knowledge of students with the most significant cognitive disabilities?
    - What might explain the distributions you see here?
    - Do you believe the recommended cut points are reasonable, from content and policy perspectives?

- If you believe changes are needed:
  - Where are changes needed?
  - What is your rationale for making those recommendations? Content? Policy?
  - What would be the impact on content at those performance levels?

4. In general, panelists recognized that the difference between raw and adjusted cut points could reflect a reasonable amount of disagreement about skills that were essential to a performance level. This led one panelist to remark that consideration of cut points and impact could lead to refinement of performance level skills.
5. There was stronger recommendation for keeping the raw cut for EM/AP at sixth grade and more moderate interest in changing the eighth grade EM/AP cut. The rationales were based on the panelists' discussion of what originally drove their raw cut point recommendations.
6. At the completing of the cross-panel work, this panel was given the same debriefing mentioned above. This debriefing covered confidentiality requirements regarding what panelists were allowed to say about the process, meeting materials, cut points, and impact data. The procedure for submitting travel expenses was also explained.
7. Panelists were then asked to complete all questions of the standard-setting evaluation questionnaire. This assessment included items regarding their comfort level and understanding of the procedure, individual evaluation of cut points, and overall impressions. These results will be compiled and included in the full memo to the governance board.
8. This work was completed prior to noon on day 3. In the remaining time, panelists were asked to contribute to content issues regarding the assessment and instructional materials.

Commentary

1. The actual standard-setting event was carefully scripted. The training of the six facilitators who led the work at each panel's table included a full-scale tryout of the standard-setting process (i.e., actually setting standards based on sets of the materials that would be used at the event). This procedure provided detailed understanding of the standard-setting process and permitted all panels to receive the same instructions at each step in the process for each grade/course for which standards were set.
2. There were daily debriefs with the facilitators, which permitted any needed mid-course corrections to be made to the process or instructions. This served to keep the standard setting on schedule.
3. In the student profiles, cells were blank for LLs when the student did not test on the EE. Some panelists started to evaluate those empty cells compared to adjacent mastered LLs and believed the student should have mastered the blank cells. Panelists were retrained to focus on the cells that were shaded as part of their evaluation.
4. Changes that were recommended during the cross-panel discussion were based on the assessment content and the standards and were less influenced by the impact data that had been presented. The cross-panel discussion provided key insights to the final

cut points. Panelists agreed that many cut points could have gone in either direction by a point or two, and all panelists indicated the final cut points were acceptable.

5. The standard-setting meeting was carried out effectively, the staff were helpful to the panelists, and the panelists worked diligently to set standards. The panelists were very supportive of the processes they used to set standards.

Resolution

At the June 22 Technical Advisory Committee (TAC) meeting, the TAC evaluated the methodology and process that was used to determine cut points rather than the cut point values themselves. Using this criteria, the TAC found the process to be consistent with the proposed methodology. Additionally, the TAC stated they could find nothing that should prevent the states from accepting the cut scores. The TAC further recommended that when presenting this information to states at the governance meeting, additional information should be included in the report, including a more explicit explanation of which students were included in the impact data and how off-grade testers (students who test in grades that did not receive grade-level cut points, i.e., third and seventh grades) were handled, as well as recruitment procedures and demographics of the panelists.

Appendix I: Vertical Articulation Panel Discussion Summary

The vertical articulation panel, comprised of 10 members (two from each panel) met to review cut points and impact data. They evaluated information based on panel-recommended (raw) cut points and on statistically adjusted cut points. Panelists evaluated whether the cut points were logical across grades and whether they were appropriate based on the content and their states' policy perspectives. The panel also discussed whether they would recommend any changes to the raw or adjusted cuts and their rationales for those changes.

Before being shown any results, the panel was asked what patterns they would expect to see in the cut points and impact data across grades. There was general consensus that the panel expected a general increase in cut points from lower to higher grade levels. They expected the impact data to show higher achievement in the lower grades and lower achievement in the upper grades. Much of the discussion about their rationale for this expectation focused on students' opportunity to learn. Panelists indicated that students in upper grades had less exposure to the science curriculum than those in lower grades. These representatives from the grade-level panels also noted that their panel-recommended cuts reflected standards that were higher than what was being taught in classrooms. While they expected to see low performance based on 2016 impact data, they believed that over time and with more effective instruction, more students would reach the At Target level.

When presented with the panel-recommended and adjusted cut points, vertical panel representatives indicated that in general the patterns of cut points were as expected, perhaps even more consistent across grades than they expected. However, in reviewing the statistically adjusted cuts the panelists noted the lack of progression from sixth to eighth grades and explained that with two additional years of instruction, the eighth grade cut should be higher than the sixth grade cut point. It was determined that moving the sixth grade cut point down a point rather than increasing the eighth grade cut was more reasonable given the difficulty of the content.

Panelist views of the impact data were that they were reasonable for the first year of administration of the assessment. They did not expect to see large percentages of students at the Advanced level. They again commented on the need to "set the bar high" for students, and that while there were currently large proportions of students at the Emerging level, they expected the performance level distribution to shift upward over time.

The panel's final recommendation was to adopt the statistically adjusted cut points, with one exception: retain the panel-recommended sixth grade cut point between Emerging and Approaching (9) rather than the statistically adjusted cut point (10).

DYNAMIC® LEARNING MAPS

DLM® Performance Level Descriptors—Science: Grade 4

Year-End Model

Emerging	A student who achieves at the **emerging** performance level typically can recognize changes in state of matter, match properties, observe the effects of gravity, identify human needs, order daily events, and anticipate routines. In physical science, the student can • recognize melting and freezing • match materials with similar physical properties • recognize the direction objects go when dropped In life science, the student can • identify common human foods In earth and space science, the student can • order events in daily routines, including sunrise and sunset • identify routines to follow when it is raining
Approaching the Target	A student who achieves at the **approaching the target** performance level typically can classify materials, predict direction of gravitational pull, identify what plants need, distinguish living from non-living things, and identify ways to protect Earth's resources. In physical science, the student can • classify materials by physical properties • predict the direction objects go when dropped • identify models that show plants need sunlight to grow In life science, the student can • distinguish things that grow from things that do not grow In earth and space science, the student can • identify strategies that people use to protect Earth's resources, such as recycling
At Target	A student who achieves at the **at target** performance level typically can compare weights, show how plants get energy, provide evidence that plants are living things, show matter moving in an ecosystem, recognize changes in daily patterns, recognize how water affects people, and compare ways to protect Earth's resources. In physical science, the student can • compare the weights of a material before and after melting or freezing • use models to show how plants capture energy from sunlight In life science, the student can • provide evidence that plants grow • identify a model, such as a food chain, that shows matter moving from plants to animals In earth and space science, the student can • recognize patterns in the length of daylight hours • recognize how water affects people in a region • compare methods people can use to help protect the Earth's resources

Advanced	A student who achieves at the **advanced** performance level typically can show that weight is conserved, identify materials by their properties**,** demonstrate that Earth's gravitational pull is directed down, describe the source of food energy, explain how matter moves in an ecosystem, interpret data on seasonal changes, explain how water affects living things, and explain ways to protect Earth's resources. In physical science, the student can • compare weights before and after heating, cooling, or mixing • identify materials by making observations and measurements of properties • identify evidence of Earth's gravitational pull on objects • create a model to describe that energy in animals' food was once energy from the sun In life science, the student can • create a model that shows matter moving through living things In earth and space science, the student can • interpret data on a graph to show seasonal patterns in the length of daylight hours • create a model showing how water affects the living things in a region • use information to describe how people can help protect the Earth's resources and how that affects the environment

DYNAMIC® LEARNING MAPS

DLM Performance Level Descriptors—Science: Grade 5

Year-End Model

Emerging	A student who achieves at the **emerging** performance level typically can recognize changes in state of matter, match properties, observe the effects of gravity, distinguish living from non-living things, identify human needs, order daily events, and anticipate routines. In physical science, the student can • recognize melting and freezing • match materials with similar physical properties • recognize the direction objects go when dropped • identify models that show plants need sunlight to grow In life science, the student can • distinguish things that grow from things that do not grow • identify common human foods In earth and space science, the student can • order events in daily routines, including sunrise and sunset • identify routines to follow when it is raining
Approaching the Target	A student who achieves at the **approaching the target** performance level typically can compare weights, classify materials, predict direction of gravitational pull, identify what plants need, show matter moving in an ecosystem, provide evidence that plants are living things, recognize changes in daily patterns, recognize how water affects people, and identify ways to protect Earth's resources. In physical science, the student can • compare weights before and after melting or freezing • classify materials by physical properties • predict the direction objects go when dropped • identify models that show plants need sunlight to grow In life science, the student can • provide evidence that plants grow In earth and space science, the student can • recognize patterns in the length of daylight hours • recognize how water affects people in a region • identify strategies that people use to protect Earth's resources, such as recycling

At Target	A student who achieves at the **at target** performance level typically can identify materials by their properties, demonstrate that Earth's gravity is directed down, show how plants get energy, show matter moving in an ecosystem, interpret data on seasonal changes, and compare ways to protect Earth's resources. In physical science, the student can • identify materials by making observations and measurements of properties • identify evidence of Earth's gravitational pull on objects • use models to describe how energy is captured from sunlight In life science, the student can • identify a model that shows matter moving from plants to animals In earth and space science, the student can • interpret data on a graph to show seasonal patterns in the length of daylight hours • compare methods people can use to help protect the Earth's resources
Advanced	A student who achieves at the **advanced** performance level typically can describe the source of food energy, describe sources of plant matter, explain how matter moves in an ecosystem, explain how water affects living things, and explain ways to protect Earth's resources. In physical science, the student can • create a model to describe that energy in animals' food was once energy from the sun In life science, the student can • provide evidence that plants need air and water to grow • create a model that shows matter moving through living things In earth and space science, the student can • create a model showing how water affects the living things in a region • use information to describe how people can help protect the Earth's resources and how that affects the environment

DYNAMIC® LEARNING MAPS

DLM Performance Level Descriptors—Science: Grade 6

Year-End Model

Emerging	A student who achieves at the **emerging** performance level typically can recognize changes in states of matter, identify major organs, match organisms to habitats, identify common animal foods, and interpret basic weather information. In physical science, the student can • recognize melting, freezing, and boiling In life science, the student can • recognize the brain, heart, lungs, and stomach • identify habitats of common organisms In earth and space science, the student can • interpret basic weather symbols
Approaching the Target	A student who achieves at the **approaching the target** performance level typically can identify materials that minimize thermal energy transfer, match organisms to habitats, compare weather conditions, and recognize resources that are important for life. In physical science, the student can • identify ways to make objects move faster or slower • identify materials that keep substances hot or cold In life science, the student can • identify habitats of common organisms In earth and space science, the student can • compare differences in basic weather conditions • recognize resources that are important for human life

DYNAMIC® LEARNING MAPS

At Target	A student who achieves at the **at target** performance level typically can gather observational data, investigate ways to change motion, predict change in thermal energy transfer with different materials, model and understand how organs are connected, identify factors that influence the growth of organisms, classify animals, identify weather events that impact landforms, make predictions about future weather, and recognize how humans impact the environment. In physical science, the student can • make observations and measurements of properties before and after chemical changes • investigate ways to change the motion of an object • predict how different materials will keep a substance hot or cold In life science, the student can • use models to show how organs are connected • identify factors that influence the growth of plants and animals • classify animals by what they eat In earth and space science, the student can • identify weather conditions that impact landforms • interpret weather forecasts to make predictions • recognize ways that humans impact the environment
Advanced	A student who achieves at the **advanced** performance level typically can analyze observational data, predict changes in motion, refine a device to minimize or maximize thermal energy transfer, use data to show that environmental resources influence growth, identify producers and consumers, distinguish between catastrophic and non-catastrophic weather events, and explain how to minimize human impacts on the environment. In physical science, the student can • analyze data on properties of matter before and after a chemical change • predict how forces acting on different objects change motion • refine a device that keeps substances hot or cold to increase its effectiveness In life science, the student can • use data to show that environmental resources influence the growth of plants and animals • identify producers and consumers in a food chain In earth and space science, the student can • understand how catastrophic and non-catastrophic weather events change Earth's surface • develop a plan to minimize a human impact on the environment

DYNAMIC® LEARNING MAPS

DLM Performance Level Descriptors—Science: Grade 8

Year-End Model

Emerging	A student who achieves at the **emerging** performance level typically can recognize changes in state of matter, identify ways to change movement, identify major organs, match organisms to habitats, identify common animals' foods, interpret basic weather information, and compare weather conditions. In physical science, the student can • recognize melting, freezing, and boiling • identify ways to make objects move faster or slower In life science, the student can • recognize the brain, heart, lungs, and stomach • identify habitats of common organisms • identify foods that animals eat In earth and space science, the student can • interpret basic weather symbols • compare differences in basic weather conditions
Approaching the Target	A student who achieves at the **approaching the target** performance level typically can investigate ways to change motion, identify materials that minimize thermal energy transfer, identify factors that influence the growth of organisms, classify animals, identify weather events that impact landforms, compare weather conditions, and recognize resources that are important for life. In physical science, the student can • investigate ways to change the motion of an object • identify materials that keep substances hot or cold In life science, the student can • identify factors that influence the growth of plants and animals • classify animals by what they eat In earth and space science, the student can • identify weather conditions that impact landforms • compare differences in basic weather conditions • recognize resources that are important for human life

At Target	A student who achieves at the **at target** performance level typically can gather observational data, predict change in thermal energy transfer with different materials, model and understand how organs are connected and function, use data to show that environmental resources influence growth, distinguish between catastrophic and non-catastrophic weather events, make predictions about future weather, and recognize how humans impact the environment. In physical science, the student can • make observations and measurements of properties before and after chemical changes • predict how different materials will keep a substance hot or cold In life science, the student can • use models to show how organs work together to support survival • use data to show that environmental resources influence the growth of plants and animals In earth and space science, the student can • understand how catastrophic and non-catastrophic weather events change Earth's surface • interpret weather forecasts to make predictions • recognize ways that humans impact the environment
Advanced	A student who achieves at the **advanced** performance level typically can analyze observational data, predict changes in motion, refine a device to minimize or maximize thermal energy transfer, identify producers and consumers, and explain how to minimize human impacts on the environment. In physical science, the student can • analyze data on properties of matter before and after a chemical change • predict how forces acting on different objects change motion • refine a device that keeps substances hot or cold to increase its effectiveness In life science, the student can • identify producers and consumers in a food chain In earth and space science, the student can • develop a plan to minimize a human impact on the environment

DYNAMIC® LEARNING MAPS

DLM Performance Level Descriptors—Science: High School

Year-End Model

Emerging	A student who achieves at the **emerging** performance level typically can recognize chemical changes, identify safety equipment, identify needs of wildlife, identify seasons, and recognize conservation strategies. In physical science, the student can • recognize changes that occur during chemical reactions • identify equipment that reduces the force of a collision In life science, the student can • identify food and shelter needs In earth and space science, the student can • identify seasons • recognize strategies people use to manage materials and resources
Approaching the Target	A student who achieves at the **approaching the target** performance level typically can identify changes in material properties, compare temperatures, recognize organ functions, match animals to habitats, and gather data on conservation strategies. In physical science, the student can • identify changes in material properties after burning and/or rusting • identify equipment that reduces the force of a collision In life science, the student can • recognize that different organs have different functions • identify animals that can survive in a particular habitat In earth and space science, the student can • compare relative temperature (warmth, coldness) of two liquids • gather data on a class conservation strategy

At Target	A student who achieves at the **at target** performance level typically can explain properties, compare safety devices, compare temperatures before and after mixing, identify organ functions, recognize relationships that affect population size, identify factors that affect survival, model Earth's orbit, explain conservation strategies, and organize data. In physical science, the student can • make a claim supported by evidence that explains chemical properties • use data to compare the effectiveness of safety devices in minimizing forces during collisions • compare the temperature of a mixture of two liquids before and after mixing In life science, the student can • identify which organs perform specific functions • recognize the relationships between population size, food sources, and available shelter • identify special traits in organisms that allow them to survive in different environments In earth and space science, the student can • model how Earth's position in its orbit corresponds with the seasons • describe reasons for strategies to conserve, recycle, or reuse • organize data on the effects of conservation strategies
Advanced	A student who achieves at the **advanced** performance level typically can design safety devices, predict temperatures before and after mixing, model organ systems, explain how animal populations depend on other organisms, explain how traits allow species to survive, model the cause of seasonal changes, construct arguments for conservation strategies, and analyze data about the effects of conservation strategies. In physical science, the student can • analyze data to evaluate the effectiveness of safety devices and make changes that can improve effectiveness • predict the temperature of a mixture based on the temperatures and amounts of the two liquids before mixing In life science, the student can • model the organization and interaction of organs into systems • use graphs to explain how animal populations depend on other organisms • explain how the traits of particular species allow them to survive in their environments In earth and space science, the student can • use a model of the Earth and the Sun to show how Earth's tilt and orbit cause changes in seasons • use science ideas to support claims about the effects of conservation strategies on resources • analyze data to determine the effects of a conservation strategy on a natural resource

DLM® Performance Level Descriptors—Science: Biology

End-of-Instruction Model

Emerging	A student who achieves at the **emerging** performance level typically can identify organs, recognize cells, recognize changes in population, identify animals' needs, compare traits, and match species to environments. The student demonstrates knowledge of life science by • identifying major organs of the body • recognizing that organisms are composed of cells • recognizing changes in population size • identifying food and shelter needs for wildlife • comparing traits of parents and offspring • matching species to environments
Approaching the Target	A student who achieves at the **approaching the target** performance level typically can identify change, graph change, recognize relationships, identify traits that are advantageous in certain environments, and identify human activities that affect other living things. The student demonstrates knowledge of life science by • identifying changes in a data display • graphing changes in population size • recognizing relationships between population size and resources • using data to identify organisms that survive better in environments • identifying human activities that affect a species

DYNAMIC® LEARNING MAPS

At Target	A student who achieves at the **at target** performance level typically can identify organ function, compare data, model relationships about cells and body size, use graphical representations to explain changes in population, interpret evidence about traits of parents and offspring, identify environmental factors that affect survival, and use mathematical models to determine the effect of human actions on a species. The student demonstrates knowledge of life science by • identifying which organs work for a specific function • comparing data before and after change • modeling the relationship between the number of cells and the size of a body • using a graphical representation to explain the dependence of an animal population on other organisms for food and their environment for shelter • using evidence to show that parents and offspring may have different traits • identifying factors in an environment that require special traits to survive • using a mathematical model to determine which human actions harm or help a species
Advanced	A student who achieves at the **advanced** performance level typically can explain organ functions, model organ systems, collect data from an investigation, model growth, explain population changes over time, explain relationships between traits of parents and offspring, explain how traits help animals survive, interpret population data sets, and evaluate environmental strategies for protecting species. The student demonstrates knowledge of life science by • explaining how different organs carry out essential functions • modeling the organization and interaction of organs into systems • collecting data from an investigation to show how organisms react to changes • using a model to show how growth occurs when cells multiply • using a graphical representation to explain changes over time in population size for an animal species • defending why reproduction may or may not result in offspring with different traits • explaining how the traits of particular species allow them to survive in their environments • interpreting data sets to identify an advantageous heritable trait • evaluating a strategy to protect a species

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General Research File					
Column Name	**Format**	**Length**	**Column Location**	**Notation**	**Example**
Unique_Row_Identifier	value	8	A	A unique number generated for each row	942
Studentid	value	6	B	A string of numbers randomly assigned to each student taking the test used to identify all internal DLM records	533121
State_Student_ Identifier	value	10	C	Student's state ID number	2815687243
AYP_School_ Identifier	character	30	D	The unique number that has been assigned by DLM to the school building as listed in your State Organization Table.	See State Organization Table
Current_Grade_Level	value	2	E	The grade of record at which the student was tested	12
Course	character	4	F	Used for EOI Only - the EOI course in which the student was tested	Eng2
Student_Legal_ First_Name	character	60	G	Contains the first name of the student taking the test	Neal
Student_Legal_Middle_Name	character	60	H	Contains the middle name of the student taking the test, leaving blank if there is not a middle name	R.
Student_Legal_ Last_Name	character	60	I	Contains the last name of the student taking the test	Smith
Generation_Code	character	10	J	The part of the student's name used to denote the generation in his/her family	Jr.
Username	character	100	K	The student's system username. Typically composed of the first four letters of the student's first name and last name. May include a number if multiple students exist. Older entries may include the full name.	demo.neal10
First_Language	value	2	L	The code for the primary language or dialect (not ethnicity) of the student. See Data Steward Manual for complete list of values	13
Date_of_Birth	date	10	M	The date (month, day, and year) on which the student was born	10/15/1999
Gender	character	6	N	The student's gender (male, female, blank)	Male
Comprehensive_ Race	value	1	O	Race is represented by a single-digit number 1 White 2 African American 4 Asian 5 American Indian 6 Alaska Native 7 Two or More Races 8 Native Hawaiian or Pacific islander	1
Hispanic_Ethnicity	value	1	P	The code which reflects the individual's recognition of his or her Hispanic ethnicity background. (0,1,blank)	1
Primary_Disability_Code	character	2	Q	Indicates the primary disability on a student's IEP. See Data Steward Manual for complete list of values	MD

ESOL_Participation_Code	value	1	R	The type of ESOL/bilingual program in which the student participates. See Data Steward Manual for complete list of values	6
School_Entry_Date	date	10	S	The date on which the student enrolls and begins to receive instructional services in a school. If the student should leave and then re-enroll, this date should reflect the most recent enrollment date.	01/01/2015
District_Entry_Date	date	10	T	The date (month, day, and year) on which the student enrolls and begins to receive instructional services in a school district.	01/01/2015
State_Entry_Date	date	10	U	The date on which the student enrolls and begins to receive instructional services in the state. If the student should leave the state and then re-enroll in school, this date should reflect the most recent enrollment date.	01/01/2015
Attendance_School_ Program_Identifier	character	10	V	The building number (building numbers are typically four digits) or other location identifier assigned by DLM.	Use the code provided in your State Organizational Table.
State	character	20	W	Participating student's state	Kansas
District_Code	value or combination	10	X	A string of numbers or a combination of numbers and characters assigned to a district for unique identifying purpose	D0329
District	character	30	Y	The name of the district for the participating student	Shawnee Mission
School_Code	value or combination	10	Z	A string of numbers or a combination of numbers and characters assigned to a school for distinguishing purpose	PS400
School	character	30	AA	The name of the school that participated the test	Crest Elementary
Educator_First_Name	character	40	AB	Contains the first name of the educator to whom the student is rostered.	Sue
Educator_Last_Name	character	40	AC	Contains the last name of the educator to whom the student is rostered.	Smith
Educator_Username	character	254	AD	The code associated with an Educator Portal user profile (typically the educator’s e-mail address) for the student's teacher.	sue.smith@cete.org
Educator_Identifer	value	no limit	AE	The teacher's unique identifier, assigned by the state.	2548966409
KITE_Educator_Identifer	value	6	AF	The teacher's randomly generated identifier assigned by the KITE system.	201347
Final_SCI_Band	character	20	AG	The student's final Science complexity band, including expressive communication, as determined by First Contact survey	Foundational

SGP_SCI*	percentage value	3	AH	Refers to "student growth percentile", indicating a student's growth relative to other students with similar prior achievement in Science. For instance, a value of .10 means that the student performed better than or as well as 10% of peers taking the same test. *	0.32
Performance_Level_SCI	value	1	AI	Student's final performance level descriptor for Science (1 = emerging 2 = approaching the target, 3 = at target, 4 = advanced, 9 = not tested)	1
Invalidation_Code	value	1	AJ	States have option to fill in during two-week review window. File originally provided to states contains a value of 0 to indicate record is valid. States can change the value to 1 to invalidate the student record. If value = 1, no score report is produced AND student is excluded from aggregated reports.	0
Essential Element codes for Science	value	1	AK-BR	A column is included for each EE in the blueprint (34 total columns). The value represents the highest linkage level the student mastered during the academic year 0 = no evidence of mastery, 1 = initial precursor, 2 = distal precursor, 3 = proximal precursor, 4 = target, 5 = successor, 9 = not assessed	1

Data obtained from enrollment file - formats will ma

*Subject to change based on final decision on growth

Incident Supplemental File					
Column	**Format**	**Length**	**Column Location**	**Notation**	**Example**
State_Student_ Identifier	value	10	A	Student’s state ID number	2815687243
Essential_Element	character	20	B	Name of the Essential Element tested.	SCI.5.LS.1.1
Issue_Code	value	2	C	Codes to be updated pending any issues in 2015-2016 administration.	1
State	character	20	D	Participating student's state	Kansas

Special Circumstance Supplemental File					
Column	**Format**	**Length**	**Column Location**	**Notation**	**Example**
State_Student_ Identifier	value	10	A	Student’s state ID number	2815687243
Special_Circumstance_Code	*pending*	*pending*	B	*pending - not yet build in Educator Portal*	*pending*

Updated February 8, 2016

Information about Scoring, Data Files, and Score Reports 2015-2016 School Year

Last Updated: 6/8/16

This document provides an overview of scoring and reporting in DLM for the 2015-2016 school year for states using the year-end assessment model. Additional resources are available on the SCORING AND REPORTING RESOURCES website for your state.

Standard Setting and Performance Levels

DLM results are not based on raw or scale scores; all data is based on diagnostic classification modeling.[1] Standard setting examines patterns of the number of linkage levels mastered across the tested Essential Elements, to which we can apply cut points to define categories of student performance. This performance is reported using the four performance levels approved by the consortium:

- The student demonstrates ***emerging*** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.
- The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is ***approaching the target***.
- The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is ***at target***.
- The student demonstrates ***advanced*** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

Each state will determine how the DLM PLDs translate into their own accountability definitions. DLM staff provide the General Research File (GRF) that includes the final DLM performance level in each subject. State members apply the individual states' accountability measures to the results in the GRF for accountability purposes.

Standard setting is a consortium-wide process. The same standard setting methods were used for each testing model, although the panels ran separately and different cut points were identified for integrated and year-end models. A detailed description of the standard setting method is provided in the document repository on the state members' area of the DLM website.

Description of Reports and Data Files

Data Files

There are three data files delivered to states at the end of the 2015-2016 year:

- **General Research File (GRF)**, which contains student results (e.g., "<state>_GRF_20150801_File_Structure.xlsx"
- **Incident File**, which lists students who were impacted by one of any known problems with testlet assignments during the spring 2016 window (e.g., "<state>IncidentsAug2016.csv")

[1] Further information about DLM psychometrics has been provided to consortium partner states in separate documents.

- **Special Circumstance Supplemental File**, which provides special circumstance codes entered for students in Educator Portal, for those states that use these codes (e.g., "<state>_Date Time Supplemental File.xlsx")

The file structure for each of these files is located on the SCORING AND REPORTING RESOURCES page (http://dynamiclearningmaps.org/srr/ye). For the 2015-2016 school year, the Date Time Supplemental File is no longer provided, due to DLM now having the ability to provide state-specific testing windows within the larger consortium window.

The GRF and supplemental files house a great deal of information organized into columns. If combined, the number of columns would be too large for some software to read. Therefore, the GRF and supplemental files are provided separately and follow different structures. For more information, see the File Structure Data Dictionary (.xlsx) on the Scoring and Reporting Resources page.

Several criteria were used to filter the data that were included in the GRF and supplemental files. These criteria included records for students with active statuses on student enrollments and rosters, or inactive enrollments and rosters but completed tests. This means that both the roster and enrollment which caused the student to be on a roster were valid at the time that the data were extracted from the system or if they were inactive at the time the data were extracted, students with any completed test sessions were also included. For questions about specific students in the GRF, please submit a ticket to the service desk at DLM-support@ku.edu.

Another resource available to you on the SCORING AND REPORTING RESOURCES page is a sample GRF with ten fictional records. Please note—state organizational tables ultimately dictate the presentation of the data. The sample GRF might vary slightly from how the state-specific data will display in the final GRF your state receives.

See the last page of this document for some Frequently Asked Questions about the GRF.

Score Reports

Individual student score reports consist of the Performance Profile, which aggregates linkage level mastery information for reporting on each conceptual area and for the subject overall. There is one score report per student per subject, unless the student has multiple roster records in that subject.

There are five linkage levels in English language arts and mathematics: initial precursor, distal precursor, proximal precursor, target, and successor. For states testing in science, there are three linkage levels in science: initial, precursor, and target. The performance levels reported on the Performance Profile are at a higher level of aggregation particular to the grade and content area. They reflect a student's overall performance as determined through a standard setting process in June 2015. There is no exact correspondence between a particular linkage level and an overall performance level.

Student results are aggregated into several other types of reports. At the classroom and school levels, reports list for individual students the number of Essential Elements tested, number of linkage levels mastered, and final performance level. District- and state-level reports provide frequency distributions, by grade level and overall, of students tested and achieving at each performance level in English language arts and mathematics. Science aggregated reports are also available for participating states.

Students who were enrolled in Educator Portal but did not complete any of the assessment are excluded from aggregated reports. Student records that were invalidated are also excluded from aggregated results.

The current score report prototypes for individual score reports and class, school, district, and state aggregated reports are located at http://www.dynamiclearningmaps.org/srr/ye.

All reports are provided in .pdf format. If you experience any technical difficulties with opening a .pdf report, please follow the directions below:

1. Open any Adobe file
2. Go to Edit > Preferences > Security (Enhanced) and uncheck "Enable Protected Mode at startup"
3. Close all instances of Adobe Reader
4. Reopen the score report.

Please contact the DLM service desk at 1-855-277-9751 (toll-free) or DLM-support@ku.edu if the issue does not resolve.

Delivery of Reports and Data Files

Educator Portal

Individual Student Score Reports

Student reports are generated as separate PDF files. There is one PDF per student record in the GRF and per subject. Individual student reports are delivered via Educator Portal for 2015-2016.

To access the student individual reports in Educator Portal, select the main REPORTS tab. Under the Alternate Assessments > Year End section, select the 'Student (Individual)' link. Use the Report Criteria to filter down to the students. The report criteria are: District (for State Assessment Administrators), school, subject, and grade. The system will list all the students in the location, subject, and grade selected. Select the student to download and save the student score report .PDF.

To access the student bundled reports in Educator Portal, select the main REPORTS tab. Under the Alternate Assessments > Year End section, select the 'Student (Bundled)' link. Use the Report Criteria to filter down to the school. The report criteria are: District (for State Assessment administrators) and school. The system will list one file per grade or grade band assessed in the school. Select the link to download and save the bundled report .PDF.

Note: A score report is produced for every student record in the GRF. If the student had only values of 9 in the GRF (not assessed) for the EEs associated with a content area, the student's Performance Profile will include the student information in the header, but in place of the body of the report, there will instead be a note indicating the student did not test in that content area for the current academic year.

If a student was rostered more than once and displays more than once in the GRF, a separate score report is produced for each record in the GRF.

Server Drive, FTP Site or DVD

Data Files

The three data files (GRF, Special Circumstance Supplemental File, and Incident File) are shared via secure FTP or server drive (Hawk drive).

As discussed at the December 2015 governance meeting, states will have a two-week window to review the GRF and make any changes before score reports are created. Specific instructions for how to document changes to the GRF can be found in the *State Guide to Reviewing the GRF* located on the DLM website.

Aggregated Reports
All 2015-1206 aggregated reports are delivered to the state via Hawk Drive or DVD.

- Classroom and school-level reports are in folders by school, nested within district.
- District-level reports are in a single folder.

All files are delivered in PDF format.

Note: For students who did not test in a content area, the classroom and school reports include a row for that student, with an indication that the student did not test in the content area. The district and state reports do not include students who did not test in a content area in the frequency counts.

Timelines

As discussed at the December 2015 governance meeting, the 2015-2016 GRF and score reports will be delivered in three batches, based on dates state-specific windows close. The dates for each batch are presented in the table below for ELA and mathematics. The last row is for science.

Window Closes by:	GRF Delivery	Any Changes to the GRF Submitted:	Score Report Delivery *without* Changes	Score Report Delivery *with* Changes
May 6, 2016	June 15	June 29	July 20th	August 3
May 20, 2016	June 29	July 13	August 3	August 17
June 10, 2016	July 20	August 3	August 24	September 7
Science - June 6, 2016	August 10	August 24	September 14	September 28

*GRF, Special Circumstance Supplement File, and incident File are all delivered at the same time. The dates in the table reflect when DLM delivers the files, not necessarily when they will be received.

DLM Results and State Accountability and Reporting

There is a difference between assessment results and the use of assessment results in accountability formulas and reporting. DLM data files and score reports are based on all data about the student's assessments during the year, in the school where they were assessed, at any time that they were assessed. Each state in the consortium has different rules about how and where students' results count for accountability purposes. They also have unique rules about when a student's results may be invalidated based on partially completed assessments, assessments completed outside the testing window, or mis-administrations, among other circumstances. There is no consortium-level definition of participation for accountability purposes.

Each state is responsible for using the DLM-generated data files and applying accountability-related rules that impact their own reporting practices. The following options are available to help states expedite their accountability calculations and score report distribution.

- Use the student enrollment extract available on demand in Educator Portal to begin screening student demographic and location (i.e., school) data.
    - This procedure allows the state to identify students whose records may need to be adjusted in the GRF once the file is released.
- States that have an internal review/QC process for score reports before they are released may wish to either have individual student score reports sent to the state directly, or may have them distributed directly to districts, with instructions not to release the reports until the state has confirmed it is time to do so.
- DLM can make available the Word document prototypes for aggregated score reports to states that wish to re-associate students to home schools for the purpose of aggregated reporting.

Additional resources are available to assist with interpreting score report information. This includes a parent interpretive guide to accompany the individual student score report and a packet that state and district stakeholders may find helpful when communicating with the public about aggregated results. These resources are posted to the same webpage where the other scoring and reporting resources are located.

Frequently Asked Questions about the GRF

Do you use school codes on the GRF?
School code is its own field. We have the code for school, district, along with the school and district names that were included in the Educator Portal upload.

How are leading zeroes handled?
All leading zeroes are included when reporting organizational codes.

Can you clarify the numerical designations?
For each EE, the numerical designations are as follows. Additional numerical designations are located in the Data Dictionary file.
0 = no evidence of mastery
1 = initial precursor mastered
2 = distal precursor mastered
3 = proximal precursor mastered
4 = target mastered
5 = successor mastered
9 = not assessed

What will populate in the cell when a student is tested but does not provide a response (distal and higher) versus not tested at all?
We will include information on the highest linkage level mastered for every assessed Essential Element based on mastery probabilities that are generated from student assessments. If the student has not demonstrated mastery on any level, they will receive a "0" which indicates non-mastery. If they do not test on the EE, they will receive a "9."

What if a student appears on more than one roster?
If the rest of the student's information (including State_Student_Identifier, subject, teacher, and grade) is identical across multiple rosters, the student should have one row of data in the GRF and receive one score report for each subject.

If the student has different identifying information across the records, the student will appear twice with identical data. For example, a student who appears on two rosters will receive two score reports with identical results. There would also be two rows for this student in the GRF and the student would appear in the aggregated reports associated with each teacher/school.

What if a student appears in more than one district?
If the student was not exited from one district by the close of the batch window, the student will have two records in the GRF with different district information and identical student data duplicated across the rows.

What if a student has two different IDs?
A student with two records that contain two different State_Student_Identifier values will receive separate score reports for each ID, if the State_Student_Identifier values are associated with two different DLM student IDs. Each report would only display the results for assessments taken under that unique ID. If two State_Student_Identifier values are associated with a single DLM student ID, the report will contain the results of all assessments.

How are students who did not test reflected in the GRF?

Students who are on active rosters but did not test are included in the GRF. If the student did not test on any EEs for a content area, the student will receive a value of 9 for each EE in that content area. The Performance Level for that content area will also include a 9 to indicate the student did not test in that content area.

REPORT DATE: 10-27-2016
SUBJECT: Science
GRADE: 5

Individual Student Year-End Report
Performance Profile 2015-16

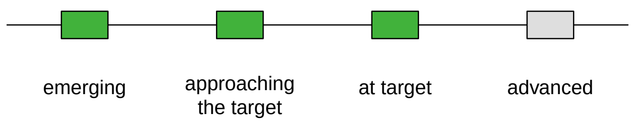
DYNAMIC® LEARNING MAPS

NAME: Susie Smith
DISTRICT: DLM District
SCHOOL: DLM School

DISTRICT: 1234
STATE: Kansas
STATE ID: 1234567

Overall Results

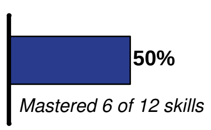
Elementary science allows students to show their achievement in 27 skills related to 9 Essential Elements. Susie has mastered 16 of those 27 skills during the 2015-16 school year. Overall, Susie's mastery of Science fell into the third of four performance categories: **at target**. The specific skills Susie has and has not mastered can be found in Susie's Learning Profile.



EMERGING:	The student demonstrates **emerging** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.
APPROACHING THE TARGET:	The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is **approaching the target**.
AT TARGET:	The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is **at target**.
ADVANCED:	The student demonstrates **advanced** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

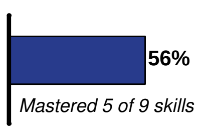
Domain

Physical Science



Life Science

Earth & Space Science



REPORT DATE: 10-27-2016
SUBJECT: Science
GRADE: 5

Individual Student Year-End Report

Performance Profile 2015-16

DYNAMIC LEARNING MAPS

NAME: Susie Smith
DISTRICT: DLM District
SCHOOL: DLM School

DISTRICT: 1234
STATE: Kansas
STATE ID: 1234567

Performance Profile, continued

More information about Susie's performance on each of the Essential Elements that make up the Domains is located in the Learning Profile.

Physical Science

Susie showed these skills during the assessment:

- Recognize melting and freezing
- Compare weight before and after melting and freezing
- Recognize the direction objects go when dropped
- Predict the direction objects go when dropped
- Identify models that show plants need sunlight to grow
- Model plants capturing energy from sunlight

Life Science

Susie showed these skills during the assessment:

- Distinguish things that grow from things that don't grow
- Provide evidence that plants grow
- Provide evidence that plants need air and water to grow
- Identify common human foods
- Identify a model that shows matter moving from plants to animals

Earth & Space Science

Susie showed these skills during the assessment:

- Anticipates routine to follow when it is raining

REPORT DATE: 10-27-2016
SUBJECT: Science
GRADE: 5

Individual Student Year-End Report

Performance Profile 2015-16

NAME: Susie Smith
DISTRICT: DLM District
SCHOOL: DLM School

DISTRICT: 1234
STATE: Kansas
STATE ID: 1234567

Performance Profile, continued

- Recognize how water affects people
- Model how water affects the living things
- Identify one way to protect a resource of Earth
- Compare methods that help protect the Earth's resources

Susie was tested on these skills but did not show them during the assessment:

- Order events including sunrise and sunset

REPORT DATE: 10-27-2016
SUBJECT: Science
GRADE: 5

Individual Student Year-End Report
Learning Profile 2015-16

NAME: Susie Smith
DISTRICT: DLM District
SCHOOL: DLM School

DISTRICT: 1234
STATE: Kansas
STATE ID: 1234567

Susie's performance in Elementary science Essential Elements is summarized below. This information is based on all of the DLM tests Susie took during the 2015-16 school year. Susie was assessed on 8 out of 9 Essential Elements expected in Elementary science. Susie was assessed on 3 out of 3 Domains expected in Elementary science.

In order to master an Essential Element, a student must master a series of skills leading up to the specific skill identified in the Essential Element. This table describes what skills your child demonstrated in the assessment and how those skills compare to grade level expectations.

Green shading shows levels mastered this year. Blue shading shows levels assessed but not mastered this year.

Essential Element	Level Mastery 1	2	3 (Target)
SCI.5.PS.1.2	Recognize melting and freezing	Compare weight before and after melting and freezing	Compare weight before and after heating, cooling, or mixing
SCI.5.PS.1.3	Match physical properties	Classify materials by physical properties	Identify materials based on properties
SCI.5.PS.2.1	Recognize the direction objects go when dropped	Predict the direction objects go when dropped	Demonstrate that gravity is directed down
SCI.5.PS.3.1	Identify models that show plants need sunlight to grow	Model plants capturing energy from sunlight	Model energy in food coming from the Sun
SCI.5.LS.1.1	Distinguish things that grow from things that don't grow	Provide evidence that plants grow	Provide evidence that plants need air and water to grow
SCI.5.LS.2.1	Identify common human foods	Identify a model that shows matter moving from plants to animals	Model matter moving through living things
SCI.5.ESS.1.2	Order events including sunrise and sunset	Recognize patterns in the length of day	Show seasonal patterns in the length of day

Levels mastered this year | No evidence of mastery on this Essential Element | Essential Element not tested

REPORT DATE: 10-27-2016
SUBJECT: Science
GRADE: 5

Individual Student Year-End Report
Learning Profile 2015-16

NAME: Susie Smith
DISTRICT: DLM District
SCHOOL: DLM School

DISTRICT: 1234
STATE: Kansas
STATE ID: 1234567

Essential Element	**Level Mastery** 1	2	3 (Target)
SCI.5.ESS.2.1	Anticipates routine to follow when it is raining	Recognize how water affects people	Model how water affects the living things
SCI.5.ESS.3.1	Identify one way to protect a resource of Earth	Compare methods that help protect the Earth's resources	Describe how to protect the Earth's resources

Levels mastered this year | No evidence of mastery on this Essential Element | Essential Element not tested

End of Year Report
Class Results

TEACHER NAME: DLM Educator

REPORT DATE: 08-11-2016

SCHOOL: DLM School
DISTRICT: DLM District
STATE: DLM State

YEAR: 2015-16

	Science				
Student Name	**Grade**	**EEs Tested**	**EEs at Target**	**Skills Mastered**	**Achievement Level**
Student1, DLM	10	9	1	10	Approaching Target
Student2, DLM	10	9	0	2	Emerging
Student3, DLM	9	9	0	5	Emerging
Student4, DLM	9	9	0	4	Emerging
Student5, DLM	9	9	0	6	Emerging

Levels

The student demonstrates ***emerging*** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is ***approaching the target***.

The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is ***at target***.

The student demonstrates ***advanced*** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

Final District Results

DISTRICT: DLM District
STATE: DLM State

YEAR: 2015-16

Science

Grade	Number of Students Tested	Emerging	Approaching Target	At Target	Advanced	At Target or Advanced
4	3	1	2	0	0	0%
8	2	2	0	0	0	0%
9	1	1	0	0	0	0%
10	2	1	1	0	0	0%
11	3	2	0	1	0	33%

Levels

The student demonstrates ***emerging*** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is ***approaching the target***.

The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is ***at target***.

The student demonstrates ***advanced*** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

End of Year Report
School Results

DYNAMIC® LEARNING MAPS

SCHOOL: DLM School
DISTRICT: DLM District
STATE: DLM State

YEAR: 2015-16

REPORT DATE: 08-11-2016

			Science			
Student Name	**Grade**	**Teacher**	**EEs Tested**	**EEs at Target**	**Skills Mastered**	**Achievement Level**
Student1, DLM	8	DLM Educator	9	1	9	Emerging
Student2, DLM	8	DLM Educator	9	0	4	Emerging
Student3, DLM	8	DLM Educator	9	2	10	Emerging

Levels

The student demonstrates ***emerging*** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is ***approaching the target***.

The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is ***at target***.

The student demonstrates ***advanced*** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

Final State Results

STATE: DLM State

YEAR: 2015-16

Science

Grade	Number of Students Tested	Emerging	Approaching Target	At Target	Advanced	At Target or Advanced
3	47	40	4	2	1	6%
4	670	435	141	68	26	14%
5	51	33	9	9	0	18%
6	57	33	16	8	0	14%
7	52	37	8	7	0	13%
8	798	468	204	112	14	16%
9	732	453	194	73	12	12%
10	792	474	227	74	17	11%
11	750	437	198	100	15	15%
12	1	1	0	0	0	0%

Levels

The student demonstrates ***emerging*** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is ***approaching the target***.

The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is ***at target***.

The student demonstrates ***advanced*** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

DYNAMIC® LEARNING MAPS

Understanding Your Child's Performance and Learning Profiles

2015-2016 School Year

Area for state branding and contact information.

What is the Dynamic Learning Maps Assessment?

The Dynamic Learning Maps™ (DLM) assessment measures student performance on alternate content standards for students with the most significant cognitive disabilities—DLM Essential Elements.

Essential Elements detail what your child should know and be able to do at a particular grade level in a content area.

During the 2015-2016 school year, your child took assessments in English language arts and math. Your child may also have tested in DLM science. This report describes how your child performed on the assessments.

REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

DYNAMIC® LEARNING MAPS

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: DLM State
GRADE: 3
STATE ID: 999999

Overall Results

Grade 3 English language arts allows students to show their achievement in 85 skills related to 17 Essential Elements. Susie has mastered 37 of those 85 skills during the 2015-16 school year. Overall, Susie's mastery of English language arts fell into the second of four performance categories: **approaching the target**.

...e student demonstrates **emerging** understanding of and ability to apply content knowledge ...epresented by the Essential Elements.

...PPROACHING TARGET: The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is **approaching the target**.

AT TARGET: The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is **at target**.

ADVANCED: The student demonstrates **advanced** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

A student who has achieved at the **approaching the target** performance level has typically shown that he or she can recognize details, ideas, and supporting points and reasons, identifies feelings, and recognizes text structure when reading Literature and Informational text.

The student recognizes details, ideas, and supporting points and reasons by:

- Using key details to recount a story from a diverse culture
- Answers who, what, when, where, and why questions
- Understanding definitions for unambiguous words in a text
- Identifying words or phrases to complete a literal sentence.

The student identifies feelings by:

- Relating character feelings to actions

The student recognizes text structure by:

- Comparing elements of two texts
- Identifying the temporal order of information or events in a text
- Using text features to locate information
- Recognizing the beginning and end of an unfamiliar text

When writing, the student:

- Selects an informational topic
- Finds information in resources to support the informational topic
- Writes using complete thoughts

Page 1 of 2

How is my child doing?

The Performance Profile is reported by content area. In this example, English language arts is the content area shown.

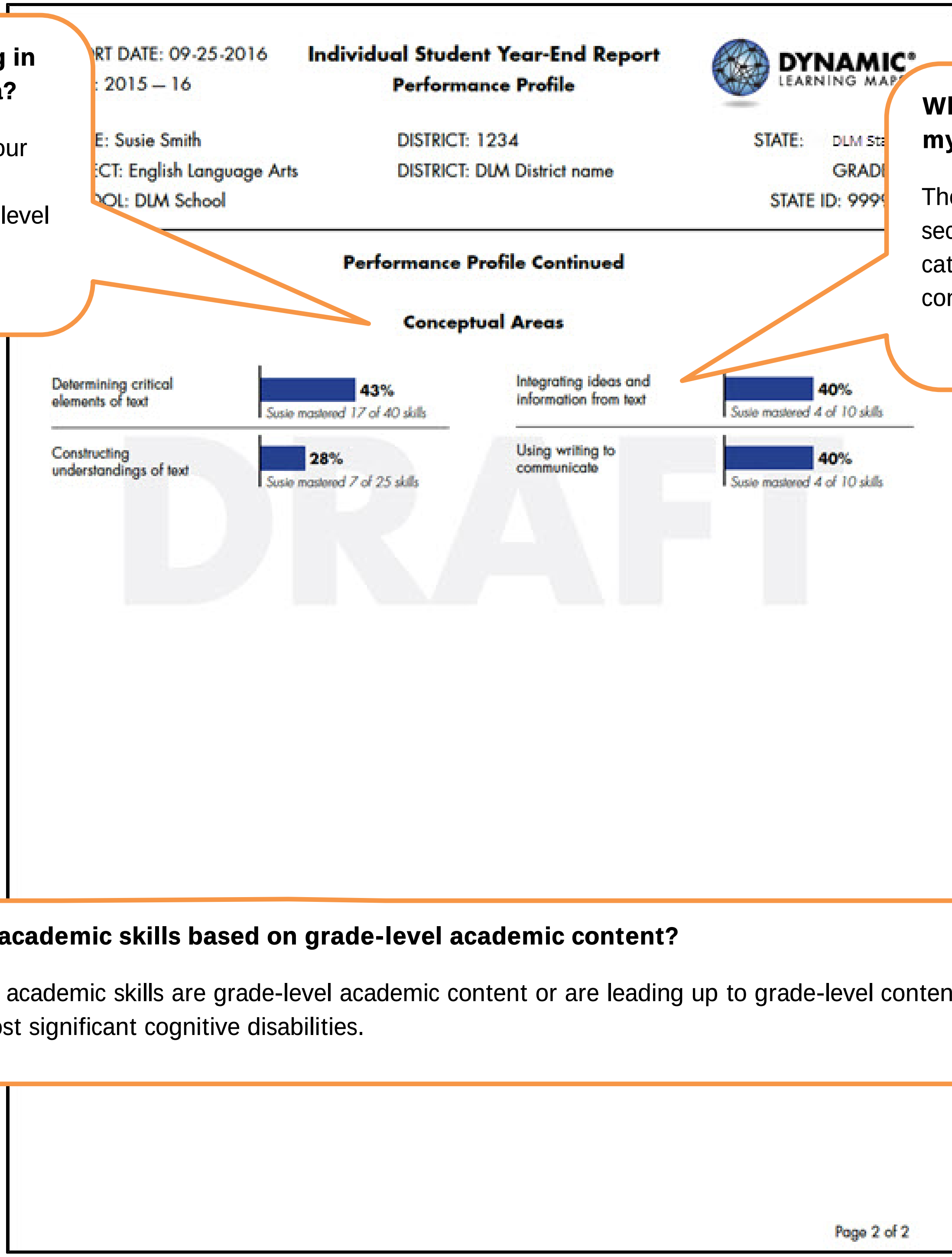
The **Overall Results** section describes your child's overall performance in relation to the alternate achievement standards for a content area.

Student performance on this assessment is categorized as Emerging, Approaching the Target, at Target, and Advanced.

"At Target" means that your child has met the alternate achievement standards in a content area for your child's grade level.

How is my child doing in each Conceptual Area?

This section describes your child's performance on academic skills in grade-level by content area.


RT DATE: 09-25-2016
: 2015 – 16

Individual Student Year-End Report
Performance Profile

DYNAMIC® LEARNING MAPS

E: Susie Smith
CT: English Language Arts
OOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: DLM Sta
GRADI
STATE ID: 999

Performance Profile Continued

Conceptual Areas

Determining critical elements of text	43% Susie mastered 17 of 40 skills	Integrating ideas and information from text	40% Susie mastered 4 of 10 skills
Constructing understandings of text	28% Susie mastered 7 of 25 skills	Using writing to communicate	40% Susie mastered 4 of 10 skills

DRAFT

Page 2 of 2

What skills are tested at my child's grade level?

The **Conceptual Areas** section identifies the categories of tested skills by content area.

Are these academic skills based on grade-level academic content?

All reported academic skills are grade-level academic content or are leading up to grade-level content for students with the most significant cognitive disabilities.

DYNAMIC® LEARNING MAPS

Entendiendo el Rendimiento del Niño y Perfiles de Aprendizaje

Año escolar 2015-2016

Area for state branding and contact information.

¿Qué son las evaluaciones Dynamic Learning Maps?

Las evaluaciones de Dynamic Learning Maps™ (DLM) miden el desempeño del estudiante en los contenido alternativo para estudiantes con discapacidades cognitivas—DLM Elementos Esenciales.

Elementos Esenciales detalla lo que su hijo debe saber y ser capaz de hacer en un determinado grado de nivel en un área de contenido.

Durante el año escolar 2015-2016, su hijo tomó evaluaciones en Arte del Lenguaje Inglés y matemáticas. Su hijo también pudo ser evaluado en Ciencias DLM. Este informe describe como lo hizo su hijo en las evaluaciones.

REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

DYNAMIC® LEARNING MAPS

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: DLM State
GRADE: 3
STATE ID: 999999

Overall Results

Grade 3 English language arts allows students to show their achievement in 85 skills related to 17 Essential Elements. Susie has mastered 37 of those 85 skills during the 2015-16 school year. Overall, Susie's mastery of English language arts fell into the second of four performance categories: **approaching the target**.

emerging | approaching the target | at target | advanced

DRAFT

...udent demonstrates **emerging** understanding of and ability to apply content knowledge ...esented by the Essential Elements.

...OACHING TARGET: The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is **approaching the target**.

AT TARGET: The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is **at target**.

ADVANCED: The student demonstrates **advanced** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

A student who has achieved at the **approaching the target** performance level has typically shown that he or she can recognize details, ideas, and supporting points and reasons, identifies feelings, and recognizes text structure when reading Literature and Informational text.

The student recognizes details, ideas, and supporting points and reasons by:

- Using key details to recount a story from a diverse culture
- Answers who, what, when, where, and why questions
- Understanding definitions for unambiguous words in a text
- Identifying words or phrases to complete a literal sentence.

The student identifies feelings by:

- Relating character feelings to actions

The student recognizes text structure by:

- Comparing elements of two texts
- Identifying the temporal order of information or events in a text
- Using text features to locate information
- Recognizing the beginning and end of an unfamiliar text

When writing, the student:

- Selects an informational topic
- Finds information in resources to support the informational topic
- Writes using complete thoughts

Page 1 of 2

¿Cómo lo está haciendo mi hijo?

El **Perfil de Rendimiento** está representado por contenido de área. En este ejemplo, Artes del Lenguaje Inglés es el contenido de area mostrado.

La sección del **Resultado General** describe el rendimiento general de su hijo en relación con los estándares alternativos por cada área de contenido.

El Rendimiento del estudiante en esta evaluación es clasificada como Emergente, Próxima al Objetivo, en Objetivo, y Avanzada.

"En Objetivo" significa que su hijo ha cumplido los estándares alternativos en un área de contenido para su nivel de grado.

¿Cómo lo está haciendo mi hijo en cada Área Conceptual?

Esta sección describe el rendimiento de su hijo en las habilidades académicas de su nivel de grado por área de contenido.

REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

DYNAMIC® LEARNING MAPS

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: DLM Sta
GRADE
STATE ID: 999

Performance Profile Continued

Conceptual Areas

Determining critical elements of text	43% Susie mastered 17 of 40 skills	Integrating ideas and information from text	40% Susie mastered 4 of 10 skills
Constructing understandings of text	28% Susie mastered 7 of 25 skills	Using writing to communicate	40% Susie mastered 4 of 10 skills

DRAFT

¿Qué habilidades se prueban en el grado de mi hijo?

La sección del **Área Conceptual** identifica las categorias evaluadas por área de contenido.

¿Son estas habilidades académicas basadas en el contenido académico del nivel de grado?

Todas las habilidades académicas presentadas son los contenidos académicos del nivel de grado o están llevando al contenido del nivel de grado para el estudiante con discapacidades cognitivas significativas.

Page 2 of 2

[Date]

Dear Parent or Guardian,

During the 2015 – 16 school year, your student participated in assessments that measure a student's mastery of the [State] alternate academic standards. The Dynamic Learning Maps™ (DLM) assessment is a test that measures the academic achievement of students with the most significant cognitive disabilities. This test measures what your child knows and can do, at his or her academic grade-level, regardless of cognitive ability. This is a report of your child's results.

Setting challenging and achievable academic goals for your child is the foundation for a successful and productive school year. We hope that you will find the information included in these reports useful during your parent-teacher conferences and IEP meetings. This report identifies your child's current level of academic achievement, including strengths and needs. We recognize that this assessment only measures academic skills and your child may have also been successful in meeting additional goals that you and the IEP team have established.

Students are constantly learning and growing. It is exciting to see what they have learned and can do. After reviewing these reports, we encourage you to talk to your child's teacher about how this report relates to daily class work and IEP goals. Together, we will discover all the new and exciting things your child has to share with us.

Very truly yours,

[Insert Name Here]

Superintendent of Education

[Date]

Dear Parent or Guardian,

During the 2015 – 16 school year, your student participated in the Dynamic Learning Maps™ (DLM) assessment. DLM provides a standardized measurement of academic achievement on the alternate academic standards in English Language Arts and Mathematics for students with the most significant cognitive disabilities throughout the state of [State], and in other states. With this information, we will be able to monitor student academic achievement in English language arts and mathematics on an annual basis.

Enclosed you will find your child's results on DLM. The Individual Student Report provides information about your child's achievement on the Essential Elements. This information is for you to review and keep.

If you have any questions regarding this test or the information that is being sent to you about how your child performed on this test, please contact me, or the school principal.

Sincerely,

THE STUDENT'S TEACHER

TALKING TO PARENTS/GUARDIANS ABOUT THE DLM STUDENT REPORTS 2015-16

Students who take Dynamic Learning Maps® alternate assessments receive student reports at the end of each year. This guide is designed to help you talk to parents about the DLM student reports.

If you have questions about school and state accountability, please contact your state department of education.

➔ There is also a PARENT INTERPRETATIVE GUIDE for DLM student reports. Review this guide and share it with parents.

Getting Ready for the Meeting

- Set a positive tone when meeting with the parent(s) to review the parent interpretive guide and the student's results.
- Review the report, the interpretive guide for parents and this guide to make sure you are comfortable with the language in the report.
- Think about different explanations you may need to give and alternative wording to explain the report contents. If you need to modify the language in the report, be careful not to change the intended meaning. For example: it would be acceptable to substitute "reading and writing" for "English language arts" or "ELA." But do not refer to ELA as just "reading," because the ELA assessment includes more than just reading.
- Review sections of the TEST ADMINISTRATION MANUAL and ACCESSIBILITY MANUAL in preparation for parent/guardian questions.

Continued on next page

Discussing the Student Report

The report has one part in each subject: the performance profile. The performance profile contains summary results for the claim or conceptual area and for the subject as a whole.

Key points about each section are summarized below.

Performance Profile

Overall Results

- This section explains the student's overall performance in Essential Elements for the appropriate grade and subject.
- Caution parents against thinking that the number of linkage levels mastered is a raw score or number of items correct.
- Give academic examples of the skills.
- Provide examples of the Essential Elements (EEs). If appropriate, tell and/or show the parents where the EEs are located on your state web page.
- Tell or show parents how the EEs relate to what is being taught to grade-level peers.

Performance Categories

- Explain that "at target" means the student has met the standard.
- Focus on the student's highest level of mastery.
- [In states that convert DLM performance level descriptors into the state's labels]: explain how the DLM Consortium's performance levels correspond to the state's performance level descriptors.
- If parents are concerned about low performance, remind them that the DLM assessment has high expectations, perhaps higher than the past alternate assessment. There is room for students to grow and do even more in the future. This is only the second year of DLM results.

Conceptual Areas

- This section summarizes the student's performance in groups of related Essential Elements within the subject.
- Focus on what the student has mastered.
- The statements that come after the bar graphs list the skills students demonstrated during the assessment, or those that they were assessed on but did not show mastery.
- Sometimes students demonstrate skills during instruction but not during the assessment.

REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

DYNAMIC® LEARNING MAPS

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: DLM State
GRADE: 3
STATE ID: 999999

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EMERGING: The student demonstrates **emerging** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

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A student who has achieved at the **approaching the target** performance level has typically shown that he or she can recognize details, ideas, and supporting points and reasons, identifies feelings, and recognizes text structure when reading Literature and Informational text.

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- Answers who, what, when, where, and why questions
- Understanding definitions for unambiguous words in a text
- Identifying words or phrases to complete a literal sentence.

The student identifies feelings by:
- Relating character feelings to actions

The student recognizes text structure by:
- Comparing elements of two texts
- Identifying the temporal order of information or events in a text
- Using text features to locate information
- Recognizing the beginning and end of an unfamiliar text

When writing, the student:
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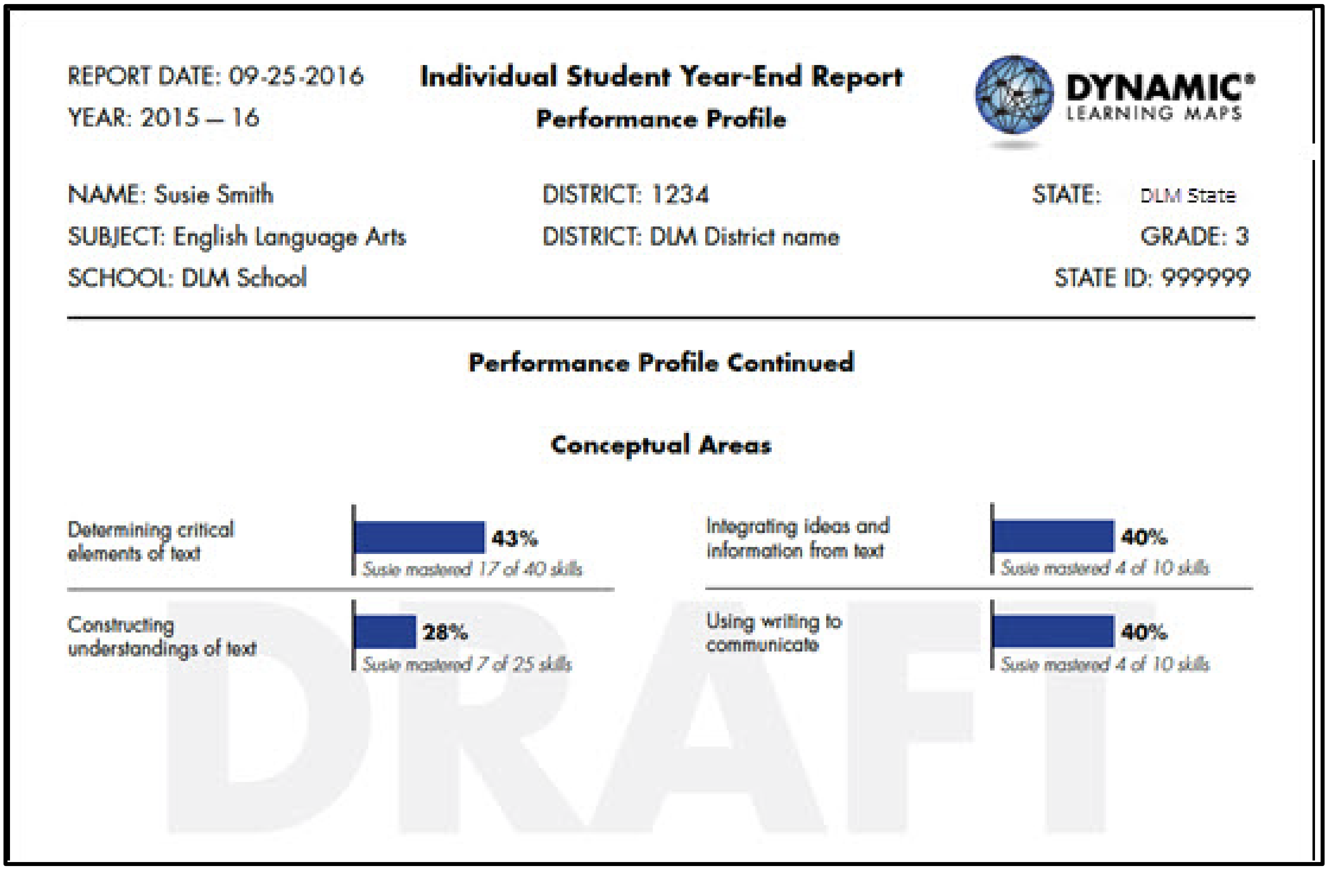
- Finds information in resources to support the informational topic
- Writes using complete thoughts

Page 1 of 2



REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

DYNAMIC® LEARNING MAPS

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: DLM State
GRADE: 3
STATE ID: 999999

Performance Profile Continued

Conceptual Areas

Determining critical elements of text — 43% — Susie mastered 17 of 40 skills

Integrating ideas and information from text — 40% — Susie mastered 4 of 10 skills

Constructing understandings of text — 28% — Susie mastered 7 of 25 skills

Using writing to communicate — 40% — Susie mastered 4 of 10 skills

DRAFT

Remember: Convey to parents how the DLM assessment is a part of their child's educational journey.

Other Reports

You may also receive a class roster that lists DLM results for each of your students. Information about this type of report is provided in the GUIDE TO DLM RESULTS.

Other Information

The following information may help you talk with parents about other aspects of Dynamic Learning Maps. Use the Test Administration Manual to locate other information that will help with your conversations.

About the assessment administration:

- Explain that this not a typical assessment. The students are administered 3-8 items grouped together in small testlets. Each testlet is at one level for one or more Essential Elements (EE).
- Explain the adaptive nature of the spring DLM assessment by telling parents that the assessment is delivered online and when the student completes a testlet, the system will present the next testlet at a higher or lower level than the previous one.
- Explain how the student accessed the assessment (computer or other device) and what accessibility supports were used.
- Consider sharing the Essential Elements that will be assessed in the next grade.

Be prepared to show examples of the EEs. The EEs are available to share. You may explain the assessment and what the student sees on the computer screen. However, do not give specific examples of test items. The test items are secure even after test administration has been completed. Example testlets that can be shared with parents are available on the DLM website: http://dynamiclearningmaps.org/content/information-parents

Notes:

School and District Guide to DLM Results
School Year 2015-16

Dynamic Learning Maps™ (DLM) is a system of alternate assessments for students with the most significant cognitive disabilities. Students show their performance on English language arts and mathematics content standards called Essential Elements. This guide explains the individual student score reports and group results provided by the consortium. This guide is designed for local administrators such as principals and superintendents.

For questions about school and state accountability, please contact your district or your state department of education.

Reports Provided by Dynamic Learning Maps

Each student score report includes a Performance Profile. There are also several group reports, including Class and School Results, and Final District and State Results. [State: add more about additional summaries you expect to provide.]

How Scores Are Calculated

DLM results are not based on raw or scale scores; all results are calculated using an approach called diagnostic classification modeling, or cognitive diagnostic modeling. This approach determines whether the student showed mastery of specific skills. Based on the evidence from the DLM assessments, the student either mastered or did not master the skill. For each Essential Element tested, a student may master up to five skills at different levels, called linkage levels. The student's overall performance in the subject is based upon the number of linkage levels mastered across the tested Essential Elements. This performance is reported using the four performance levels chosen by the consortium:

- The student demonstrates **emerging** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.
- The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is **approaching** the target.
- The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is **at target**.
- The student demonstrates **advanced** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

Each state determines how the DLM performance levels translate into its own definitions of proficiency for accountability purposes.

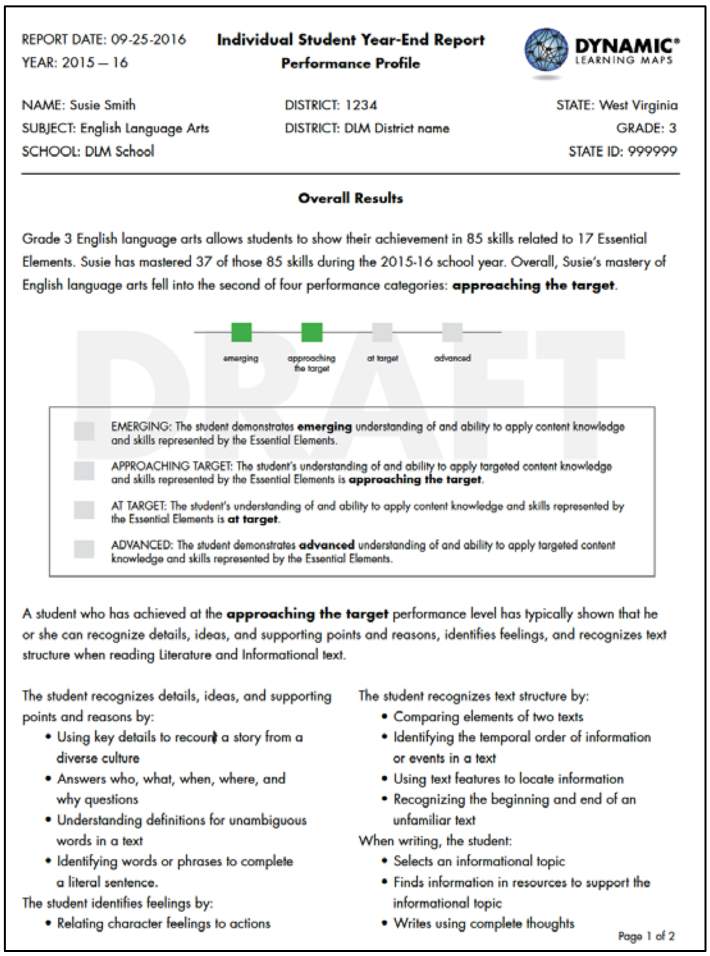
Individual Student Score Reports

Individual student score reports include the Performance Profile, which summarizes skill mastery for each conceptual area and for the subject overall. There is one score report per student per subject.

Performance Profile

The Performance Profile provides a report of the student's performance across Essential Elements from the 2015-2016 blueprints. The number of skills that must be mastered in order to reach a certain performance level was determined at the consortium level by a group of educators from the consortium states, including content experts and experts in teaching students with the most significant cognitive disabilities. There is no exact correspondence between mastering a particular linkage level on a specific Essential Element and an overall performance level in the subject.

The Performance Profile below shows the student's mastery of skills for groups of related Essential Elements. The bar graphs show student mastery of skills for claims or conceptual areas.



REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: West Virginia
GRADE: 3
STATE ID: 999999

Overall Results

Grade 3 English language arts allows students to show their achievement in 85 skills related to 17 Essential Elements. Susie has mastered 37 of those 85 skills during the 2015-16 school year. Overall, Susie's mastery of English language arts fell into the second of four performance categories: **approaching the target**.

EMERGING: The student demonstrates **emerging** understanding of and ability to apply content knowledge and skills represented by the Essential Elements.

APPROACHING TARGET: The student's understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements is **approaching the target**.

AT TARGET: The student's understanding of and ability to apply content knowledge and skills represented by the Essential Elements is **at target**.

ADVANCED: The student demonstrates **advanced** understanding of and ability to apply targeted content knowledge and skills represented by the Essential Elements.

A student who has achieved at the **approaching the target** performance level has typically shown that he or she can recognize details, ideas, and supporting points and reasons, identifies feelings, and recognizes text structure when reading Literature and Informational text.

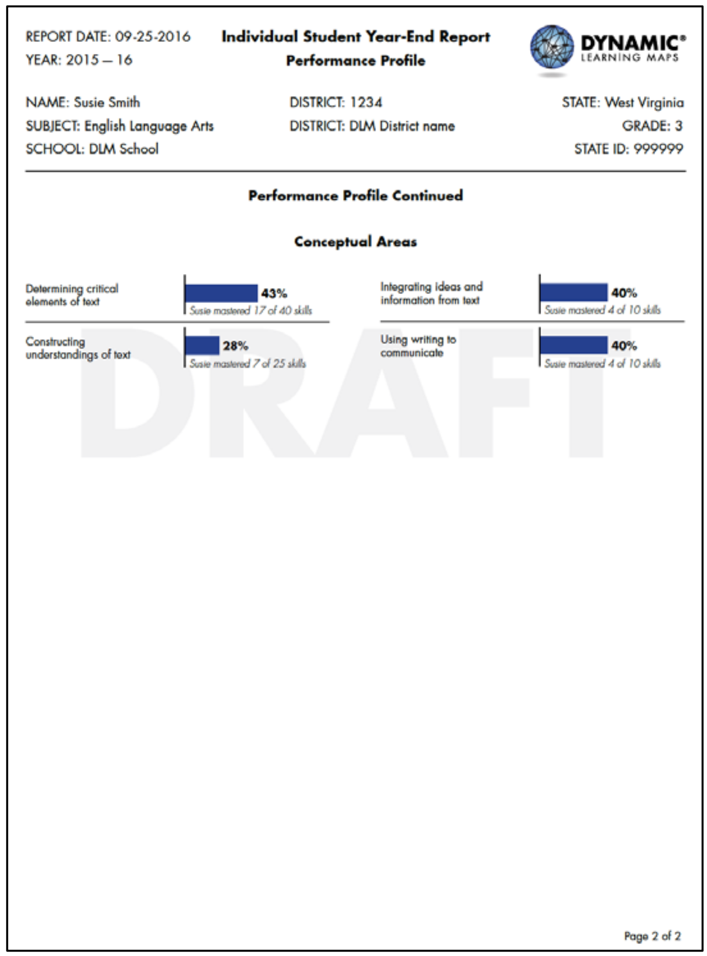
The student recognizes details, ideas, and supporting points and reasons by:
- Using key details to recount a story from a diverse culture
- Answers who, what, when, where, and why questions
- Understanding definitions for unambiguous words in a text
- Identifying words or phrases to complete a literal sentence.

The student identifies feelings by:
- Relating character feelings to actions

The student recognizes text structure by:
- Comparing elements of two texts
- Identifying the temporal order of information or events in a text
- Using text features to locate information
- Recognizing the beginning and end of an unfamiliar text

When writing, the student:
- Selects an informational topic
- Finds information in resources to support the informational topic
- Writes using complete thoughts

Page 1 of 2



REPORT DATE: 09-25-2016
YEAR: 2015 – 16

Individual Student Year-End Report
Performance Profile

NAME: Susie Smith
SUBJECT: English Language Arts
SCHOOL: DLM School

DISTRICT: 1234
DISTRICT: DLM District name

STATE: West Virginia
GRADE: 3
STATE ID: 999999

Performance Profile Continued

Conceptual Areas

Page 2 of 2

Hints for Interpreting the Performance Profile

- Remember that the judgment of mastery is based on what the student demonstrated on the DLM assessments. A student may have demonstrated a similar skill during instruction but not demonstrated the skill during a DLM assessment.

- The assessment measures where students are with regard to the grade-level target. Not all students will perform at the target level, and that is to be expected.
- The number of skills mastered does not mean that a student answered a certain percent of items correctly.
- Students with significant cognitive disabilities have a variety of educational goals. Academics are one part of their educational program. Teachers provide instruction beyond what is reflected in the student's DLM profile, including other academics, functional skills, and other priorities identified in the Individualized Education Program (IEP).

You may use these results to support teachers by:
- helping them consider how the results can be used and the limitations of the data,
- identifying areas of needed professional development to strengthen instruction,
- identifying areas of academic skills where instruction may be focused, and
- reflecting on how a student's overall performance informs the IEP.

Class and School Level Score Results

At the classroom and building levels, the Class Results is a list of individual students with the number of Essential Elements tested, number of linkage levels mastered, and their final performance level.

Each school receives Class Results for every teacher with students who participated in the DLM Alternate Assessment. The students are arranged alphabetically by grade level.

End of Year Report
Class Results

TEACHER NAME: Alissa Streeter

REPORT DATE: 06-10-2015

SCHOOL: DLM SCHOOL couldbe 30characters
DISTRICT: DLM DISTRICT
STATE: DLM State

YEAR: 2014-15

		English Language Arts				Mathematics			
Student Name	**Grade**	**EEs Tested**	**EEs at or above Target**	**Skills Mastered**	**Achievement Level**	**EEs Tested**	**EEs at or above Target**	**Skills Mastered**	**Achievement Level**
Daly, Aaron	8	17	4	42	Emerging	15	2	33	Emerging
Daly, Tabitha	8	17	4	42	Emerging	15	2	33	Emerging
Sigler, Eleanor	6	16	12	47	At Target	11	5	37	Approaching Target
Sigler, Ronnie	6	16	12	47	At Target	11	5	37	Approaching Target
Sigler, Terrence	6	16	12	47	At Target	11	5	37	Approaching Target
Simpson, Zita	6	16	14	70	Advanced	11	8	20	At Target
Zamboni, Albert	8	17	4	42	Emerging	15	2	33	Emerging
Zamboni, Benjamin	6	16	12	47	At Target	11	5	37	Approaching Target
Zamboni, Carl	6	16	14	70	Advanced	11	8	20	At Target
Zamboni, David	8	17	4	42	Emerging	15	2	33	Emerging
Zamboni, Earl	6	16	12	47	At Target	11	5	37	Approaching Target
Zamboni, Frank	6	16	14	70	Advanced	11	8	20	At Target
Zamboni, Gerald	8	17	4	42	Emerging	15	2	33	Emerging
Zamboni, Harry	6	16	12	47	At Target	11	5	37	Approaching Target
Zamboni, Ingrid	6	16	14	70	Advanced	11	8	20	At Target
Zamboni, Jessie	8	17	4	42	Emerging	15	2	33	Emerging

The School Results contain the same information as the Class Results and includes the teacher for each student in the second column. Records for the entire school are organized alphabetically by grade, and then by teacher and student in alphabetical order.

Hints for Interpreting the Class and School Results

- Students appear in the School Results based on the roster and school where they were assessed. This may not be the same school where they are counted for accountability purposes.
- If a student was on more than one roster, the student appears once for each roster (one column for ELA and one column for math).
- If a student was enrolled in DLM assessments but did not complete any portion of the assessment, the student is not counted in these results.
- If the student was invalidated, the student is not counted in these results.
- Remember that the judgment of skill mastery is based on what the student demonstrated on the Dynamic Learning Maps assessments. A student may have demonstrated a similar skill during instruction but not demonstrated the skill during a DLM assessment.
- The assessment measures where students are with regard to the grade-level target. Not all students perform at the target level, and that is to be expected.

- These results only provide a summary of overall performance in the grade/subject. A summary of student-specific information for instructional planning is located in each student's Performance Profile.

District and State Level Results

The Final District Results provides one table for each subject: one for English language arts and one for mathematics. Each table contains a row that shows the number of students tested at each grade level and the number of those who were at each performance level in the subject. The last column indicates percent of students at the Target or Advanced levels.

Final District Results

DISTRICT: LAMAR RE 2 **YEAR:** 2014-15
STATE: Colorado

English Language Arts

Grade	Number of Students Tested	Emerging	Approaching Target	At Target	Advanced	At Target or Advanced
3	1	1	0	0	0	0%
5	2	2	0	0	0	0%
8	3	1	0	1	1	67%
10	2	1	0	1	0	50%
11	1	0	0	0	1	100%

Mathematics

Grade	Number of Students Tested	Emerging	Approaching Target	At Target	Advanced	At Target or Advanced
3	1	1	0	0	0	0%
5	2	2	0	0	0	0%
8	3	1	2	0	0	0%
10	2	1	1	0	0	0%
11	1	0	0	1	0	100%

The Final State Results has the same formatting and provides the same type of information for all student records in the state.

Hints for Interpreting Final District and State Results

- Student results are reported for the district where they were assessed. This may not be the same district where they are counted for accountability purposes.
- If a student was enrolled in more than one district, the student appears once in each Final District Results and counted twice in Final State Results.
- If a student was enrolled in DLM assessments but did not complete any portion of the assessment, the student is not counted in these results.
- If the student was invalidated, the student is not counted in these results.
- Both of these results provide a high-level summary of students at the district or state level. A summary of student-specific information for instructional planning is located in each student's Performance Profile.
- The assessment measures where students are with regard to the grade-level target. Not all students perform at the target level, and that is to be expected.

How Reports Are Distributed

Student score reports are generated as separate PDF files. There is one PDF per student per subject. Individual student score reports are packaged for delivery in folders, organized by district name, school name, and grade.

[State: insert more information about how districts and schools should expect to receive the reports.]

Scoring and Reporting Resources 2015-2016 YE

These resources were previously posted to this webpage http://dynamiclearningmaps.org/srr/ye

Scoring/Reporting Resources – 2015-16 YE

- 2016 General Research File Structure (xlsx)
- 2016 Data Dictionary (xlsx)
- 2016 Score Report Delivery Dates (pdf)
- DLM Scoring Refresher Nov 2015 (pdf)
- Guide to Scoring and Reports 2015-16 YE (docx)
- Parent Interpretive Guide 2015-16 YE (docx)
- Parent Cover Letter for Score Reports – Teacher Version 2015-16 (docx)
- Parent Cover Letter for Score Reports – Superintendent Version 2015-16 (docx)
- Performance Profile Prototype 2016 YE (pdf)
- Scoring and Reporting Guide for Administrators 2016 YE (docx)
- Teacher Interpretive Guide 2015-16 YE (docx)
- Special Circumstance Supplemental File Structure (xlsx)
- 2015-16 State Guide to Reviewing the GRF (docx)
- 2015-16 State Summary of Changes to the GRF (docx)
- Science 2016 Data Dictionary (xlsx)
- Science 2016 General Research File Structure (xlsx)

CETE Response to External Evaluation of DLM Science Alternate Assessment System Alignment
June 2017

The external alignment study conducted by HumRRO provides important content-related validity evidence for the DLM science alternate assessments. The analyses were conducted on the full range of tested Essential Elements (EEs) and linkage levels, and the full population of testlets used in 2015–2016 operational assessments. The study had three foci and, within two foci, three criteria. CETE established the study foci while HumRRO established the criteria.

Overall, the HumRRO study yielded positive findings regarding alignment within the DLM science assessment system. Across all foci, criteria and pools, in 53 of 60 cases (88%) the HumRRO-established criterion was met. Where the criterion was not met, CETE anticipates using the feedback to inform future improvements.

Traditionally, alignment study results yield statistics about elements or relationships within an assessment system, and judgments of adequacy based on those statistics. For example, when evaluating the relationship between general and alternate content standards, an alignment study will typically report the percent of alternate content standards that met the threshold, calculated as:

$$\frac{n\ alternate\ standards\ judged\ to\ be\ aligned\ to\ general\ standards}{total\ number\ of\ alternate\ standards}$$

Criteria for judging the adequacy of alignment (e.g., in the Webb alignment method) are based on these units.

The HumRRO report does not report conventional alignment statistics. Instead, most results are calculated and reported with individual ratings as the unit of analysis and reporting:

$$\frac{n\ individual\ panelist\ ratings\ of\ alignment\ across\ all\ evaluated\ standards}{total\ number\ of\ individual\ ratings\ across\ all\ evaluated\ standards}$$

While the HumRRO report provides useful information and indicates a high degree of alignment, the statistics incorporate rater disagreement within panels and do not provide final judgments directly about the units in the assessment system itself.

The remainder of this memo summarizes CETE's response to the HumRRO findings for specific criteria. Where applicable, the response starts with re-analysis to obtain more traditional alignment statistics. In Focus 1, we provide a detailed illustration of the re-calculation process.

Focus 1 (DLM Essential Elements to Next Generation Science Standards)

HumRRO Study Findings: Panelists evaluated the content alignment between the 34 blueprint EEs and the Next Generation Science Standards (NGSS) standards, including Disciplinary Core Ideas (DCIs) and Science and Engineering Practices (SEP). Using panelists' ratings from Criterion 1, the blueprint EEs were evaluated regarding a match to the Domain, DCI, and Topic of the corresponding NGSS. Finally, panelists determined consensus cognitive process dimensions for the blueprint EEs and NGSS separately, allowing for a comparison of the cognitive process dimensions between the standards. EE ratings across all grade bands measured the intended content (Criterion 1), and were found to represent content from the reporting categories as expected (Criterion 2). The High School Unique EE ratings aligned with associated SEP fell just below the 90% criterion; however, when the High School (HS) and Biology Common EE ratings are included, the 90% criterion is met. At least 78% of the blueprint EE ratings were found to assess the same or lower cognitive process dimension as the NGSS; however, in the Middle School panel group, less than 75% of the blueprint EE ratings were measuring the same or lower cognitive process dimension as the NGSS (Criterion 3). In the Middle School panel group, three blueprint EE ratings indicated a higher cognitive process dimension than the corresponding NGSS.

CETE Response: The HumRRO results indicate overall positive findings about alignment, although improvement may be needed in high school for Criterion 1 and elementary and middle grades for Criterion 3.

As described above, HumRRO statistics for Criterion 1 incorporate rater variability within panels and do not provide final judgments about the EEs themselves. For example, 87% of high school ratings were aligned with the SEP (see yellow highlighted cell in Criterion 1, Table 1).

Table 1. *HumRRO Report Table 1: Percent of Essential Element Ratings Which Met Each Criterion*

	Criterion 1		Criterion 2	Criterion 3
	Essential Element Alignment		Represent Intended Categories	Essential Element Complexity
	Are EE ratings aligned with associated DCIs?	Are EE ratings aligned with associated SEP?	Do EEs adequately represent reporting categories?	Are EE ratings at same or lower cognitive process dimension as NGSS?
	Table 9	Table 10	Table 13 – 15	Table 16
Elementary	100%	100%	100%	78%
Middle School	100%	100%	100%	67%
High School Unique	100%	87%	100%	100%
HS & Biology Common	100%	100%	100%	100%
Biology Unique	100%	100%	100%	100%

There were 5 panelists and 6 unique EEs at the high school level, for a total of 30 ratings. HumRRO considered a rating of “fully aligned” or “partially aligned” to meet the criterion. The 87% calculation came from a split panel on two EEs. Of the five panelists, two rated the EEs as fully aligned, one rated them as partially aligned, and two rated them as not aligned (see Table *1*).

Table 2. *Excerpt from HumRRO Report Table 12*

		Number of Panelists Rating Essential Elements as		
EE	SEP	Not Aligned	Partially Aligned	Fully Aligned
EE.HS.ESS1.4	Using mathematics and computational thinking	2	1	2
EE.HS.ESS3.3	Using mathematics and computational thinking	2	1	2

The majority of the panelists (3 of 5) thought the EE met the criterion of being either partially or fully aligned to the SEP. Therefore, 26 of 30 ratings (87%) met the criterion, as reported in Table 1. The alignment study procedures did not include a mechanism to resolve discrepancies or determine a final panel judgment for each pool of EEs.

Before responding to the findings, we first re-analyzed results that HumRRO reported as individual ratings to reflect more traditional alignment statistics about pools of EEs.[1] The goal was to identify strengths and areas for improvement in alignment once rater variability was removed from the results and a threshold was applied to determine a final judgment for each element or relationship evaluated. CETE applied the following decision rule when re-analyzing the data: *If the majority of panelists rated a relationship in a category that was consistent with the criterion, we considered the criterion met*. *If the panel ratings were evenly split between values that met/did not meet the criterion, or were majority not met, we considered the criterion not met.*

In the example above, the majority of panelists (3 of 5) considered both EEs to be partially or fully aligned to the SEP. Since the HumRRO criterion for acceptable alignment was based on partial or full alignment ratings, in the CETE re-analysis both of these EEs met the criterion. When added to the remaining high school EEs, 9 of 9 (100%) met the criterion. Full results for Focus 1 after the re-analysis is summarized in Table 3.

Table 3. *CETE Re-analysis of Focus 1 / Criterion 1*

Pool	Criterion 1 Essential Element Alignment Are EEs aligned with associated NGSS DCIs?	Criterion 1 Essential Element Alignment Are EEs aligned with associated SEPs?
Elementary	9/9 (100%)	9/9 (100%)
Middle	9/9 (100%)	9/9 (100%)
High School	9/9 (100%)	9/9 (100%)
Biology	10/10 (100%)	10/10 (100%)

[1] Similar follow-up analyses were conducted in focus 2 and 3 whenever HumRRO used ratings as the unit of analysis.

Since alternate content standards (EEs) should be aligned with grade-level content standards (NGSS) but have reduced depth, breadth, and complexity, partial alignment is an expected finding and is considered to meet criteria for adequate alignment in alternate assessment systems.[2] The results do not indicate any corrective action is needed. However, to ensure EEs retain the intended link to NGSS, we will review comments for ratings of “partial” and “no” alignment and use the feedback to inform future potential revisions to the EEs.

For Criterion 3, panel consensus ratings of cognitive process dimensions indicated that 2 of 9 elementary EEs and 3 of 9 middle school EEs had *higher* performance expectations than the associated NGSS DCI. An example of this unexpected discrepancy is provided in Table 4. In the DLM cognitive process taxonomy, *apply* is two levels below *evaluate*.

Table 4. *Example Cognitive Process Dimension Ratings*

DLM EE and Rating	NGSS and Rating
EE.MS.ESS3.3: Develop a plan to monitor and minimize a human impact on the local environment (e.g., water, land, pollution). Panel consensus rating: **Evaluate**	MS.ESS3.3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. Panel consensus rating: **Apply**

The EEs were developed through careful processes that included multiple steps of expert and educator review for alignment to NGSS at reduced depth, breadth, and complexity. CETE staff will review the original and HumRRO-identified cognitive process dimensions and, if necessary, convene a panel to review the findings and determine the next steps.

Focus 2 (Progression of linkage levels within an Essential Element)

HumRRO Study Findings: Panelists independently rated the progression of skills/knowledge and/or cognitive complexity found between the Initial to Precursor and the Precursor to Target linkage level transitions. Overall, the linkage level transition ratings were ‘progressing’ between Initial to Precursor and Precursor to Target in elementary, middle, high school, and the common blueprint EEs in biology and high school. Fewer than 90% of the biology transition ratings were progressing. Results are summarized in Table 5. Panelists were asked to make recommendations when they identified a transition that was non-progressing.

[2] Flowers, C., Wakeman, S., Browder, D. M., & Karvonen, M. (2009). Links for academic learning: A conceptual model for investigating alignment of alternate assessment systems based on alternate achievement standards. Educational Measurement: Issues and Practice, 28(1), 25-37. doi: 10.1111/j.1745-3992.2009.01134.x

Table 5. *HumRRO Report Table 2. Percent of Linkage Level Transition Ratings Which Met the Criterion*

	Vertical Articulation	
	Do initial to precursor linkage level transition ratings indicate progression?	Do precursor to target linkage level transition ratings indicate progression?
	Table 22	
Elementary	97%	100%
Middle School	94%	94%
High School Unique	100%	100%
HS & Biology Common	100%	100%
Biology Unique	89%	84%

CETE Response: Results for study Focus 2 were reported as percentages of individual panelist ratings rather than as final judgments per EE about each linkage level transition. Thus, rater variability is incorporated into the results. Similar to Focus 1/Criterion 1, we re-analyzed the data to identify the percentage of transitions from linkage level to linkage level that were progressing rather than the percentage of ratings. We also incorporated the common high school and biology EEs into each group in order to form a more complete understanding of the results for each blueprint. After applying the majority rule in cases where raters disagreed, we calculated results for each pool of EEs. Results are summarized in Table 6.

Table 6. *CETE Re-Analysis of Focus 2*

	N panelists	N EEs	Do **Initial to Precursor** linkage level transitions indicate progression?	Do **Precursor to Target** linkage level transitions indicate progression?
Elementary	4	9	9 (100%)	9 (100%)
Middle	4	9	9 (100%)	9 (100%)
High School	5	9	9 (100%)	9 (100%)
Biology	4	10	10 (100%)	9 (90%)

The considerable shift in biology results from HumRRO's ratings-based statistics to CETE's transition-based statistics is a reflection of one outlier panelist who evaluated a total of eight transitions (four Initial-to-Precursor and four Precursor-to-Target) as non-progressing. In only one Precursor-to-Target transition did one other panelist agree, creating a 2/2 panel split.

This study focus was designed to provide evidence related to the ordering of content in the linkage levels. In the RFP we asked that the progression be evaluated based on two criteria: (1) there is an appropriate increase in the cognitive complexity of the skills described by the linkage levels, or (2) a lower linkage level represents clear prerequisite knowledge or skills for a higher linkage level. Although the progressions meet the 90% threshold across all EE pools, CETE will evaluate the supplemental panelist comments provided in the HumRRO report (Tables 22-23) for feedback that could inform future changes to linkage levels.

Focus 3 (Alignment of Items to Linkage Levels)

HumRRO Study Findings: In general, the item ratings indicated good overall alignment with the linkage levels. Panelists rated the assessment items for all grade bands as measuring the intended EE linkage level DCI, even though not all item ratings aligned with the EE linkage level SEP in middle school and high school unique (Criterion 1). Overall, testlet ratings were greater than the 90% criterion level, indicating adequate EE linkage level coverage across items within a testlet. Additionally, panelists found items and testlets for all grade levels to closely match the expected Domain, DCI, and Topic associated with the EE (Criterion 2). There were mixed results on Criterion 3. In all groups, panelist ratings showed agreement with more than 90% of the cognitive process dimensions assigned to items within +1/-1 cognitive process dimension. In the high school and biology common items, panelist ratings resulted in less than 70% of the Target linkage level items at a lower or same cognitive process dimension as the associated EE. For 65% of the item ratings, the cognitive process dimension was higher for the item than the associated EE. Overall, panelists' ratings in the high school panel group indicated agreement with the assigned cognitive process dimension of the items. Results are summarized in Table 7.

Table 7. *HumRRO's Table 3. Percent of Testlet Items Which Met Each Criterion*

	Criterion 1			Criterion 2	Criterion 3	
	Item Alignment			Represent Intended Categories	Item Complexity	
	Are item ratings aligned with EE linkage level DCI?	Are item ratings aligned with EE linkage level SEP?	Do testlet ratings fully cover EE linkage level content?	Do testlets adequately represent intended categories?	Do panelist ratings agree with all linkage level items' cognitive process dimensions within +1/-1?	Do target linkage level items reflect lower or same cognitive process dimensions as the EEs?
	Table 26	Table 27	Table 28	Tables 38 – 40	Table 42	Table 44
Elementary	100%	90%	99%	100%	100%	89%
Middle School	100%	81%	93%	100%	97%	94%
High School Unique	100%	88%	99%	100%	98%	83%
HS & Biology Common	99%	90%	98%	100%	96%	35%
Biology Unique	100%	94%	100%	100%	96%	84%

CETE Response: Most results for Focus 3 were reported as percentages of individual panelist ratings, rather than as final judgments per item or testlet. Thus, within-panel rater variability is incorporated into the results. Similar to Focus 1/Criterion 1 and Focus 2, we re-analyzed the data to answer each question relative to the relationship being evaluated for item pools and testlets. After applying the majority rule in cases where raters disagreed and incorporating the common high school/biology testlets into both pools, we calculated results for each pool of items and testlets. Results are summarized in Table 8 for the two content-related criteria.

Table 8. CETE Re-Analysis of Focus 3, Criteria 1 and 2

			Criterion 1			Criterion 2
			Item Alignment			Represent Intended Categories
	N items	N testlets	Are items aligned with linkage level DCIs?	Are items aligned with SEP?	Do testlets fully cover linkage level content?	Do testlets adequately represent intended categories?
Elementary	82	27	27 (100%)	27 (100%)	27 (100%)	27 (100%)
Middle	85	28	28 (100%)	24 (85%)	27 (96%)	28 (100%)
High School	82	27	27 (100%)	27 (100%)	27 (100%)	27 (100%)
Biology	95	30	30 (100%)	29 (97%)	30 (100%)	30 (100%)

In this analysis, we expected the majority of items to be aligned with the DCI and SEP of the linkage level, and for testlets to fully cover the linkage level. Overall, the findings were consistent with expectations, although the middle school pool fell short of the 90% criterion for SEP. Most of the items that did not meet the SEP criteria had split panels, so we will carefully review the panelist comments for these items.

The re-analyzed cognitive process dimension (CPD) statistics are summarized in Table 9. The DLM CPD taxonomy includes 10 categories, 9 of which may be appropriate for items based on the cognitive process expected in the assessed nodes.[3] Unlike alignment studies that use Webb's four categories of depth of knowledge (DOK), by virtue of having nine categories, the DLM CPD taxonomy has more opportunity for disagreement. We asked HumRRO to define agreement based both on exact match and +/- 1 category.

[3] The pre-intentional category does not have any assessment items.

Table 9. *CETE Re-Analysis of Focus 3, Criterion 3*

	Criterion 3			
	Item Complexity			
	Do panelists agree with item cognitive process dimension within +1/-1?		Do Target level items reflect lower or same cognitive process dimensions as the EEs?	
	N items	n and % met criterion	N target level items	n and % met criterion
Elementary	82	81 (99%)	27	18 (67%)
Middle	85	68 (80%)	27	24 (89%)
High School	82	82 (100%)	28	17 (61%)
Biology	95	92 (97%)	33	17 (52%)

Agreement between item writers and panelists was relatively high in all pools except middle school. The 21 total items across all pools that did not meet the criterion had split panel ratings with no majority. In other words, in none of the cases was there a panel consensus or majority view that the item writer's rating was incorrect. Dissenting panelists often recommended alternative CPDs that were in opposite directions from one another in the taxonomy (i.e., one recommended a lower CPD than assigned, another recommended a higher CPD).

HumRRO established a criterion that at least 75% of items would have the same or lower CPD as the associated linkage level. We would have expected the items to meet a 90% threshold. Only the middle school pool met HumRRO's criterion. The finding that so many Target level items (39 of 115 across the pools) had higher CPD ratings than the associated EE was very surprising. By design, the DLM alternate assessments provide opportunities for students to demonstrate their knowledge, skills, and understandings across varying levels of complexity (i.e., the linkage levels for each EE). The multidimensional nature of science EEs is often reflected in linkage level statements that describe more than one type of CPD. Items are written to align to some facet of the linkage level, but not necessarily the entire breadth of performance expected in the linkage level. This intentional design feature minimizes complexity within individual items by focusing on one conceptual element of the construct. When items are delivered together in the context of a testlet, the breadth of the linkage level is assessed.

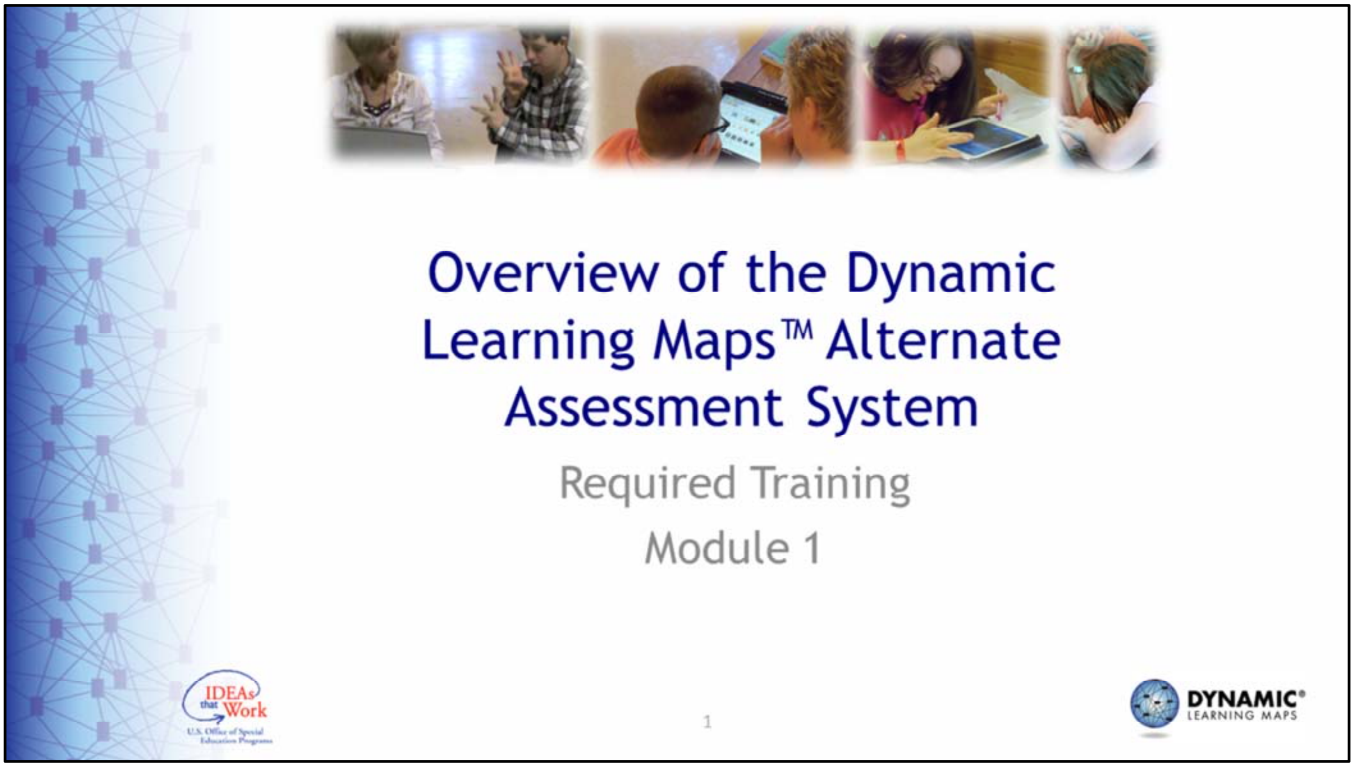
While re-analyzing the data for the relationship between target items and EE CPD, we again noted a high proportion of disagreement within panels that could not be resolved by applying a majority rule. Also, 89% of all panelist ratings of item CPD were understand, apply, or analyze. Given the restricted range, high incidence of split panels, and some evidence that ratings were made based on the verb without consideration of the associated content, it is possible that the panelists had difficulty assigning CPD ratings during this part of the study. CETE staff plan to convene a follow-up panel to evaluate the CPD of all linkage levels and items.

Focus 3 was intended to provide evidence of alignment as it is often conceptualized for large-scale assessments. Given the complexity of the DLM assessment system design and the multidimensional expectations of the NGSS and EEs, CETE anticipates conducting deeper evaluations of alignment in future years. For example:

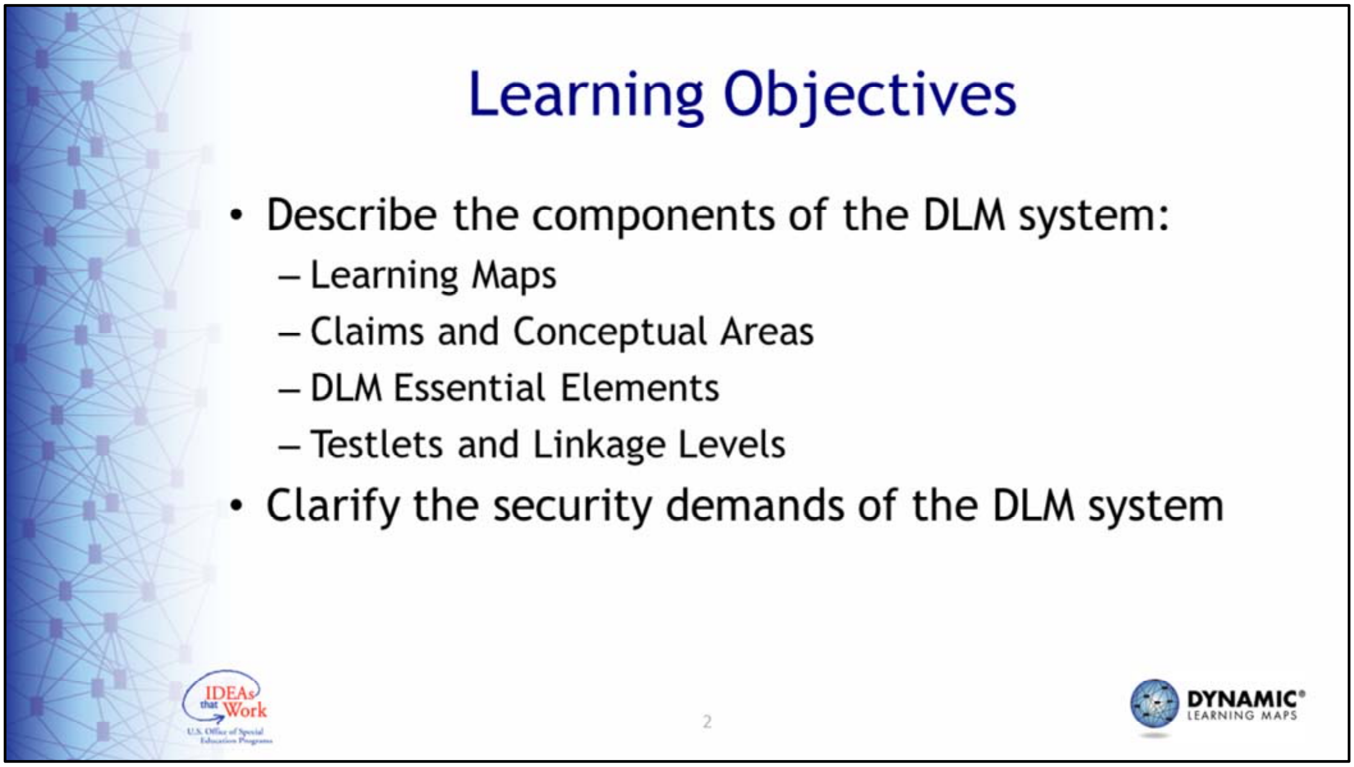
- combining HumRRO's separate ratings for DCI and SEP alignment to determine a final judgment of the alignment of each item to the overall linkage level
- evaluating alignment of cognitive process dimension in Initial and Precursor level items with the cognitive process dimension of corresponding linkage levels
- evaluating the cognitive process dimension ratings of items associated to all linkage levels for an EE, in order to confirm the items are in the correct order of complexity across the linkage levels

Conclusion

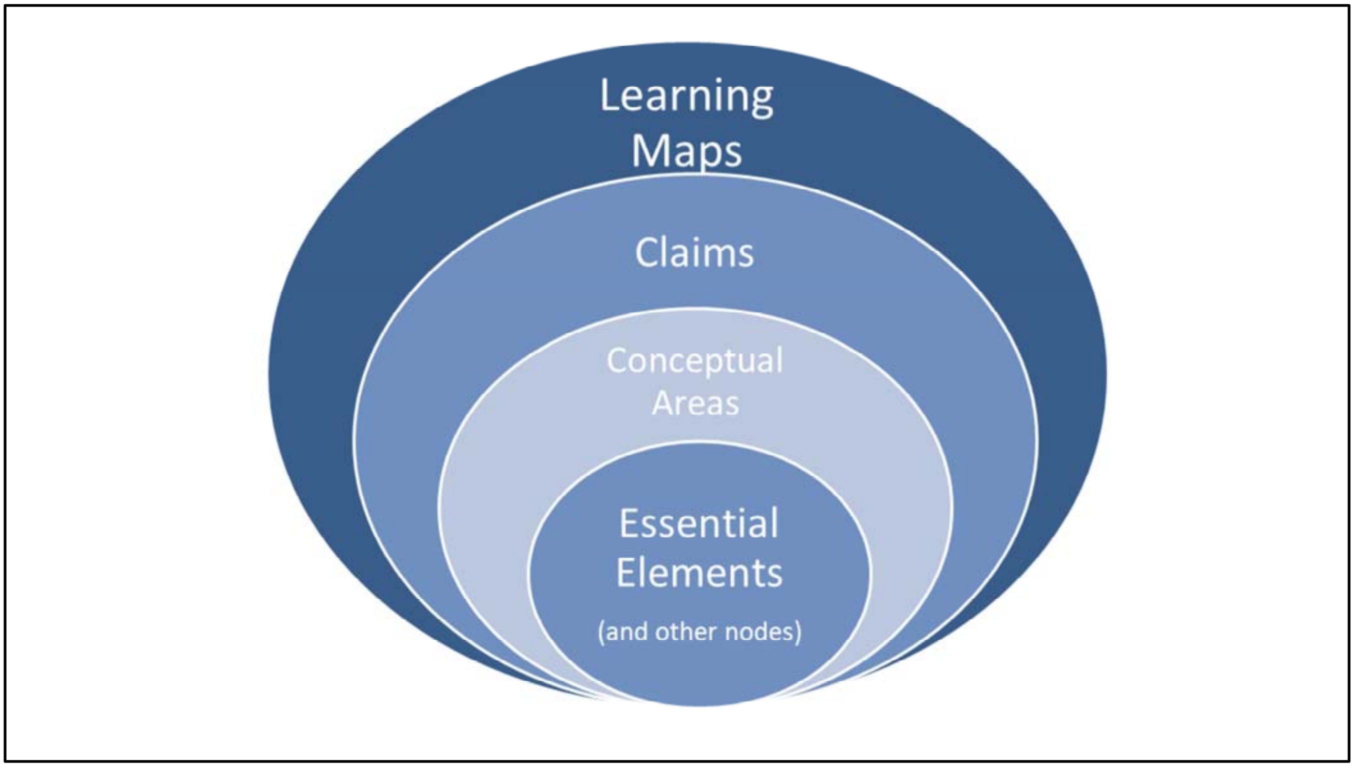
Overall, HumRRO's external alignment study provides evidence of DLM assessment system components that connect the NGSS to the assessment items via Essential Elements and linkage levels. The study provides substantial content-related evidence to support claims about what students with the most significant cognitive disabilities know and can do in science. General themes from this analysis will be shared with the DLM Technical Advisory Committee and the state partners. These themes will also inform future item writing training and external content review panel criteria and procedures. The report also identified areas for further investigation. In addition to the analyses described above, we anticipate conducting future analyses to (1) evaluate alignment of new items and testlets to linkage levels and (2) evaluate alignment at the student level (i.e., testlet combinations for individual students).



The Dynamic Learning Maps™ Alternate Assessment System is an academic assessment designed to measure what students with significant cognitive disabilities know and can do. In order to ensure standardized delivery of the DLM® Alternate Assessment, all educators who are responsible for delivering the DLM Assessments must complete all of the required training modules and achieve a score of 80% or higher on post-tests that go with each module.

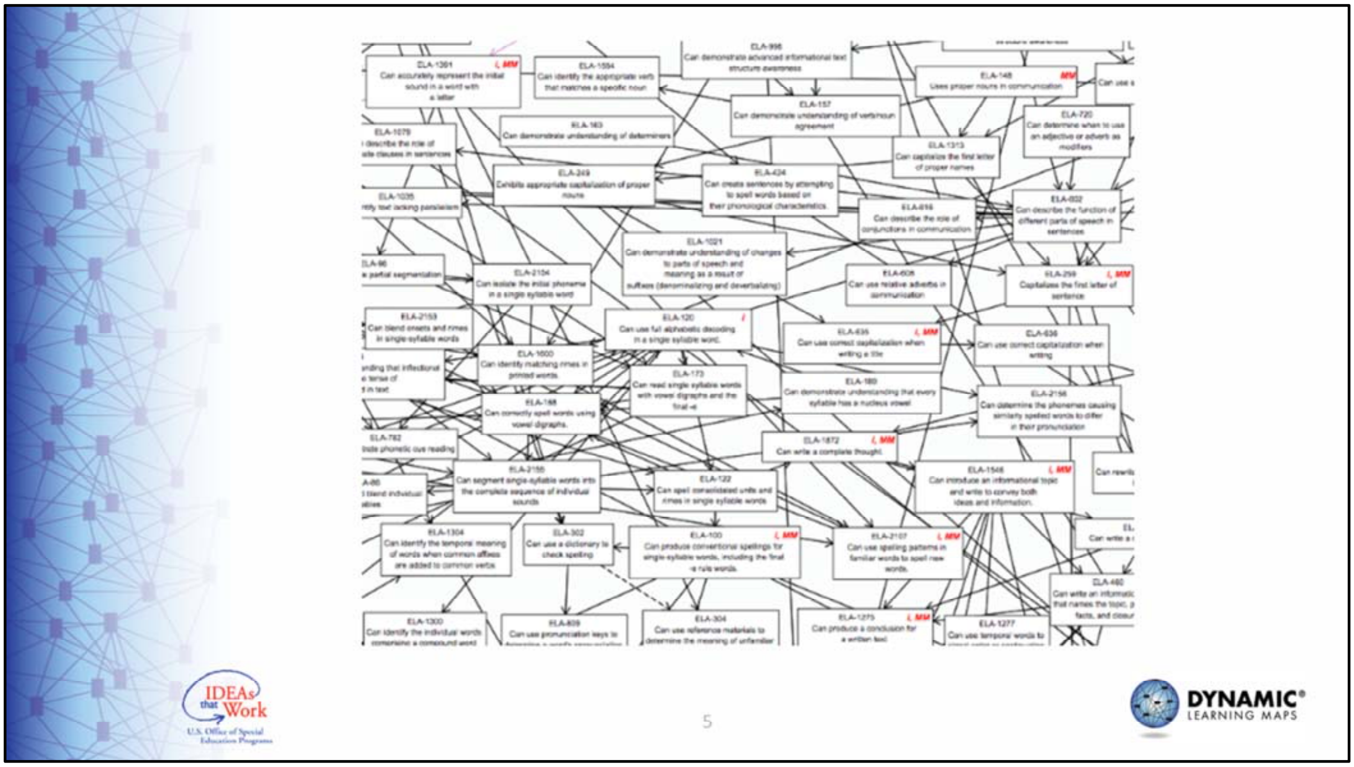


This first module provides a high-level overview of the components of the DLM system including the DLM Learning Maps, the Claims and Conceptual Areas, DLM Essential Elements, and DLM test security.

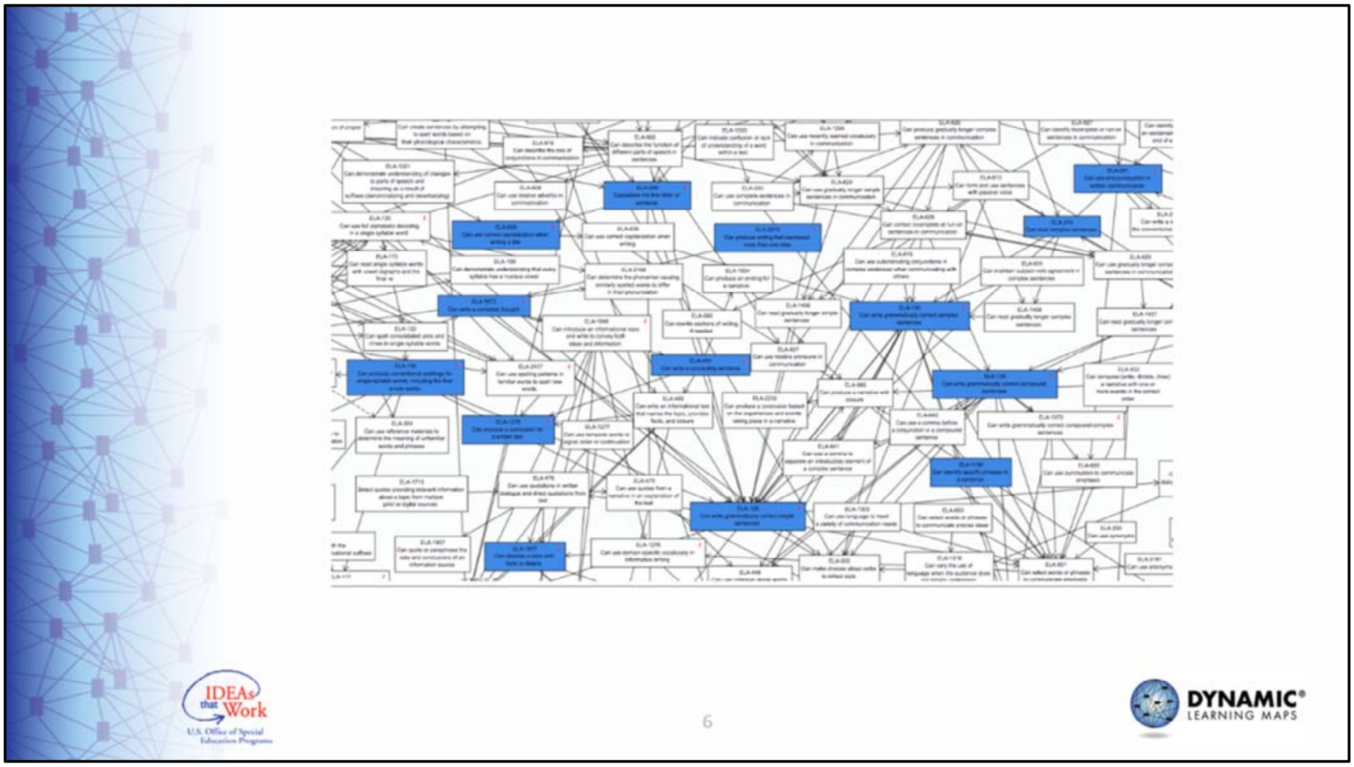


Understanding the DLM system involves understanding the relationship among the components of the system. These components include the Learning Maps, Claims and Conceptual Areas, and Essential Elements.

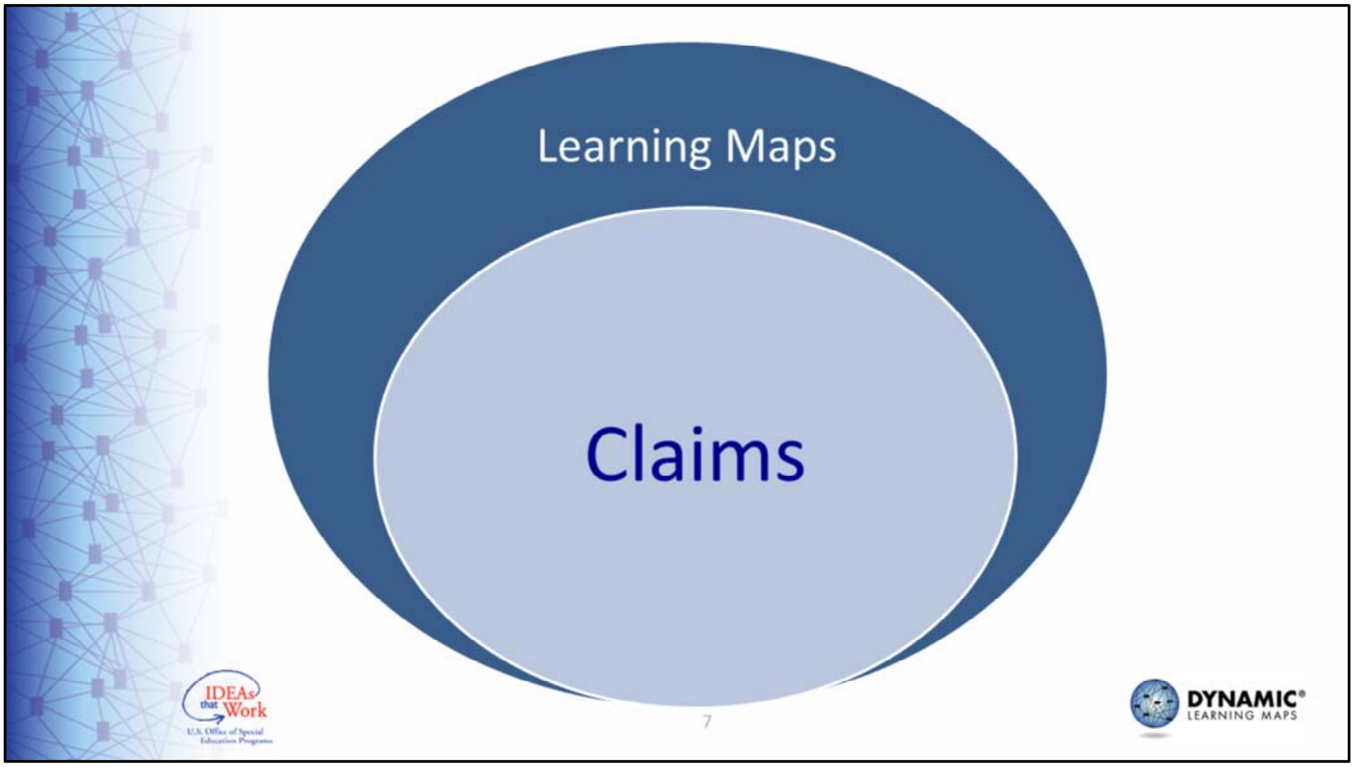
It begins with the learning maps. Learning maps represent specific skills and understandings and the multiple pathways students might follow as they develop those skills and understandings.



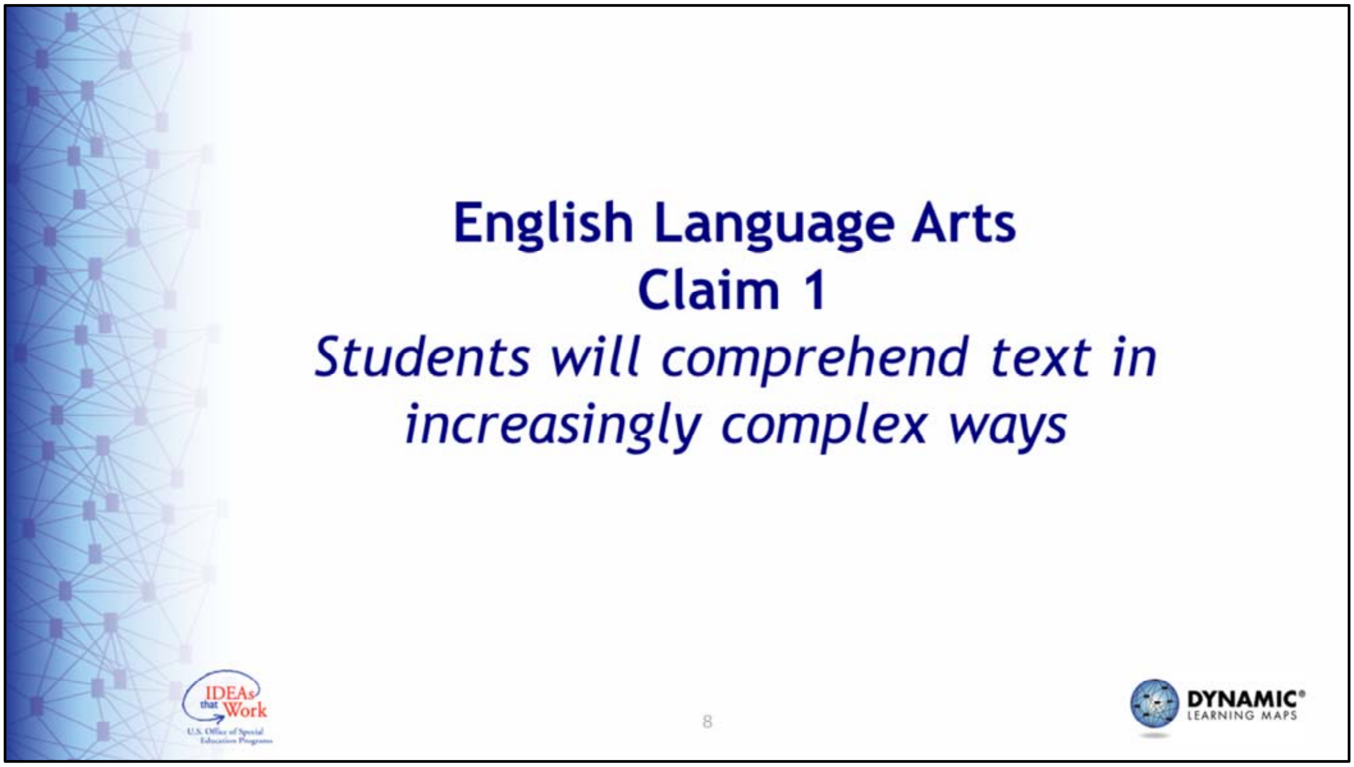
This is a close-up picture of a portion of the learning map. The rectangles represent the skills and understandings. These are called nodes. The lines show how students can move from one node to the next.



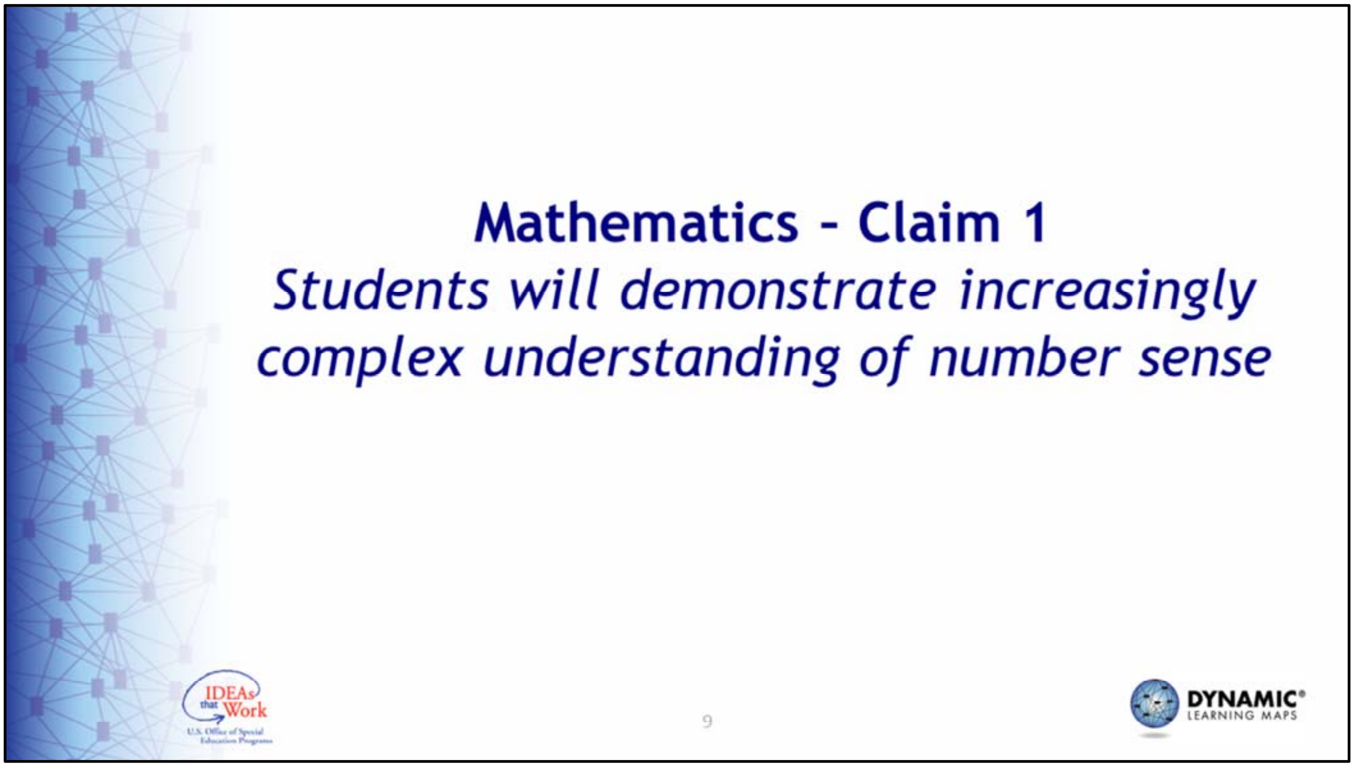
Some of the nodes in the learning map align to the DLM Essential Elements. The Essential Elements are the grade-level targets for the DLM Alternate Assessment. In this view of the learning map, the nodes aligned with Essential Elements are highlighted in blue.



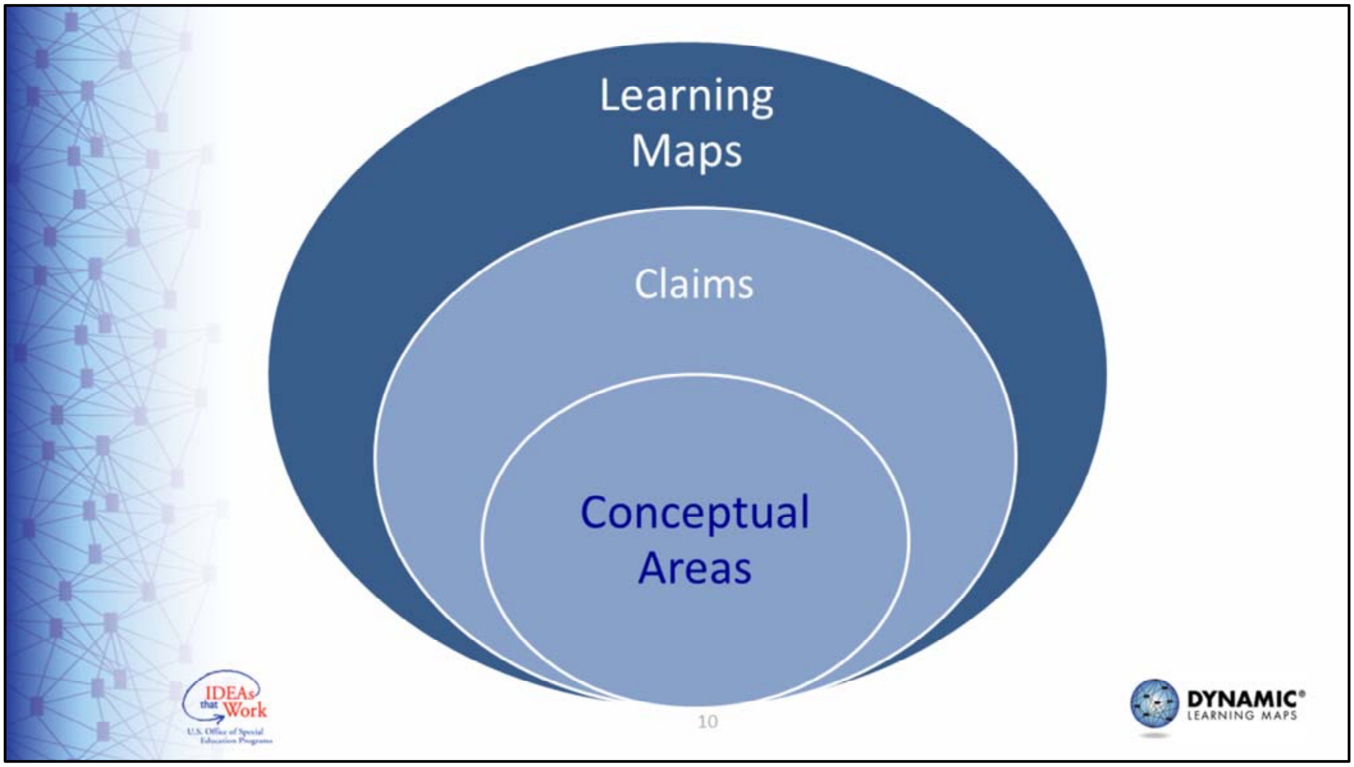
Claims are statements about what students are expected to learn and be able to demonstrate. The claims organize the learning map so that related Essential Elements are meaningfully linked together. Claims allow teams to set instructional priorities for students with significant cognitive disabilities at each grade level.



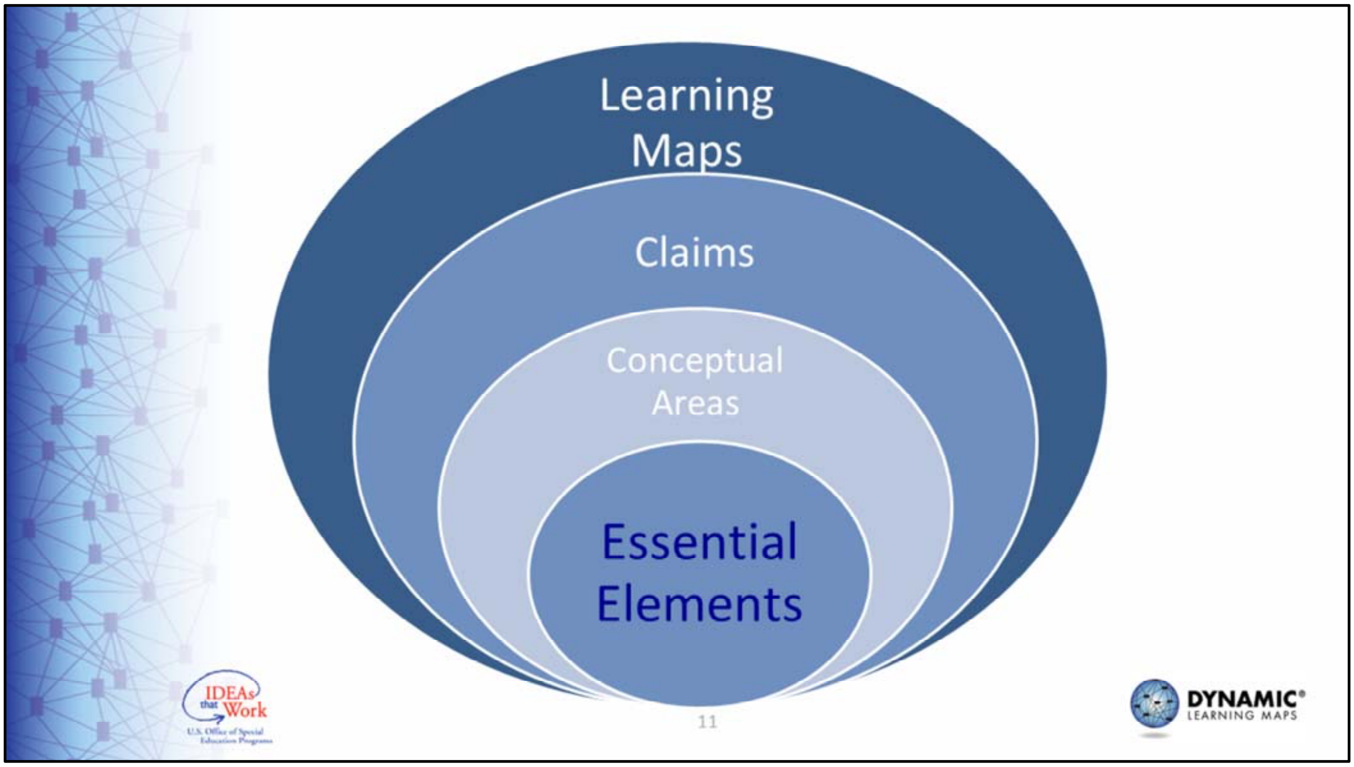
For example, the first claim for English language arts states that students will comprehend text in increasingly complex ways. On the English language arts learning map, all of the nodes and Essential Elements that are related to text comprehension fall within Claim 1. There are four claims in English language arts.



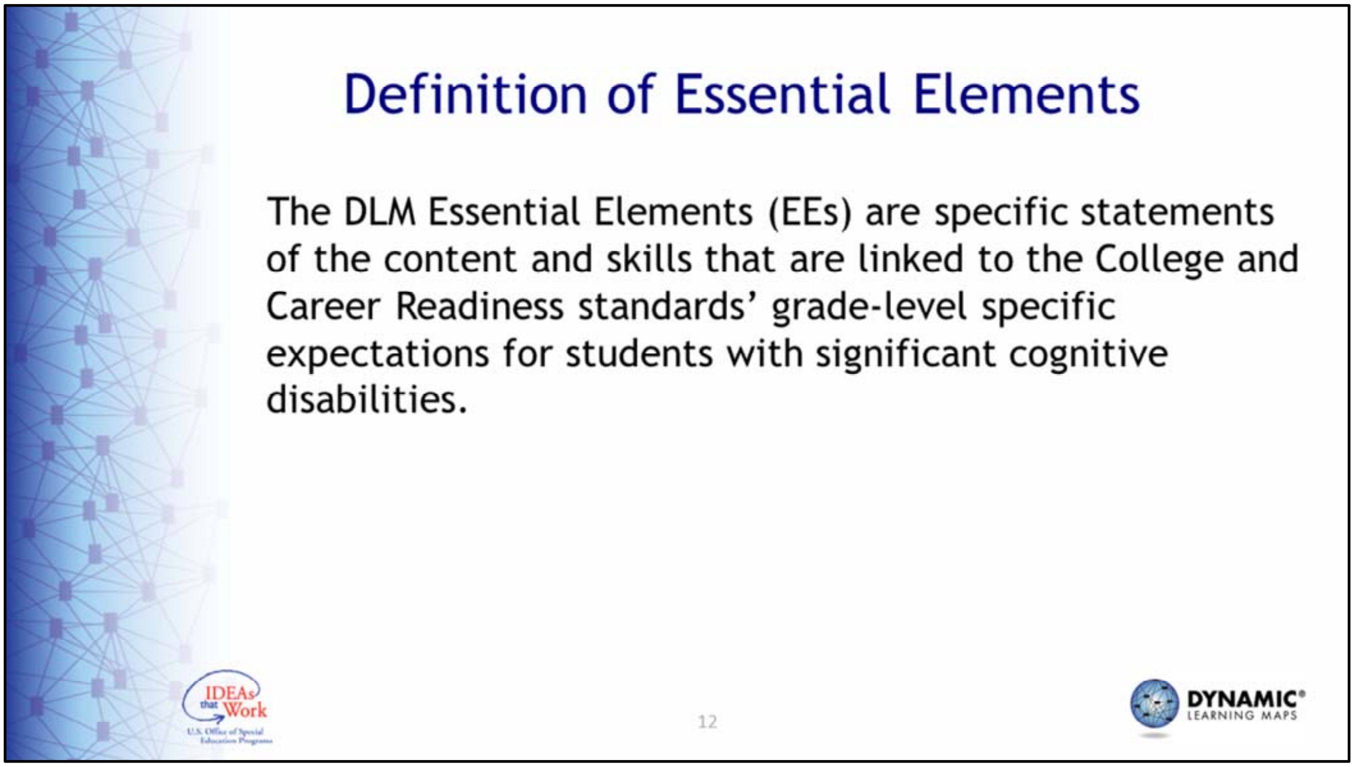
In mathematics, the first claim states that students will demonstrate increasingly complex understanding of number sense. On the mathematics learning map, all of the nodes and Essential Elements that are related to number sense fall within Claim 1 of mathematics. There are four claims in mathematics.



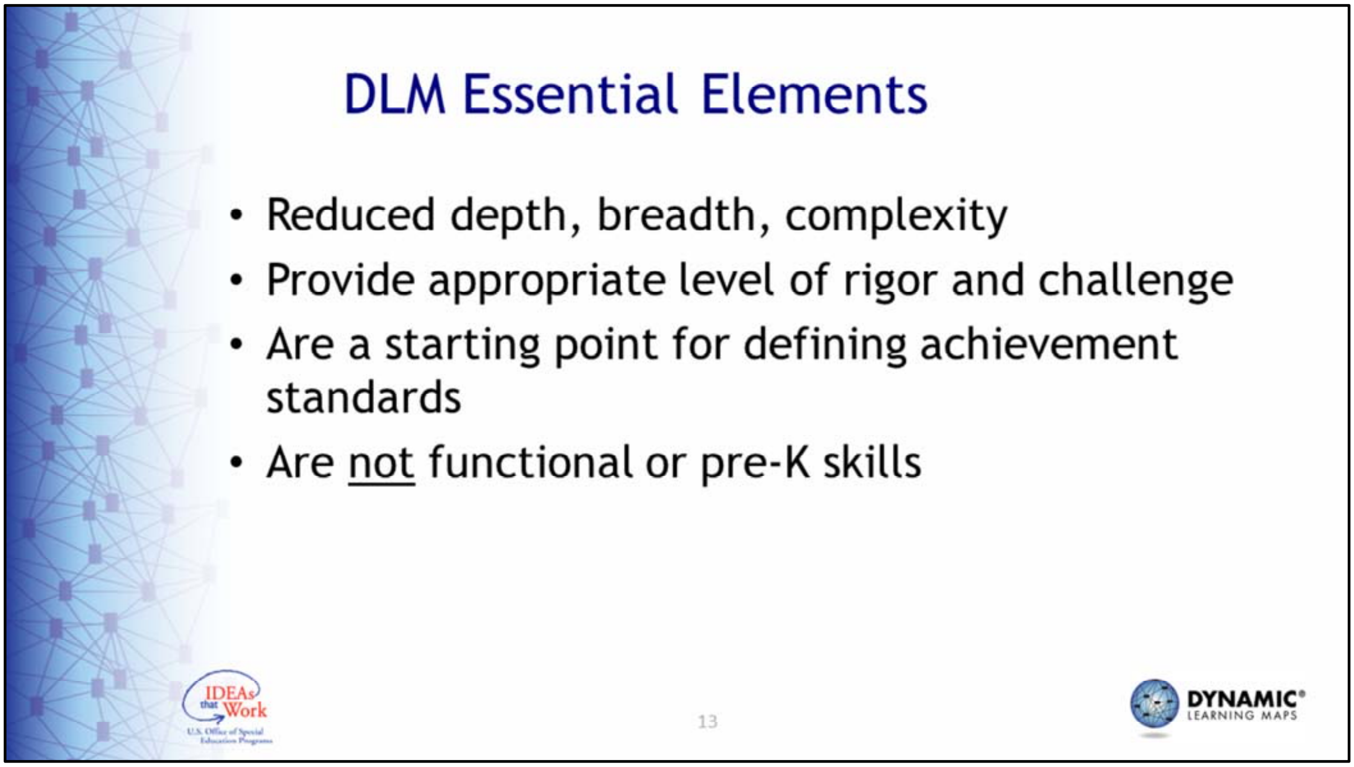
Claims are divided into smaller groups of nodes and Essential Elements called Conceptual Areas. The nodes and Essential Elements in a conceptual area are more closely related than those in the larger claim. Conceptual areas are organized around common cognitive processes.



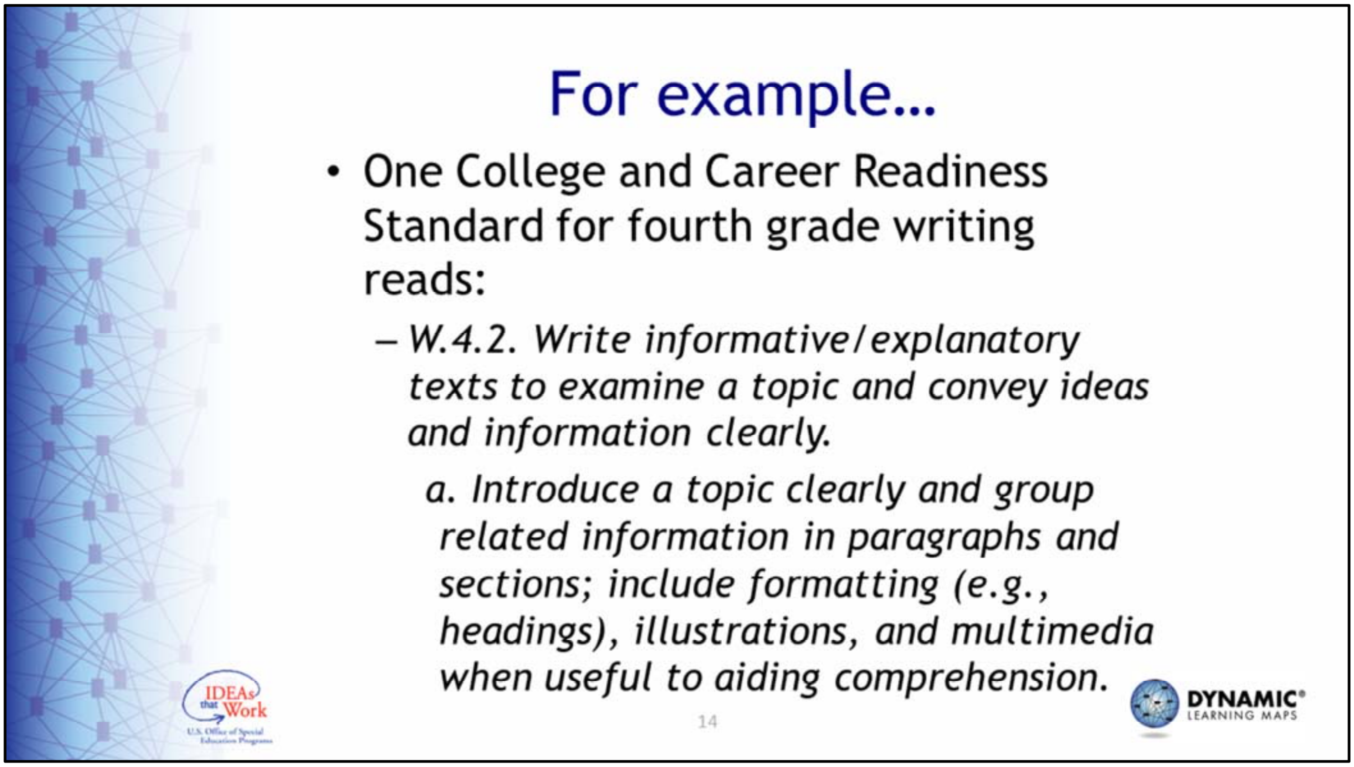
Within Conceptual Areas, the DLM Essential Elements are identified. Nodes that precede and extend beyond each Essential Element are also identified.



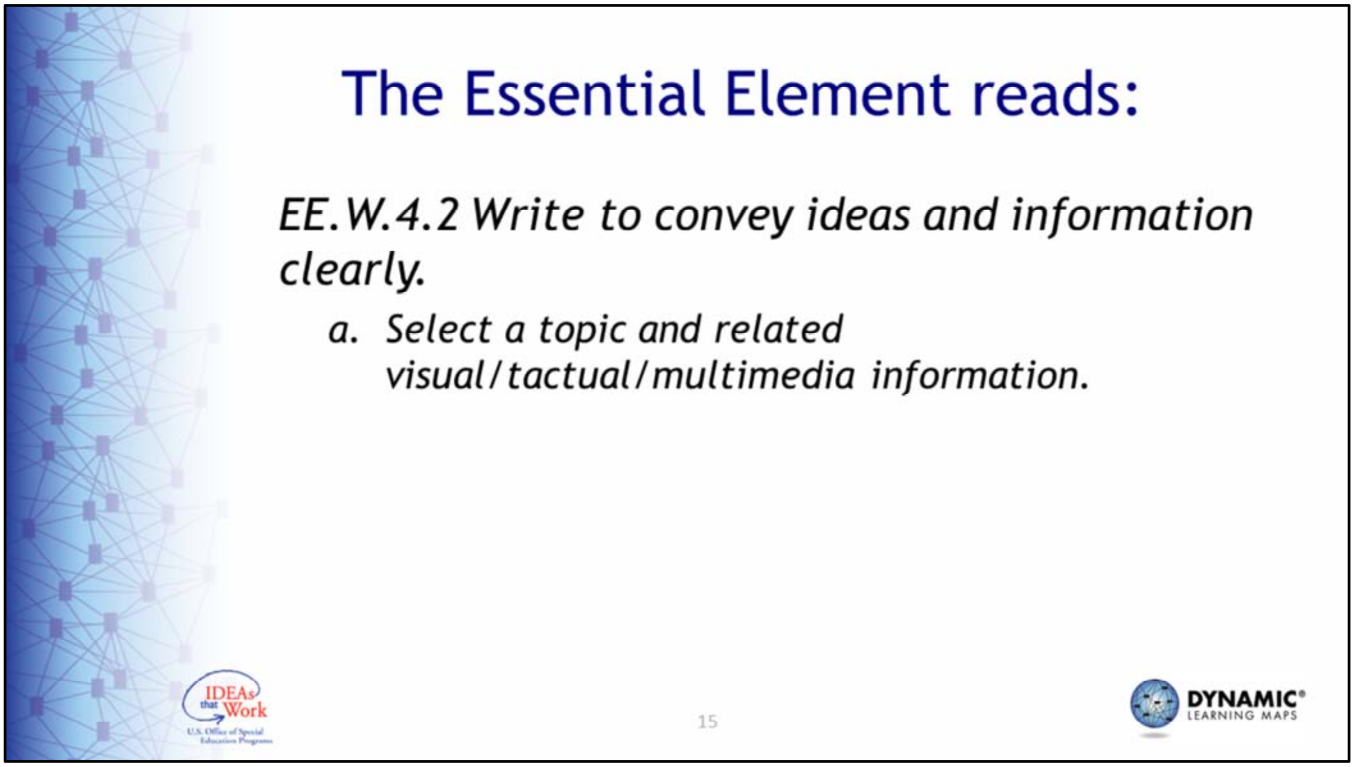
As already stated, The Dynamic Learning Maps Essential Elements are specific statements of knowledge and skills that are linked to the grade-level specific College and Career Readiness standards. Essential Elements stand on their own as important learning targets for students with the most significant cognitive disabilities.



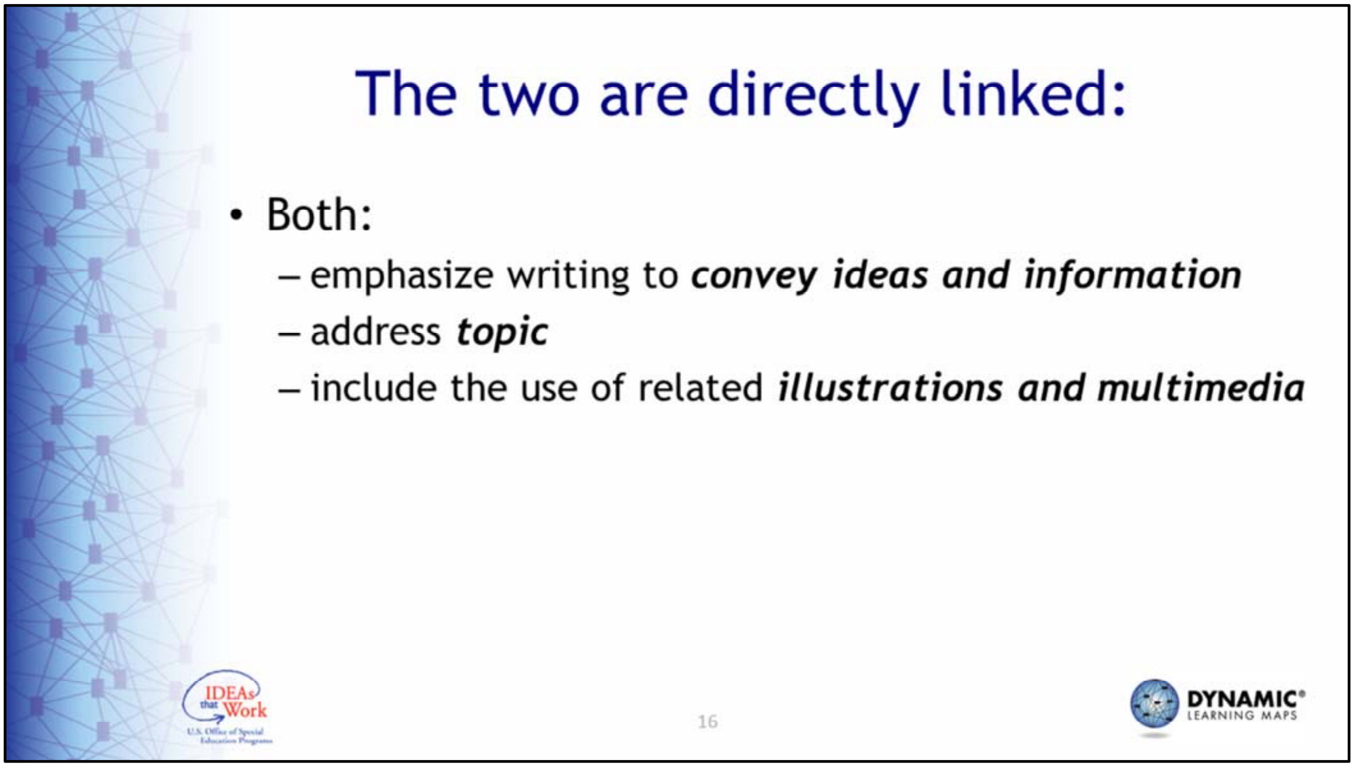
The DLM Essential Elements link to the College and Career Readiness standards but at a reduced depth, breadth, and complexity. They are at a level of rigor and challenge that is appropriate for students with the most significant cognitive disabilities who also often have multiple physical disabilities. Most important of all, Essential Elements focus on academic skills, NOT functional or pre-K skills.



As an example of the link between College and Career Readiness Standards and Essential Elements, consider this fourth-grade standard in writing. The general education standard reads, "*Write informative/explanatory texts to examine a topic and convey ideas and information clearly.*
Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension."



The linked Essential Elements reads: "*Write to convey ideas and information clearly.* a. *Select a topic and related visual/tactile/multimedia information."*

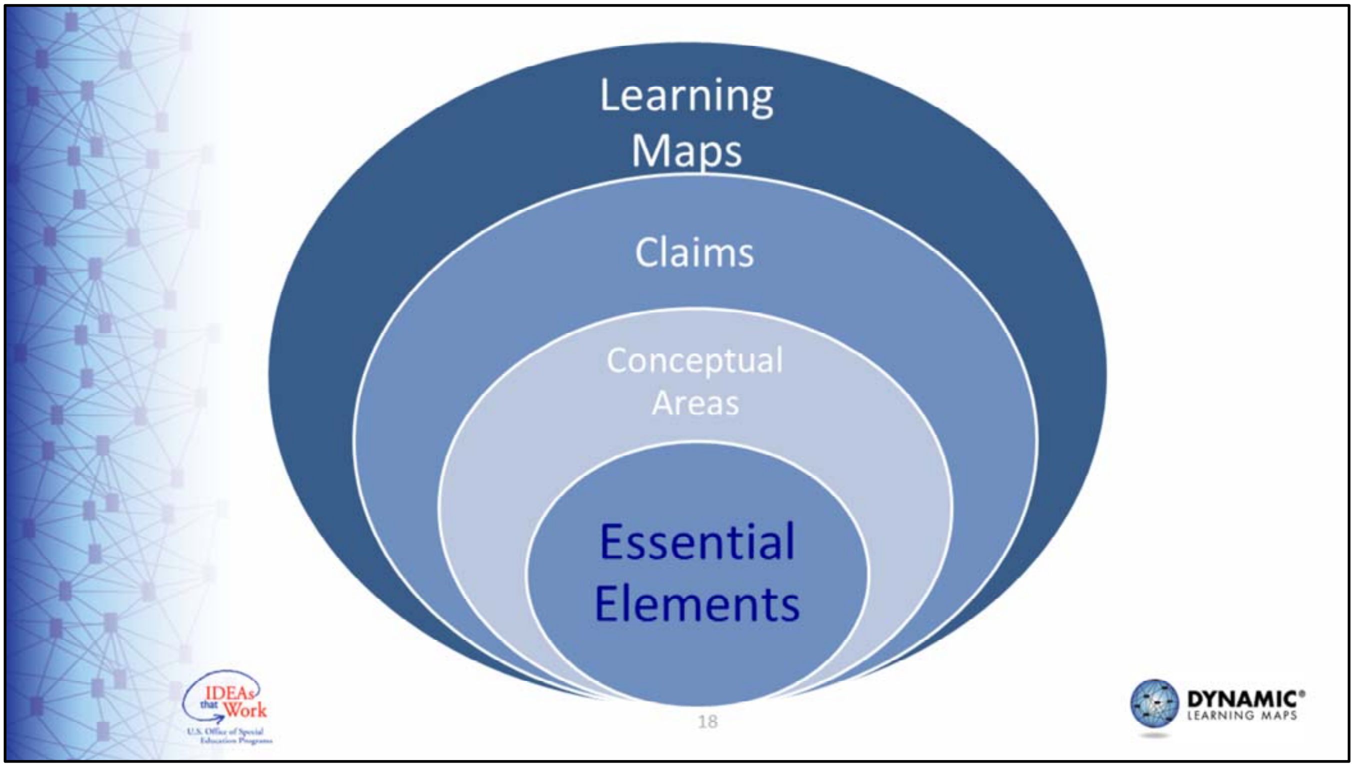


The link is clear between the College and Career Readiness grade-level standard and the Essential Element. Both emphasize writing to convey ideas and information. Both address a topic. Both include the use of related illustrations and multimedia. The Essential Element is not a downward extension of the grade-level standard; instead it is a clarification of the elements that are the most essential in achieving the standard.

Fourth Grade Mathematics Example

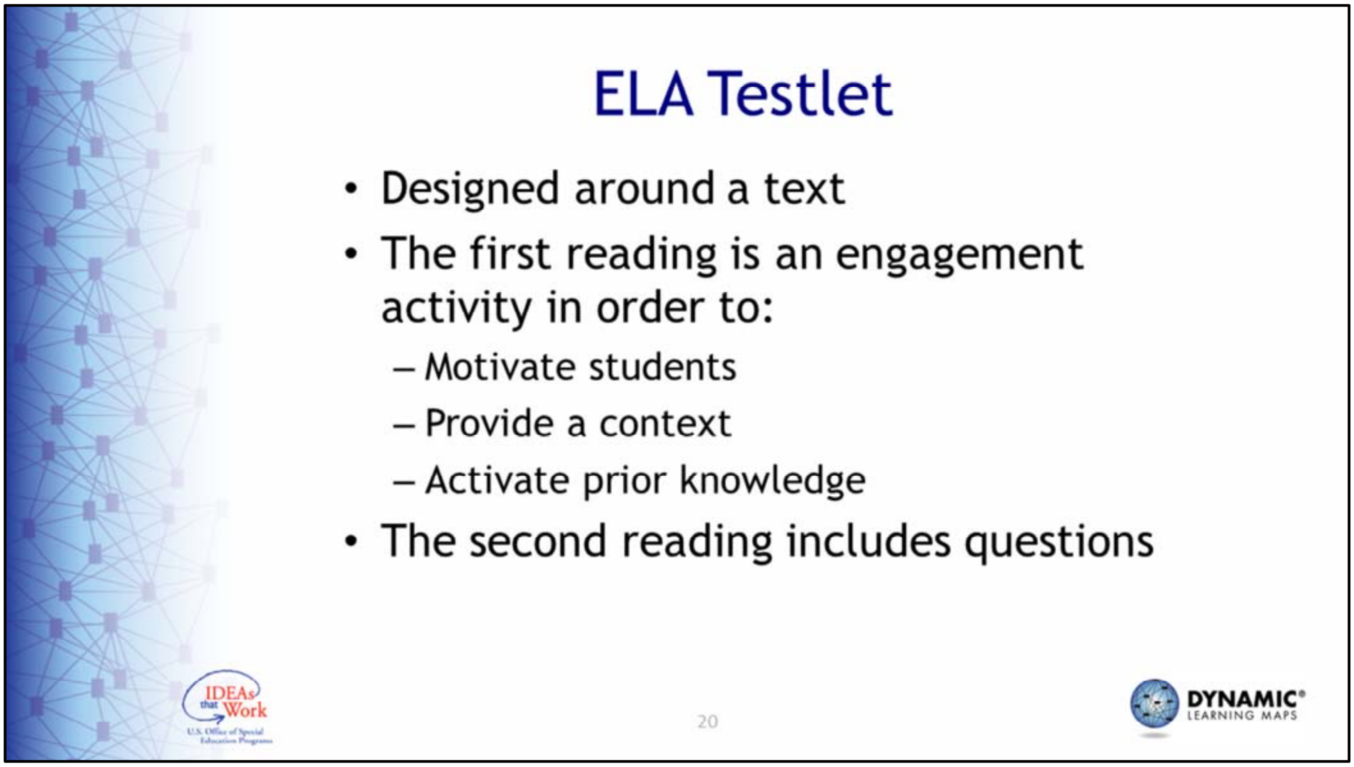
College and Career Readiness Standard	Essential Element
4.MD.5. Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: - An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a “one-degree angle,” and can be used to measure angles…	EE.4.MD.5. Recognize angles in geometric shapes.

Here is an example in math. The College and Career Readiness standard for fourth grade, on the left, states that students will recognize angles as geometric shapes and understand concepts of angle measurement. The aligned Essential Element states that students will recognize angles **in** geometric shapes. They both focus on identifying angles and how they relate to geometric shapes, but the Essential Element reflects a reduced complexity compared to the College and Career Readiness standard.

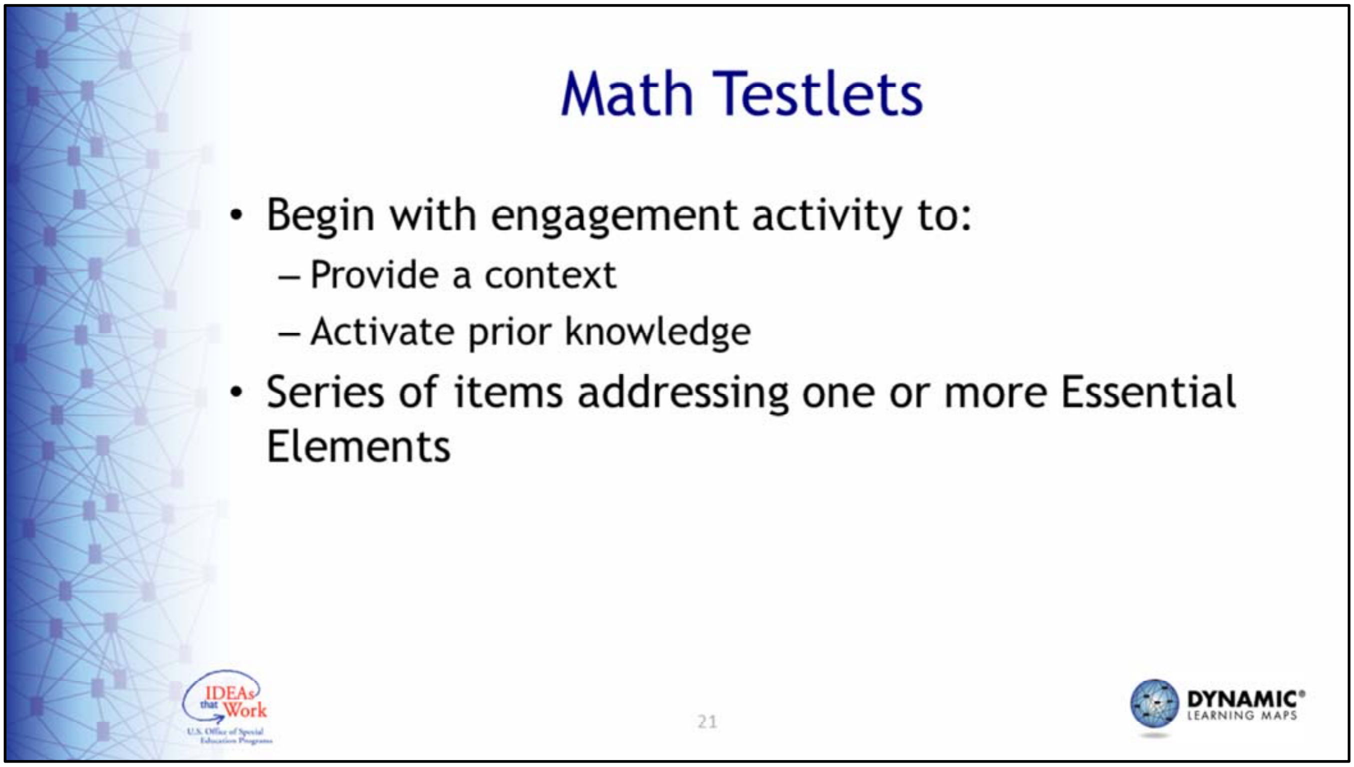


As a review of learning thus far: Learning maps represent specific skills and understandings and the multiple pathways students might follow as they develop those skills and understandings. The skills and understandings are called nodes. Nodes on the learning map are organized into claims, which indicate what the assessment will measure. The claims are divided into conceptual areas. Within the conceptual areas are Essential Elements that are linked to the nodes. The Essential Elements are grade-level targets for students with the most significant cognitive disabilities. The DLM system has many parts. Each of these parts will be discussed in more detail as you continue with the training, and more information is available about each in the TEST ADMINISTRATION MANUAL.

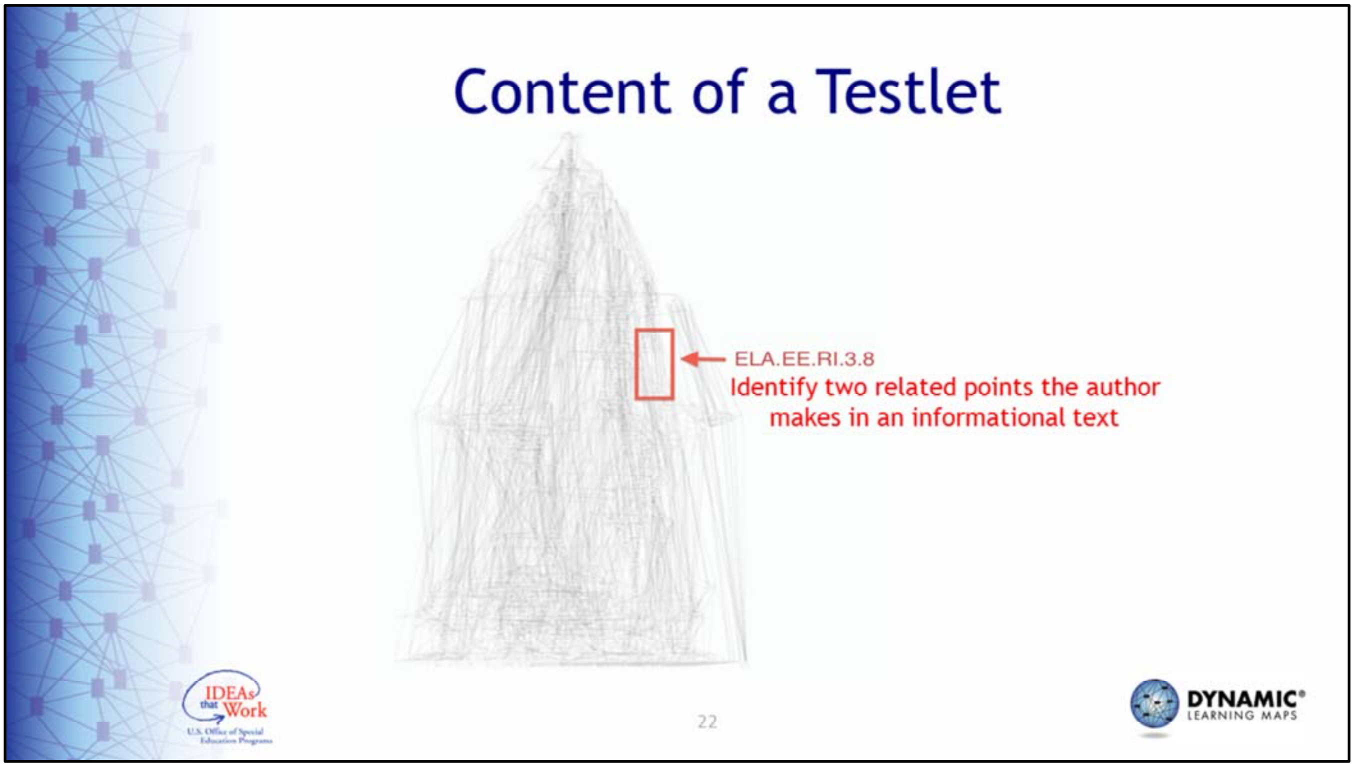
DLM breaks down the assessments into testlets. Students complete multiple testlets in math and ELA. Each testlet generally has at least 3 and as many as 8 items that assess one or more Essential Elements. How a testlet is set up varies between content areas.



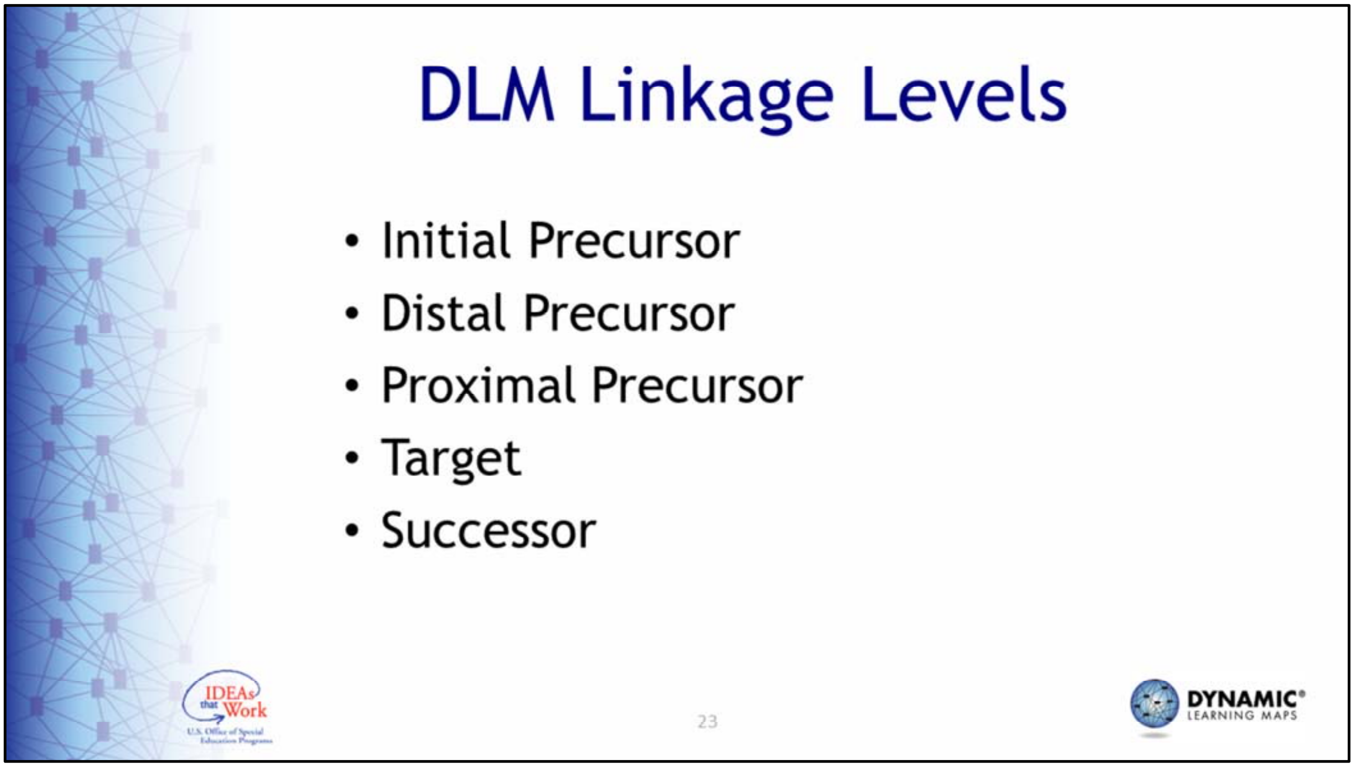
For example, testlets that assess reading and language are designed around a text. During the assessment, students participate in two readings of the text: the first helps them develop an overall understanding of the text or participate in a shared reading to build familiarity. Test administrators may use activities and objects to engage the student with the text during the first reading. It is intended to motivate students, provide a context for the items, and activate background knowledge. The second reading includes embedded questions as well as questions at the end of the text.



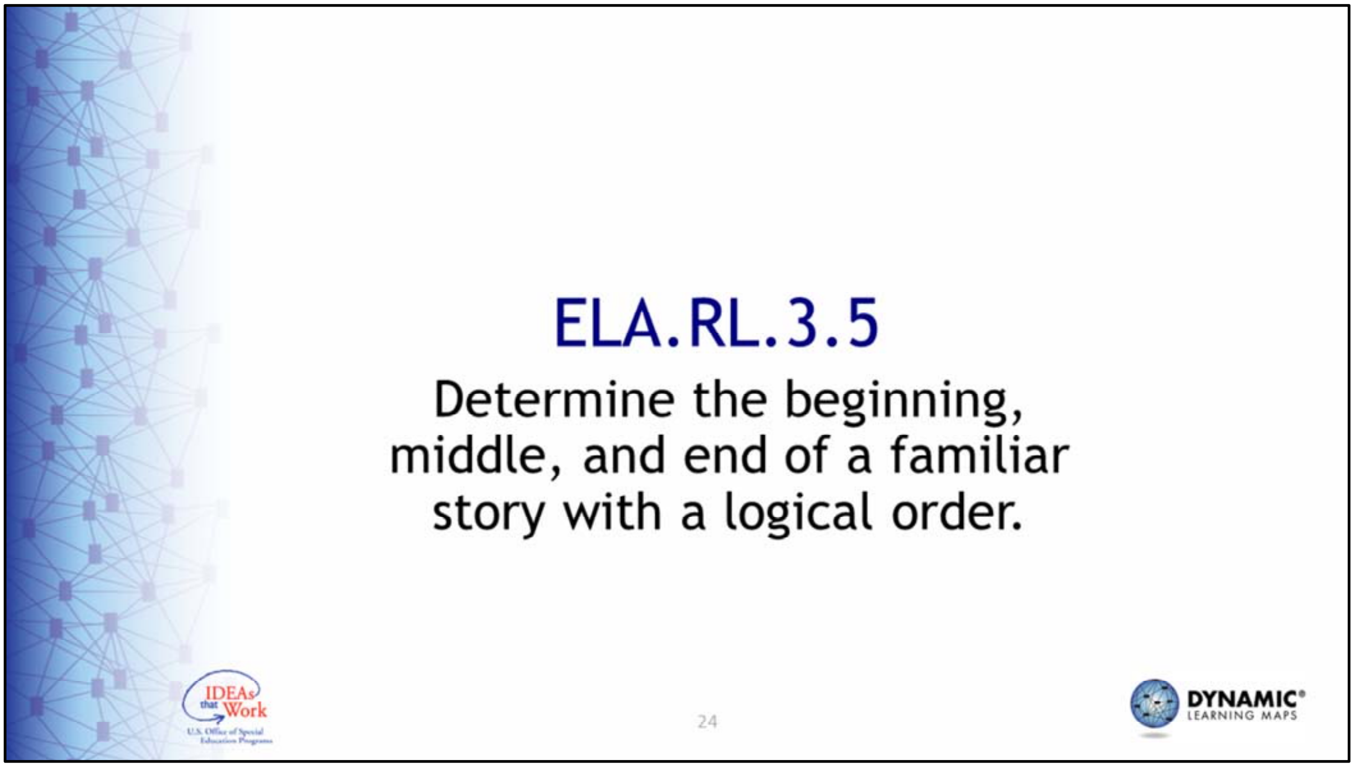
Math testlets are built around an engagement activity designed to activate prior knowledge and provide a context for the questions. The engagement activity does not require a response. After the engagement activity, students complete items that address one or more Essential Elements.



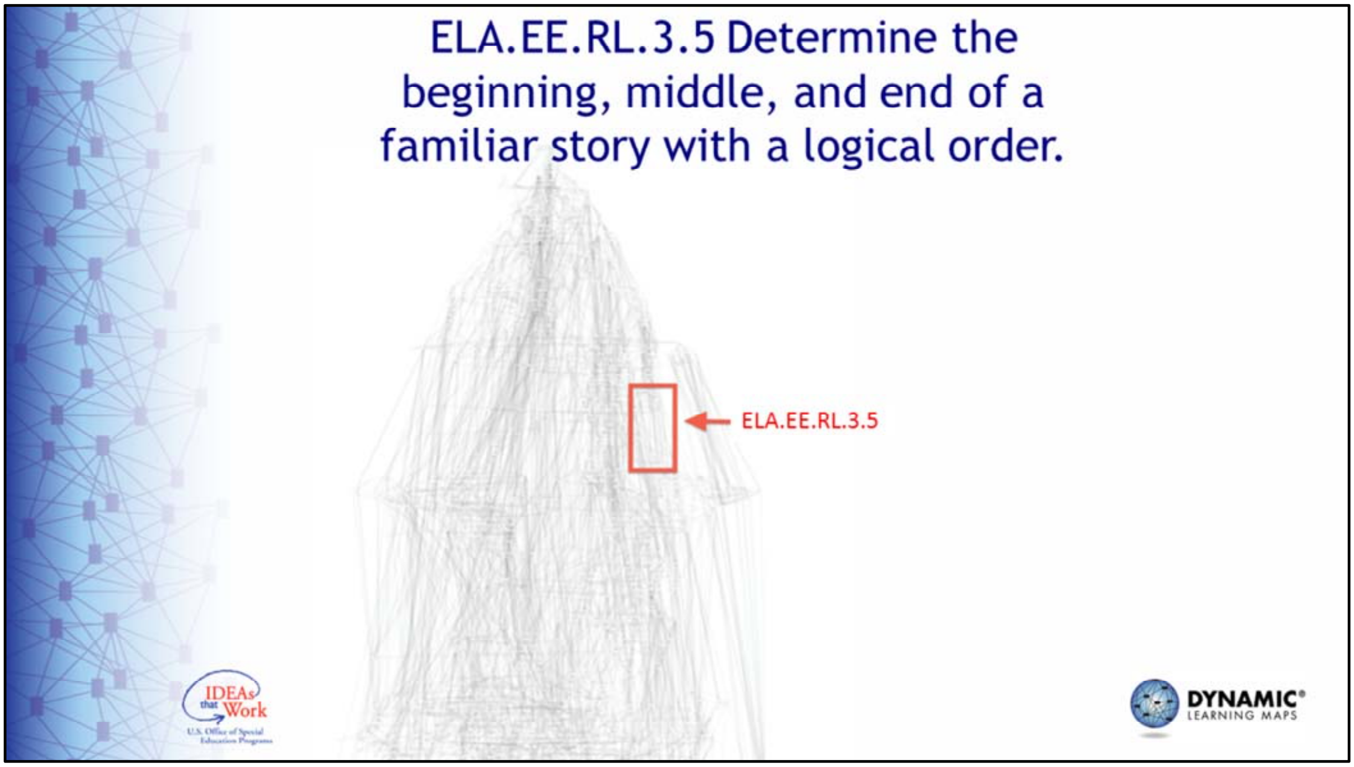
The content of a testlet comes from the nodes in the learning map that link to the Essential Elements. For each of the Essential Elements tested in the DLM system, four additional linkage levels have been identified in the learning map.



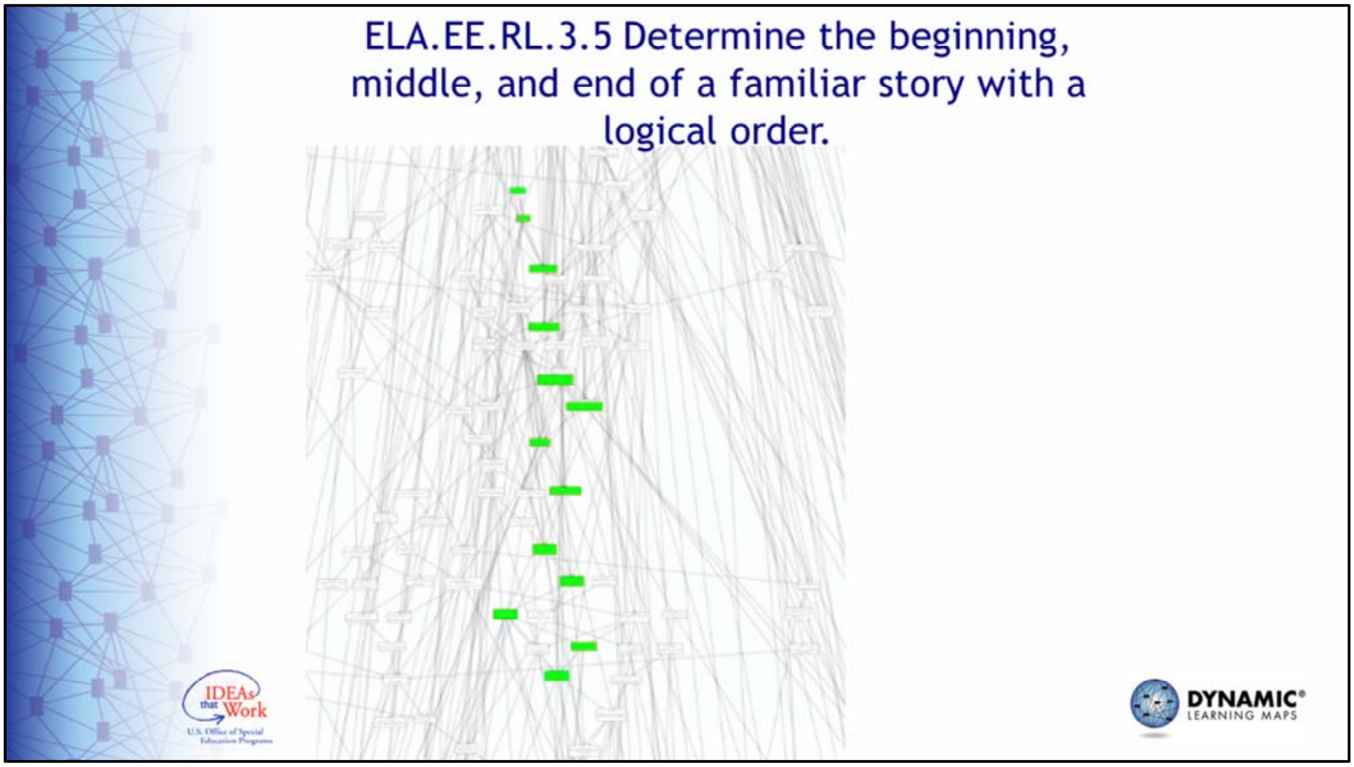
The resulting five linkage levels defined for each Essential Element being assessed in the DLM system are: the Initial Precursor, Distal Precursor, Proximal Precursor, the Target (which aligns directly with the Essential Element), and the Successor (which extends upward toward the grade-level standard).



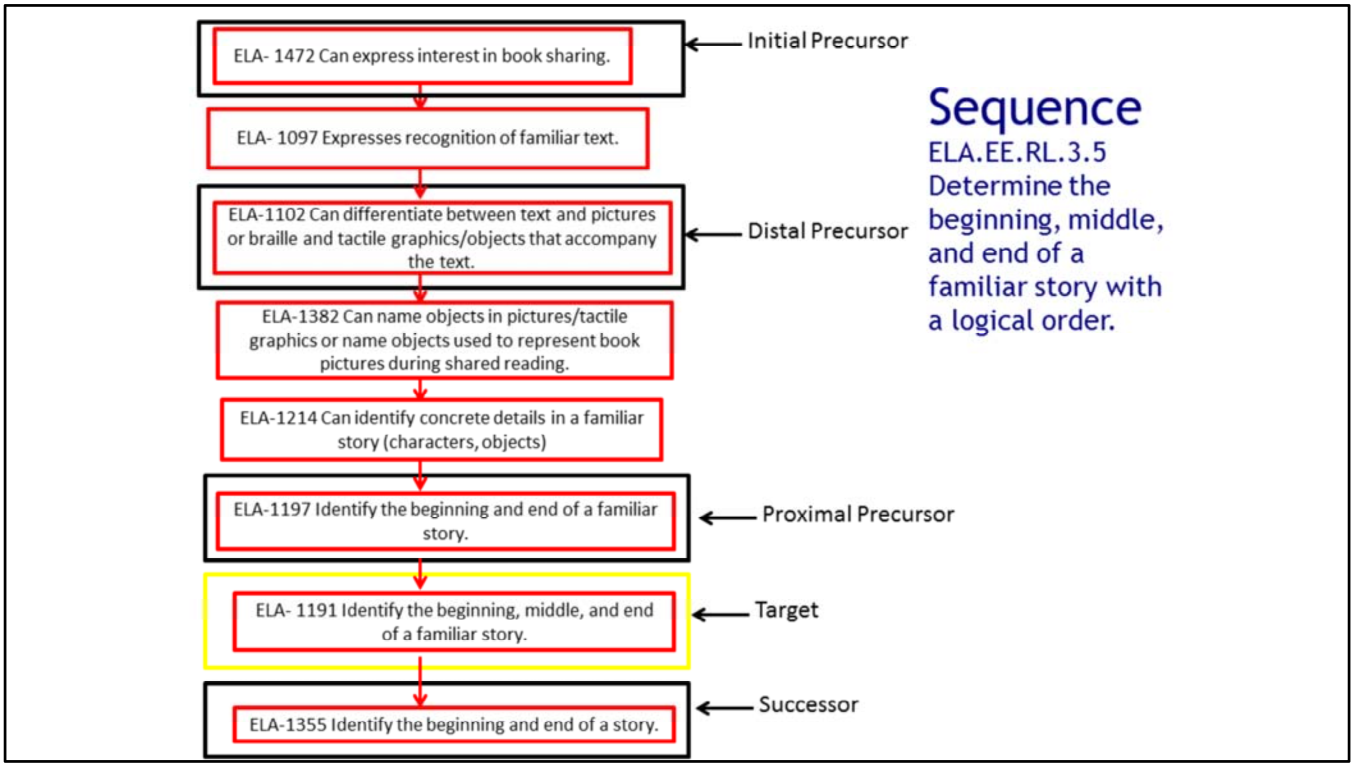
Let’s examine a specific Essential Element to illustrate how this works. The Essential Element appears at the third-grade level and is linked to the third-grade standard in Reading Literature, Standard 5. The Essential Elements reads, “Determine the beginning, middle, and end of a familiar story with a logical order.”



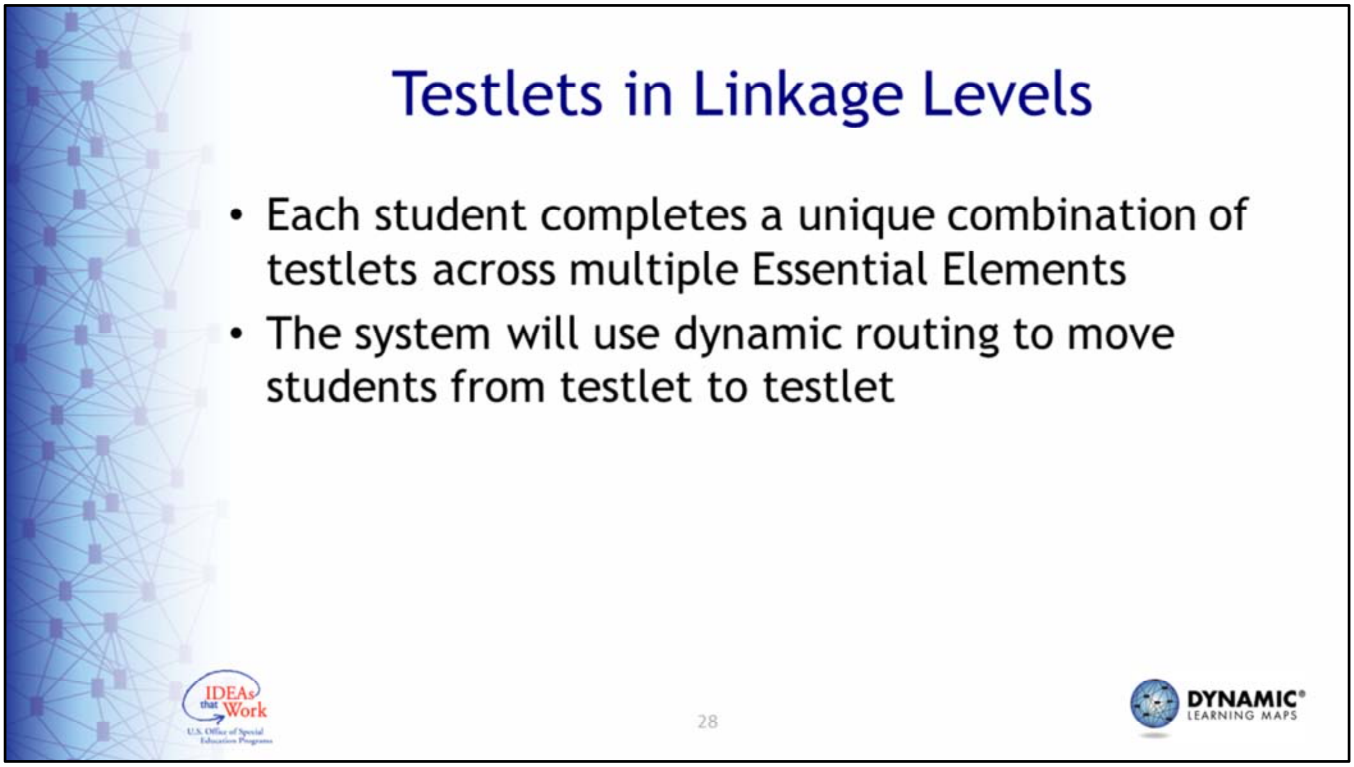
The section of nodes surrounding the target node is identified within the map.



The possible Precursor and Successor nodes are then identified. The nodes that reflect the most critical cognitive shifts and junctions of the multiple pathways are identified as linkage levels.

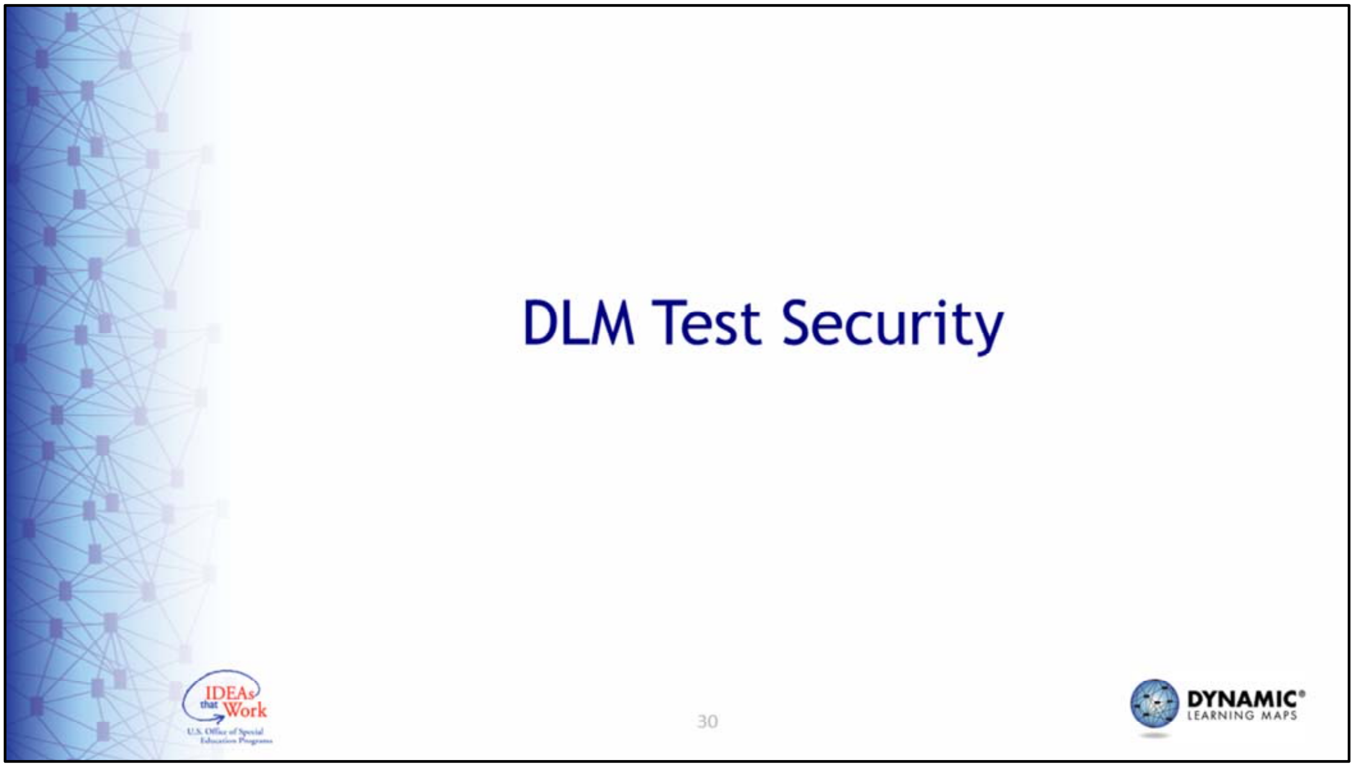


Finally, a mini-map is created that specifically details the nodes that will be assessed at each linkage level. In this example, one node is assessed at each linkage level for the third grade Essential Element.



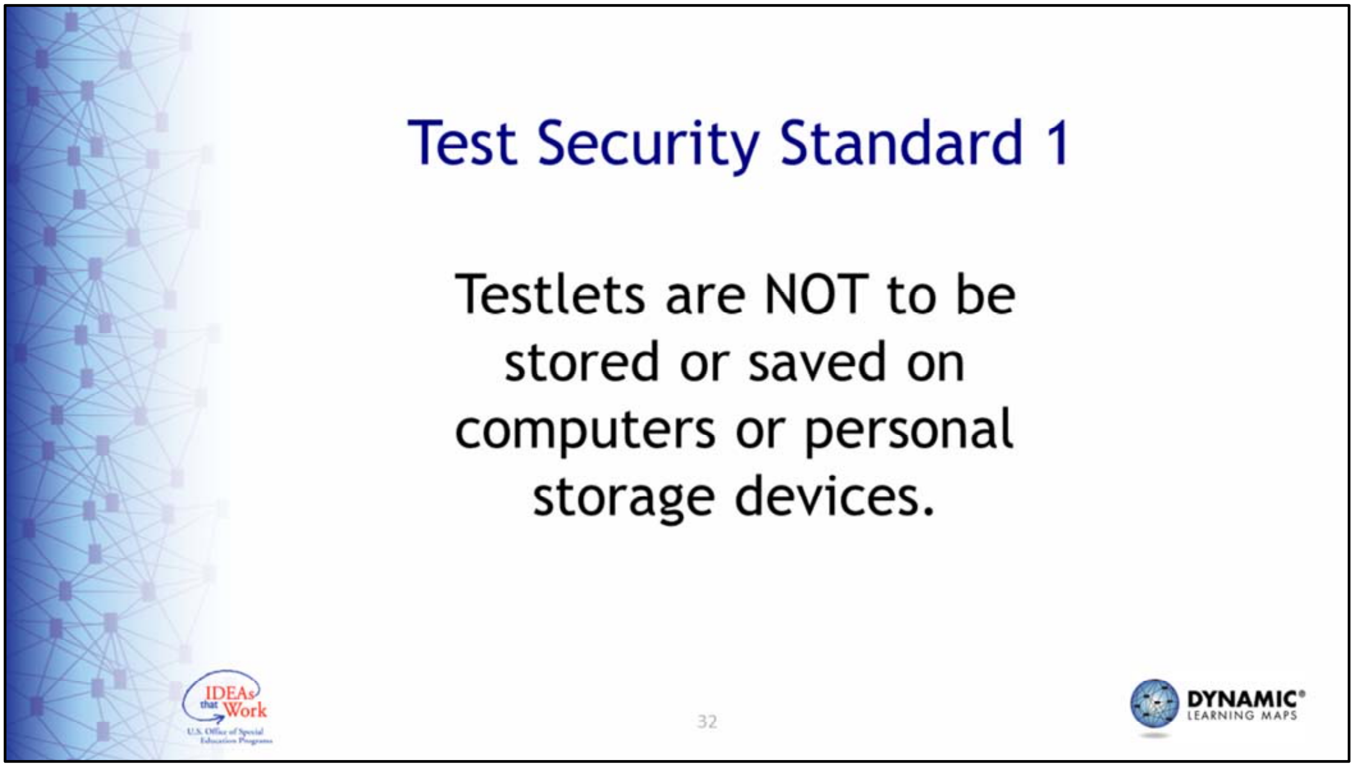
The DLM Alternate Assessment adjusts based on how a student performs on each testlet. Each student will complete a unique combination of testlets across multiple Essential Elements. An educator with multiple students in the same grade may see some similar content, but typically there is not the same test for all students.


Pause for Activity

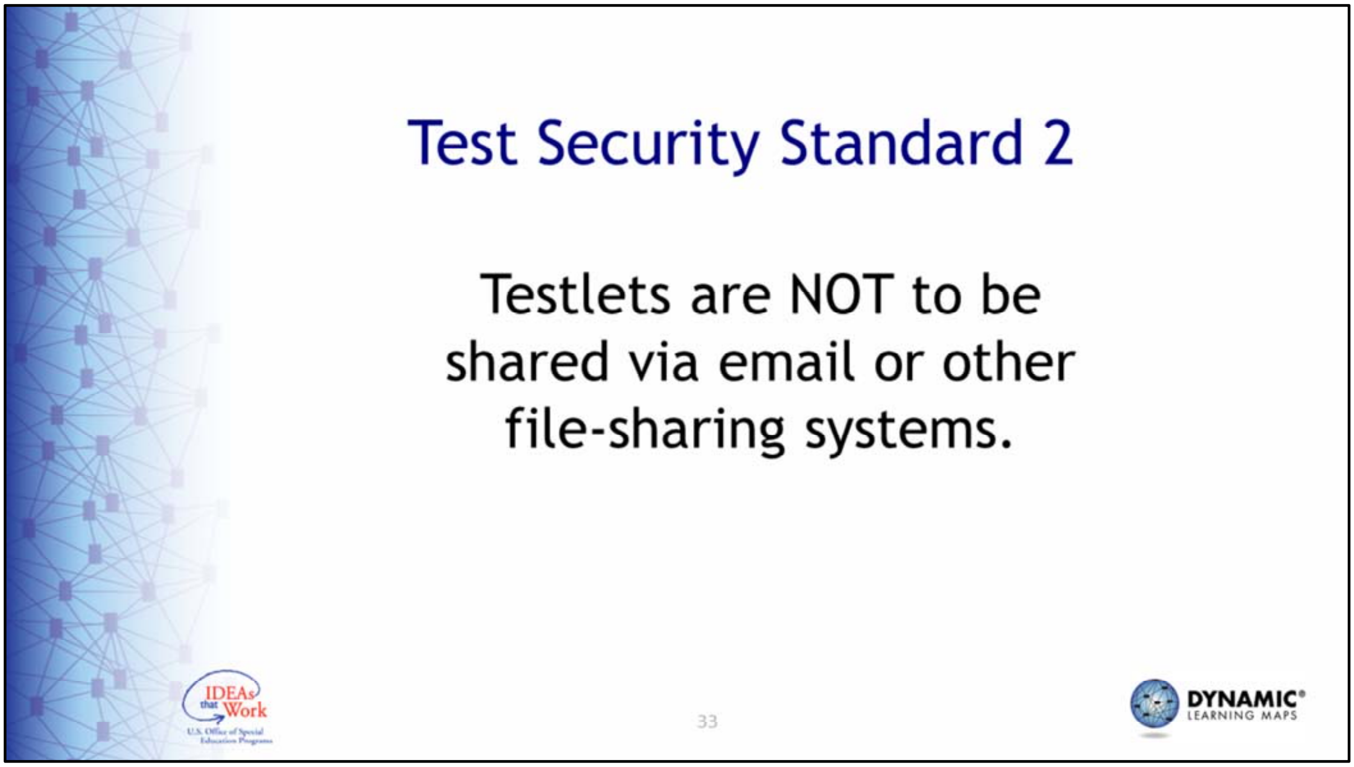


DLM tests are completely secure. All testlets are secure, whether administered during the year or at the end of the year.

The first time users log in to the KITE Educator Portal each school year, they are presented the Test Security Standards and are to agree to the terms. Test administrators and other educational staff who support DLM implementation are responsible for following the DLM test security standards.

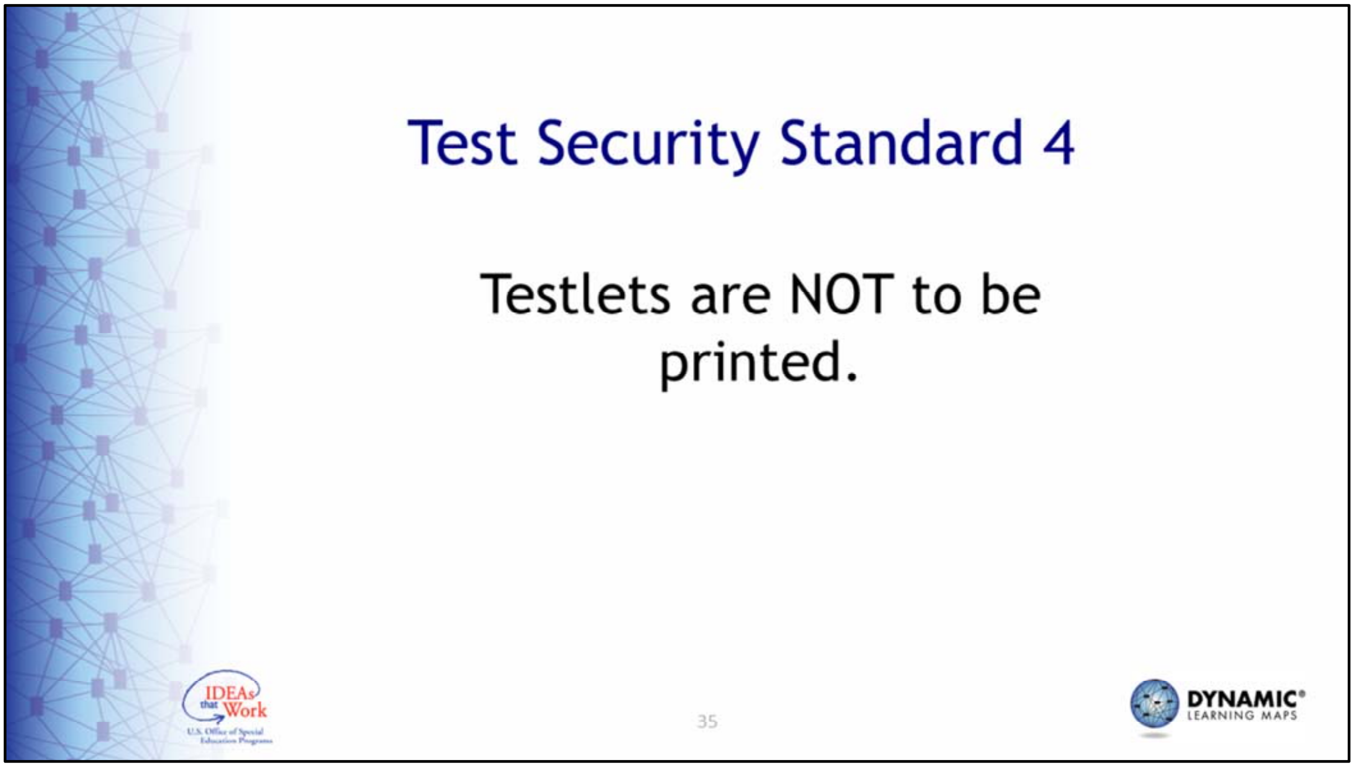


Testlets are not to be stored or saved on computers or personal storage devices.



Testlets are not to be shared via email or other file-sharing systems. This includes posting content or student responses on any type of social media.

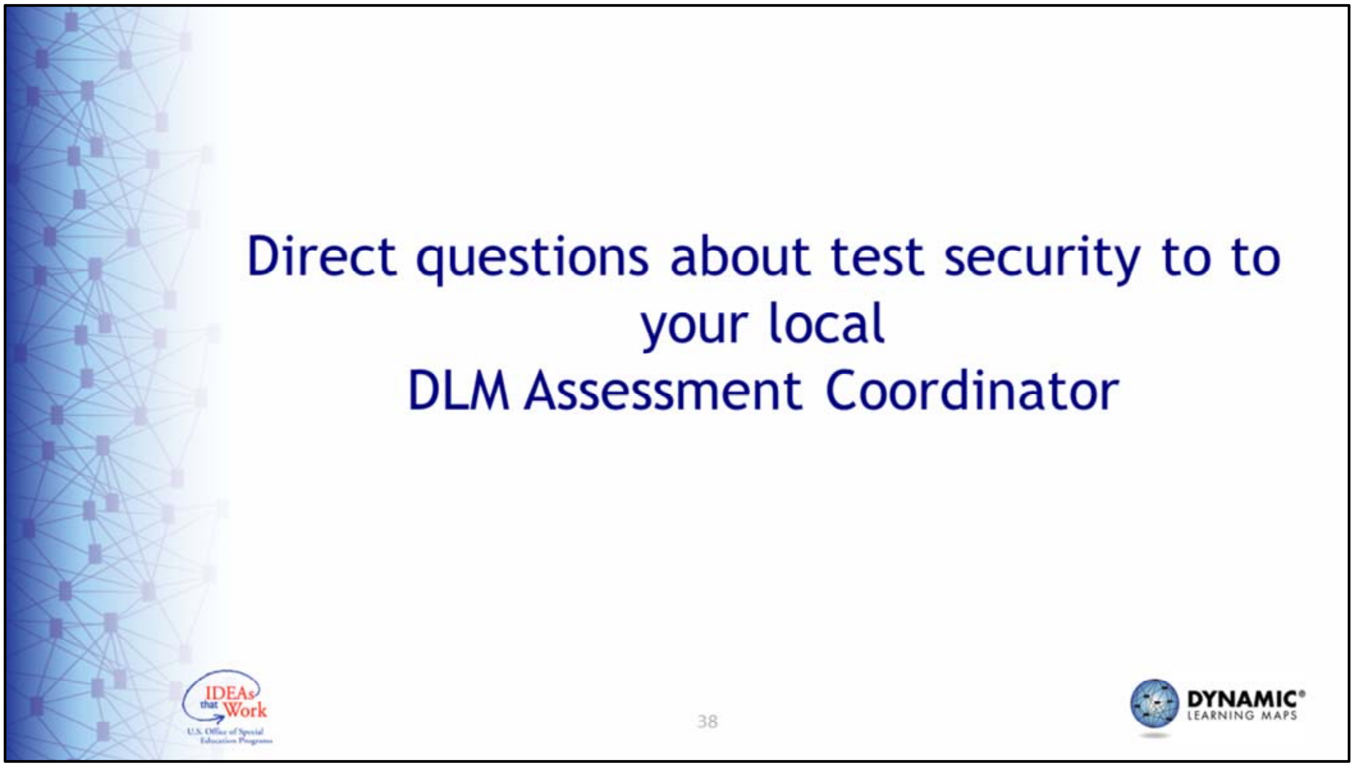
Thirdly, testlets are not to be reproduced by any means, except where explicitly allowed as described in the Test Administration Manual, such as braille forms of the testlets. Taking screenshots of the testlets is also prohibited.



Finally, testlets themselves are not to be printed. However, printing the familiar English language arts texts is allowed. Also, Testlet Information Pages (TIPs) provide information to help educators prepare for testing. These (TIPs) may be printed, but must be securely destroyed after the testlet has been submitted.

The Test Administration Manual provides additional information regarding these four test security standards.

One time each year, you will have to electronically complete a security agreement. If you do not agree to the terms in the security agreement, you will not have access to student login information, Test Information Pages, and other tools you need to administer the assessment successfully.



Questions about security expectations should be directed to your local DLM Assessment Coordinator.

This concludes Module 1 for the required training of the DLM Alternate Assessment. You must successfully complete a quiz assessing your understanding of this module before you can administer any DLM tests. Complete this quiz before continuing to Module 2.

DYNAMIC® LEARNING MAPS

DLM Required Training Part 1
Post-Test Assessment

1. The DLM® Learning Maps represent specific skills and understandings as well as the multiple pathways that students might follow as they develop those skills and understandings in mathematics, English language arts, and important functional skills.
   True **False**

   Feedback if true is selected: The learning maps focus on academic skills in mathematics and English language arts. One day they'll include science, but the learning maps do not address functional skills. It is important for students with significant cognitive disabilities learn important functional skills, but they are not addressed in DLM.

2. Which of the following statements are true about the DLM Essential Elements? (select all that apply)
   a. **The DLM Essential Elements align directly to nodes in the DLM learning maps.**
   b. **The DLM Essential Elements are the grade-level targets for the DLM Alternate Assessment.**
   c. The DLM Essential Elements focus on academic skills and functional skills.
   d. **The DLM Essential Elements are specific statements of knowledge and skills that are linked to the grade-level specific College and Career Readiness standards.**

   Feedback if c is selected: The DLM Essential Elements address academic skills in mathematics and English language arts. In some states, there are also Essential Elements in science. However, no Essential Elements address functional skills. These skills may be taught and are often included in IEPs, but they are not a formal part of the standards or Essential Elements.

3. The DLM Claims organize the learning map so that related Essential Elements are meaningfully linked together.
   True False

   Feedback if false is selected: The DLM Claims are statements about what students are expected to learn and be able to demonstrate. Each claim includes a group of related Essential Elements. Focusing on Claims instead of individual Essential Elements helps teams set instructional priorities and provide meaningful, integrated instruction that focuses on the application and use of skills.

4. The DLM Claims allow IEP teams to set instructional priorities for students with significant cognitive disabilities at each grade level.

True False

Feedback if false is selected: The DLM Claims are statements about what students are expected to learn and be able to demonstrate. Each Claim includes a group of related Essential Elements at each grade level. Focusing on Claims instead of individual Essential Elements helps teams set instructional priorities that are directly related to grade level content without focusing exclusively on isolated skills called out in Essential Elements.

5. The DLM testlets written at which linkage level align directly with the DLM Essential Element?
    a. Initial Precursor
    b. Distal Precursor
    c. Proximal Precursor
    d. Target
    e. Successor

    Feedback if any wrong answer is selected: When developing testlets, the DLM team starts by identifying the nodes in the learning map that most closely reflect the Essential Element. This node or these nodes are then used to write Target Level testlets that align directly to the Essential Elements. Testlets at other linkage levels are developed using nodes from the learning maps that build up to and extend from the target node or nodes.

6. All students at each grade level complete the same testlets in ELA and Mathematics.
    True **False**

    Feedback if true is selected: For every DLM Essential Element that is tested, there are testlets developed at the five linkage levels (Initial Precursor, Distal Precursor, Proximal Precursor, Target, and Successor). Students at one grade level could complete testlets in ELA and Mathematics at any of these 5 levels depending on their level of skill and understanding.

7. The DLM mini-maps specifically detail the nodes that are assessed at each linkage level.
    True False

    Feedback if false is selected: The mini-maps are made available to teachers so that they can see all of the nodes that are tested at each linkage level. The mini-maps allow teachers to see the relationship among the nodes and how they build upon one another. The mini-maps call out the nodes that are assessed directly, and often include additional nodes that fill learning gaps but are not directly assessed.

8. Which of the following are DLM Test Security standards? (select all that apply)

a. Testlets and Testlet Information Pages (TIPs) are not to be printed.
b. Testlets are not to be stored or saved on computers or personal storage devices.
c. Testlets are not to be shared via email, social media, or other file-sharing systems.
d. Testlets are not to be reproduced by any means, except where explicitly allowed as described in the Test Administration Manual (e.g.. braille forms of the testlets).

Feedback if "a" is selected: Educators are encouraged to print Testlet Information Pages (TIPs) to help them prepare to administer testlets; however, TIPs must be securely destroyed after the testlet has been administered. Do not post TIPs, share them via email or other social networks, and do not save them onto any local or portable drives.

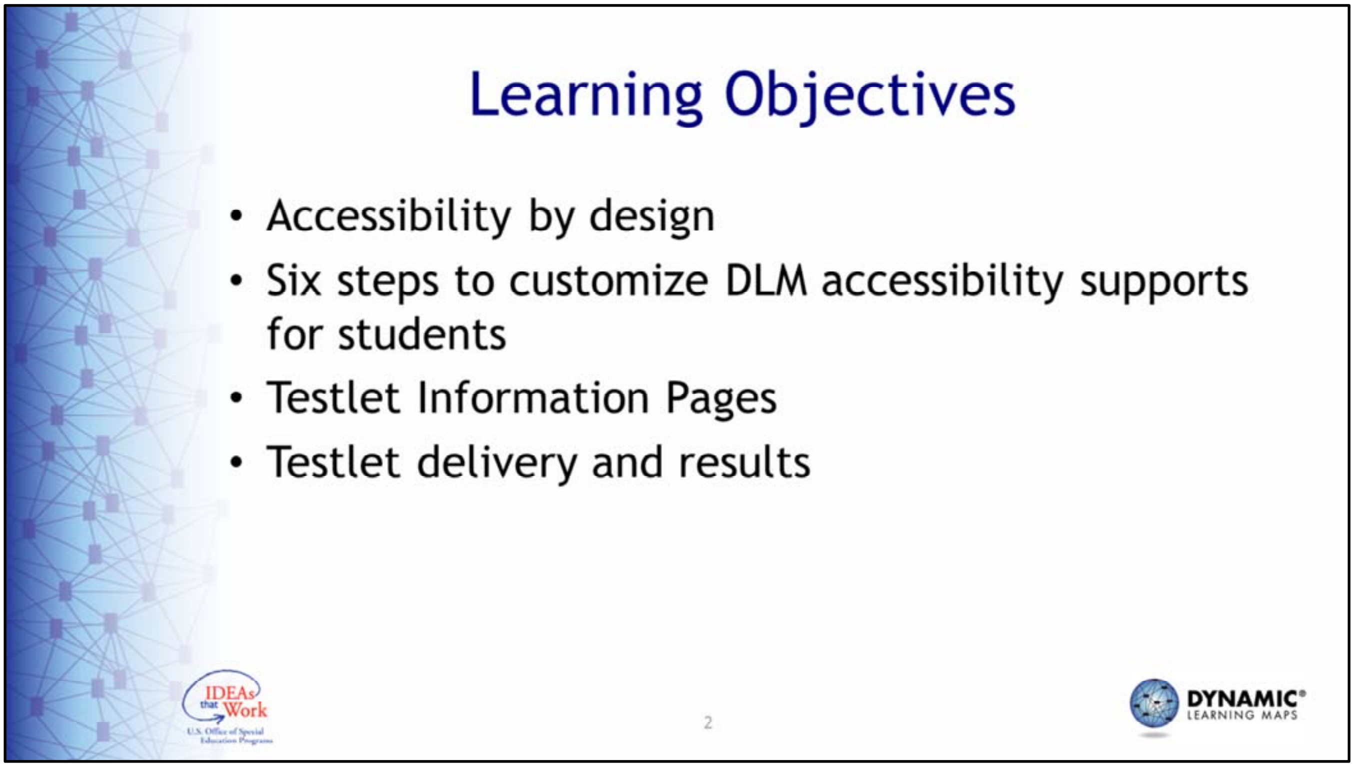
9. The DLM test security standards apply only to data stewards and test administrators.
True **False**

Feedback if True is selected: All persons involved with the administration of the DLM alternate assessment are required to adhere to all test security standards.

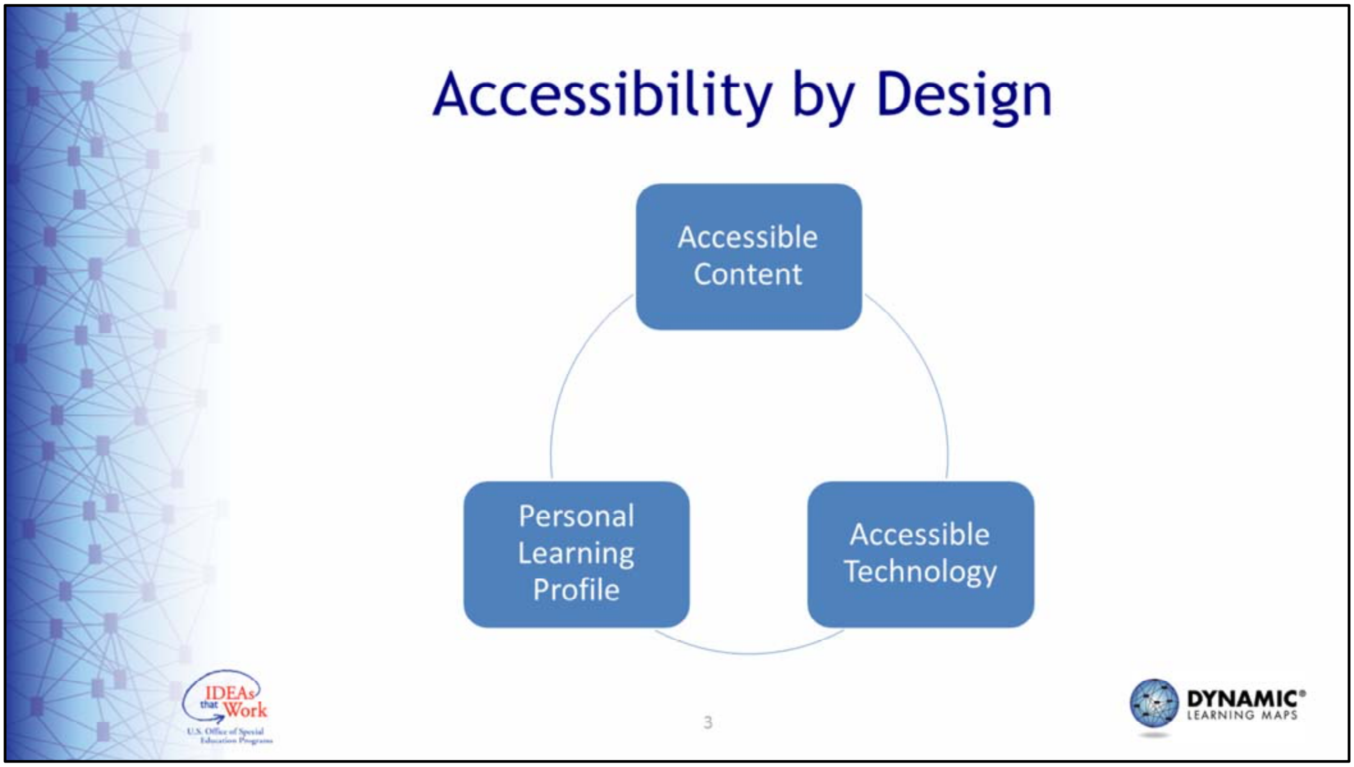
10. Testlets at the Successor level reflect skills that extend upward toward the grade level standard.
True False

Feedback if False is selected: For every Essential Element that is tested in DLM, there are testlets developed at five linkage levels (Initial Precursor, Distal Precursor, Proximal Precursor, Target, and Successor). The Target testlets link most directly with the grade level Essential Element, and the Successor testlet is designed for students who have demonstrated mastery of the grade level Essential Elements and are extending toward the grade level standard.

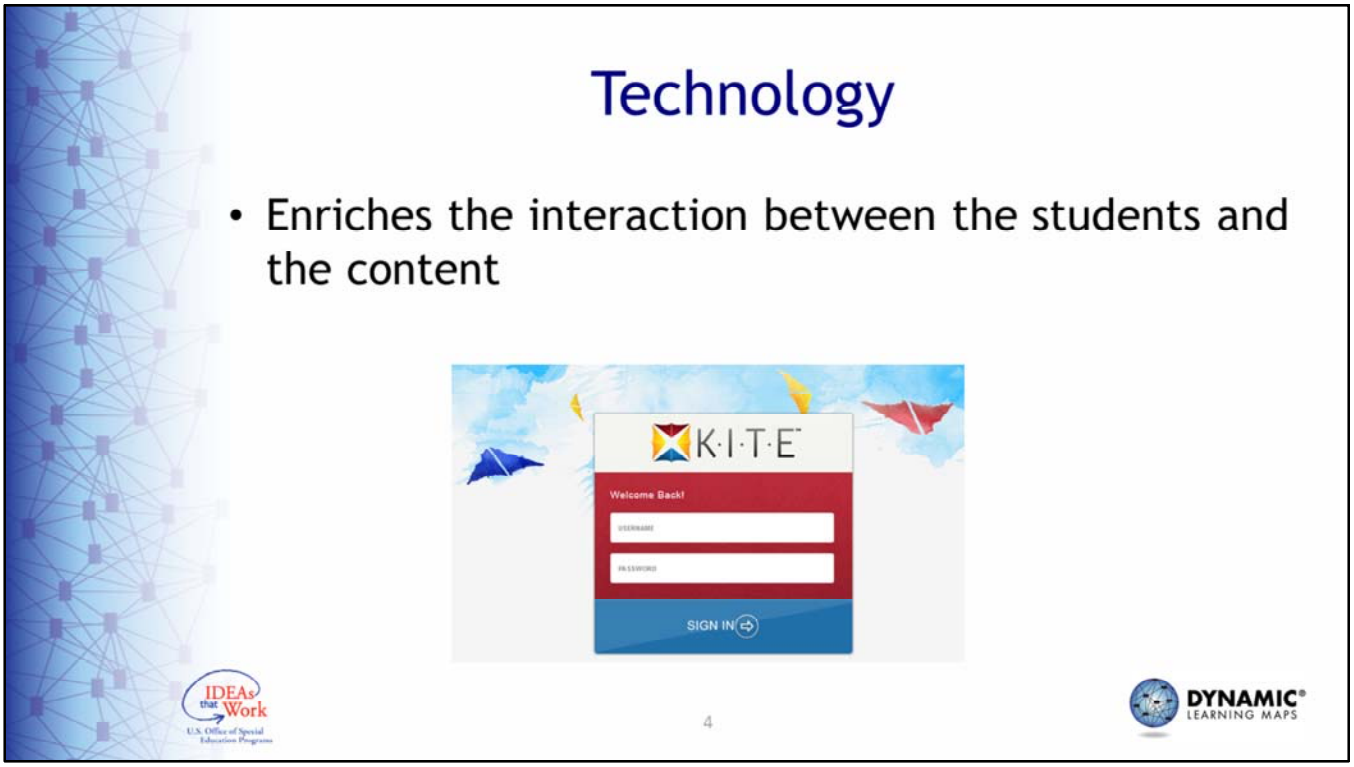
This required training module, *Accessibility by Design,* is the second in a series of required training modules for educators who are responsible for delivering the DLM Alternate Assessment based on alternate achievement standards.



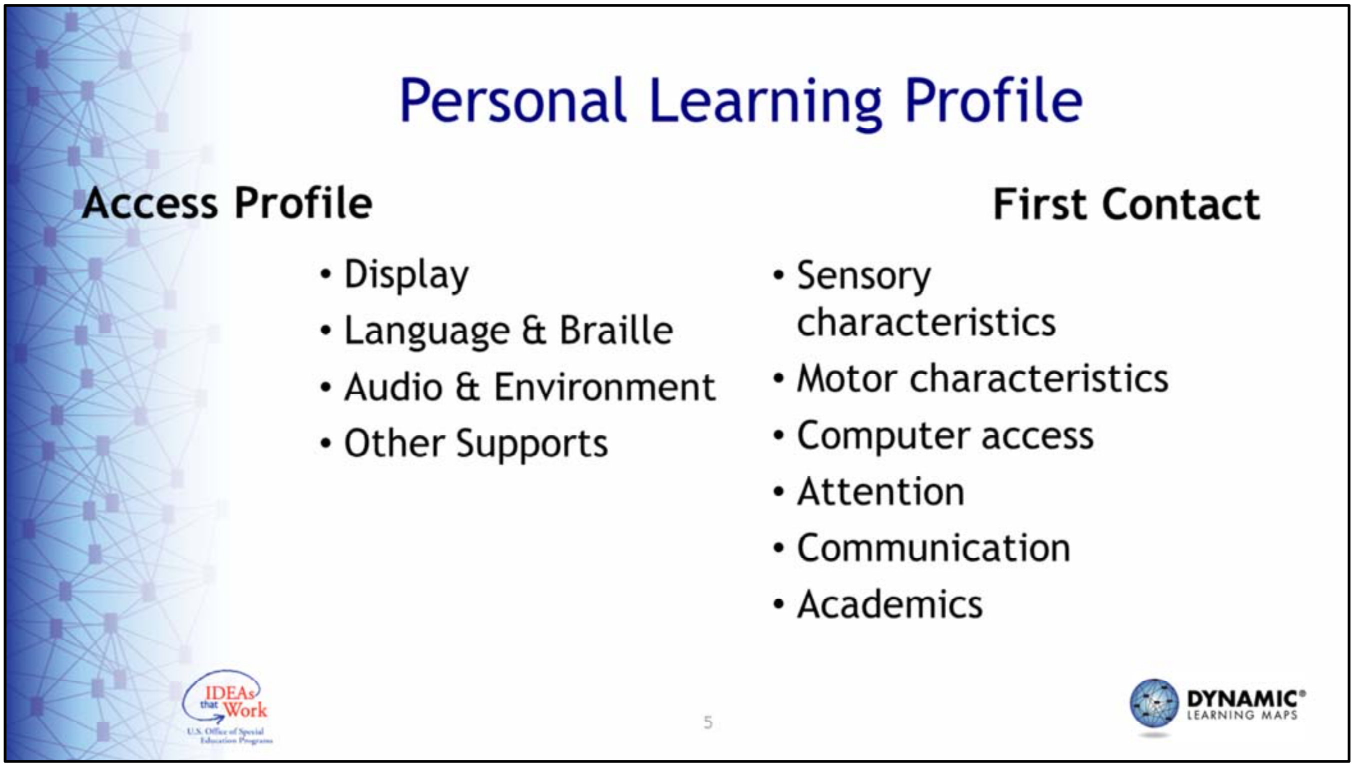
This module includes information about the overall design of the DLM assessment and how the choices educators and IEP teams make can influence the success a student has completing the assessment. This module also describes Testlet Information Pages and the way that the DLM Assessment Systems delivers testlets and produces student results.



DLM assessments are designed to be accessible in three ways. First, the content is accessible. The Dynamic Learning Maps™ Consortium is guided by the core beliefs that all students should have access to challenging, grade-level content. However, the content is developed at a breadth and depth that is accessible to students with significant cognitive disabilities. Second, the technology used to deliver the DLM assessment is accessible. The Dynamic Learning Maps Consortium is guided by the belief that the assessment should test student's content knowledge and skills, not a student's ability to use technology. The technology includes features that make it accessible to the greatest extent possible. Finally, DLM uses a personal learning profile for individual students to address their unique needs. Educators create the Personal Learning Profile based on their knowledge of student needs.



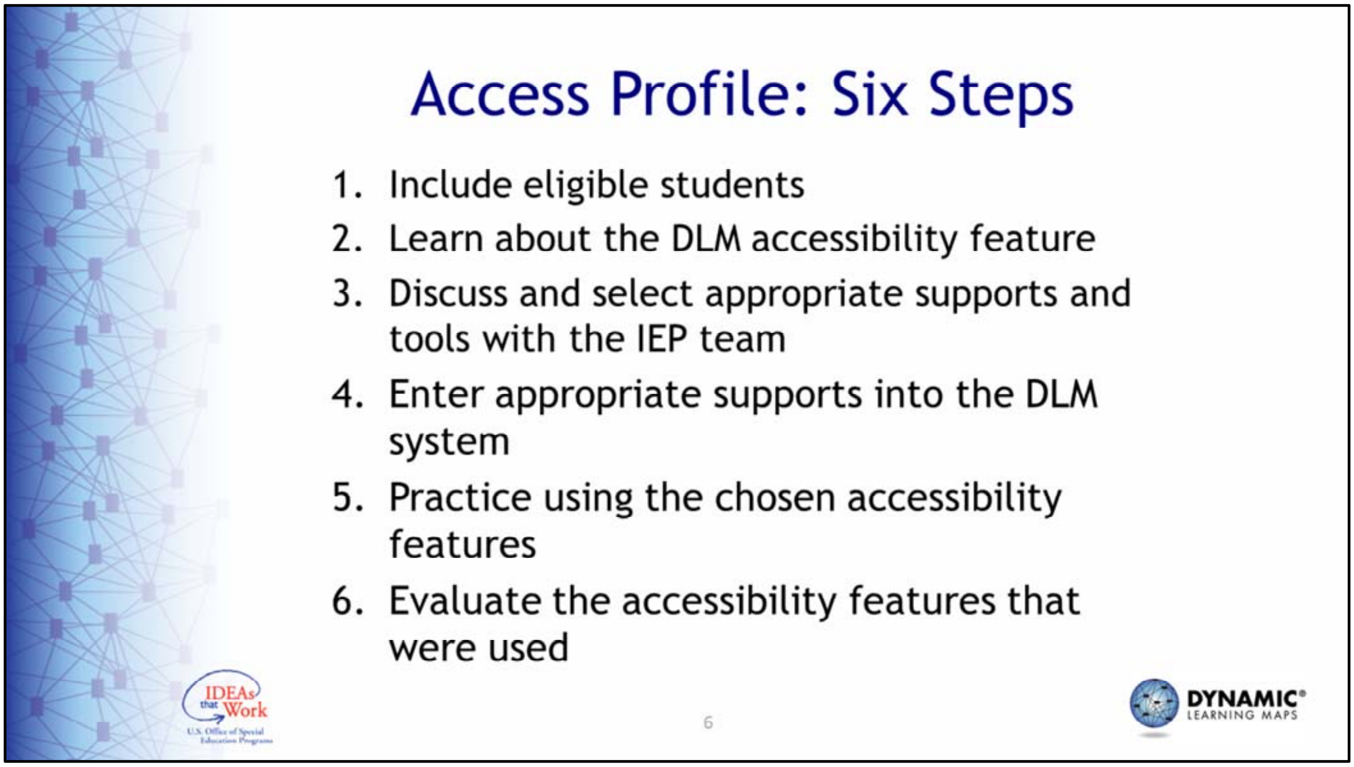
The DLM technology platform is called KITE™. The KITE platform has embedded features to increase accessibility and enrich the interaction between students and the content.



Information from the Personal Needs and Preferences Profile and the First Contact survey are combined by the system into a student's Personal Learning Profile. This information allows the system to customize each student's experience and determine which test to deliver. The Personal Needs and Preferences profile, called the Access Profile in Educator Portal, defines how the student will interact with the assessment. The Access Profile also defines supports provided outside the system such as braille, language translation, and human read aloud. The Access Profile must be completed before testing begins, but it can be changed as student's needs change.

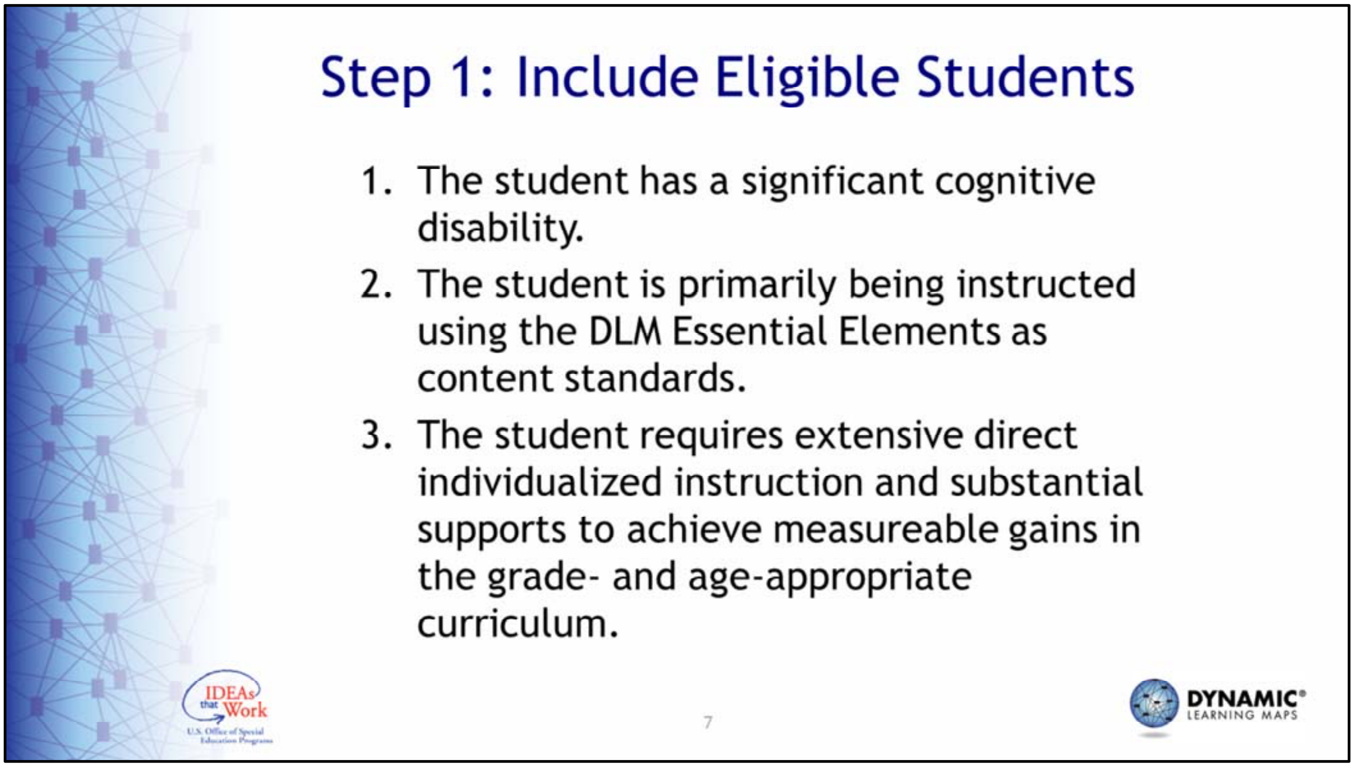
The First Contact survey is also completed prior to the assessment. The First Contact survey determines the best linkage level for the first time the student uses the system. Remember that the linkage levels reflect different levels of content complexity relative to the grade-level Essential Element. The First Contact survey includes questions about a student's sensory and motor characteristics, computer access, attention, communication and academic skills. The First Contact survey is also completed before testing begins.

Detailed instructions on how to fill out the Personal Needs and Preference Profile, Access Profile, and the First Contact survey are located in the Test Administration Manual.



DLM recommends a six-step process for IEP teams to use in the selection, administration, and evaluation of the DLM accessibility features. These steps are:

1. Include eligible students
2. Learn about the DLM accessibility feature
3. Discuss and select appropriate supports and tools with the IEP team
4. Enter appropriate supports into the DLM system
4. Practice using the chosen accessibility features
5. Evaluate the accessibility features that were used.



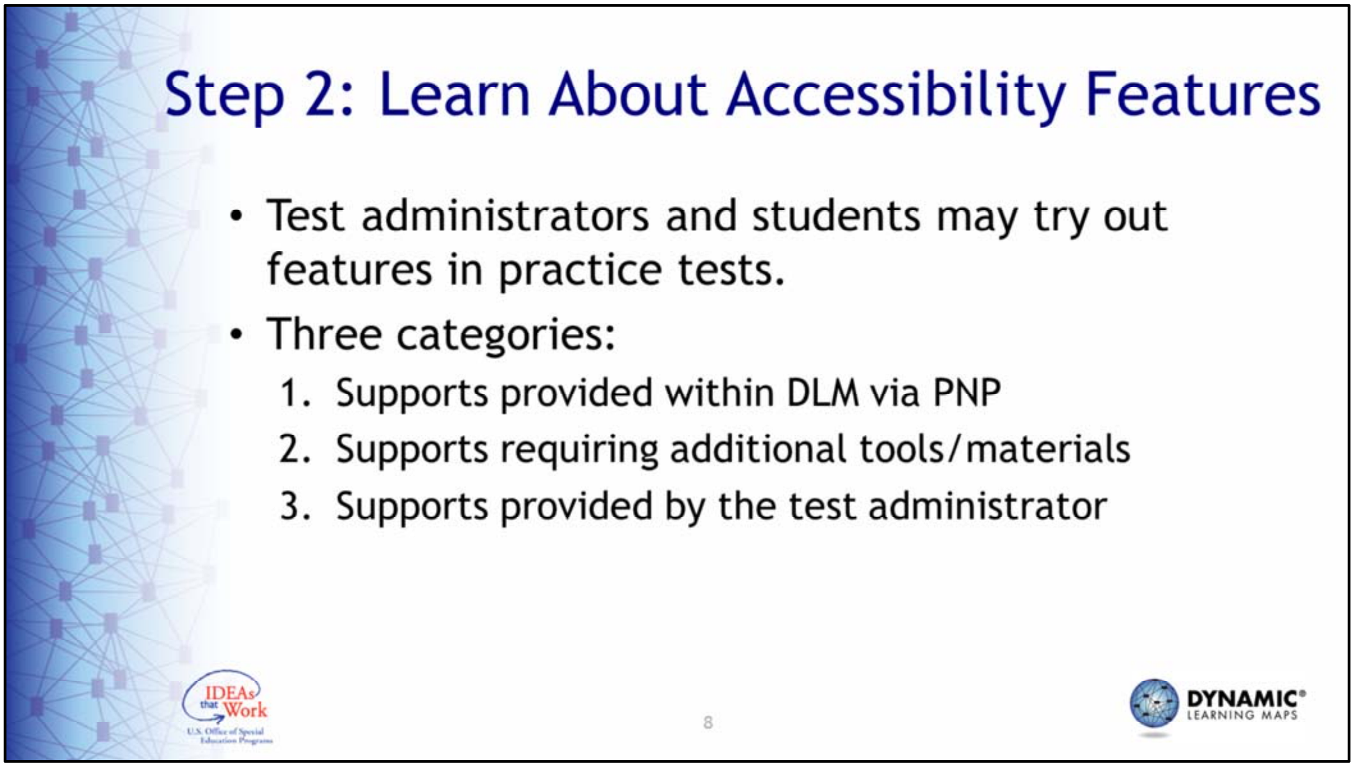
Step 1 - Include eligible students in the DLM assessment. DLM provides the following three general eligibility guidelines for participation in the DLM Alternate Assessment.

Criterion 1: The student has a significant cognitive disability.

Criterion 2: The student is primarily being instructed using the Essential Elements as content standards.

Criterion 3: The student requires extensive direct individualized instruction and substantial supports to achieve measurable gains in the grade- and age-appropriate standards.

Individual states may set additional eligibility criteria that help establish which students are eligible to take the DLM Alternate Assessment. IEP teams should refer to their state department of education for further guidance in this area.



Step 2 – Learn about accessibility features provided in DLM assessments. Test administrators and students may try out these features in practice tests to determine what works best for each student.

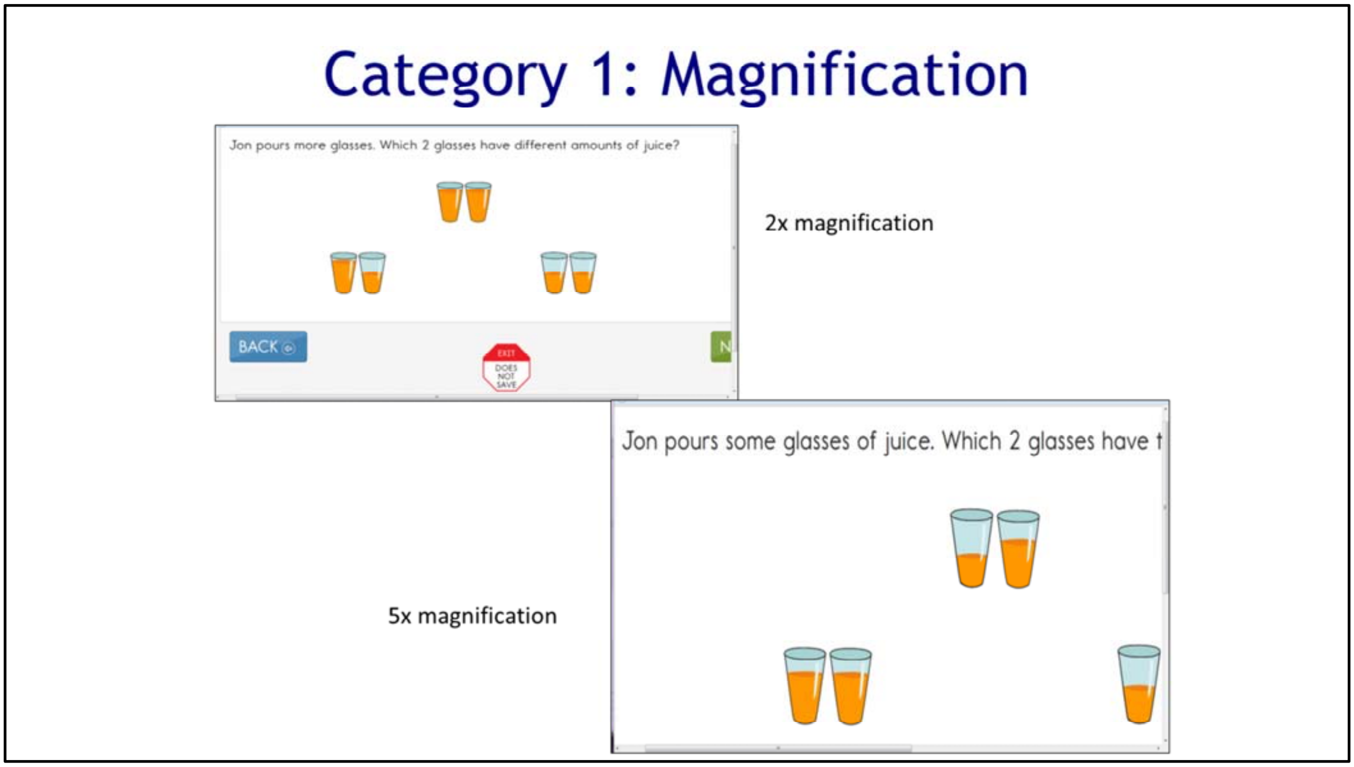
In DLM there are three categories of accessibility features.

The first are the features that are activated in the KITE system using information provided about the students in the Personal Needs and Preferences Profile. The second category includes supports that that require additional tools or materials. The third category of supports are those that are provided by the test administrator outside of the KITE system. The features in the first two categories should all be tested with students using practice testlets prior to administering the assessment.

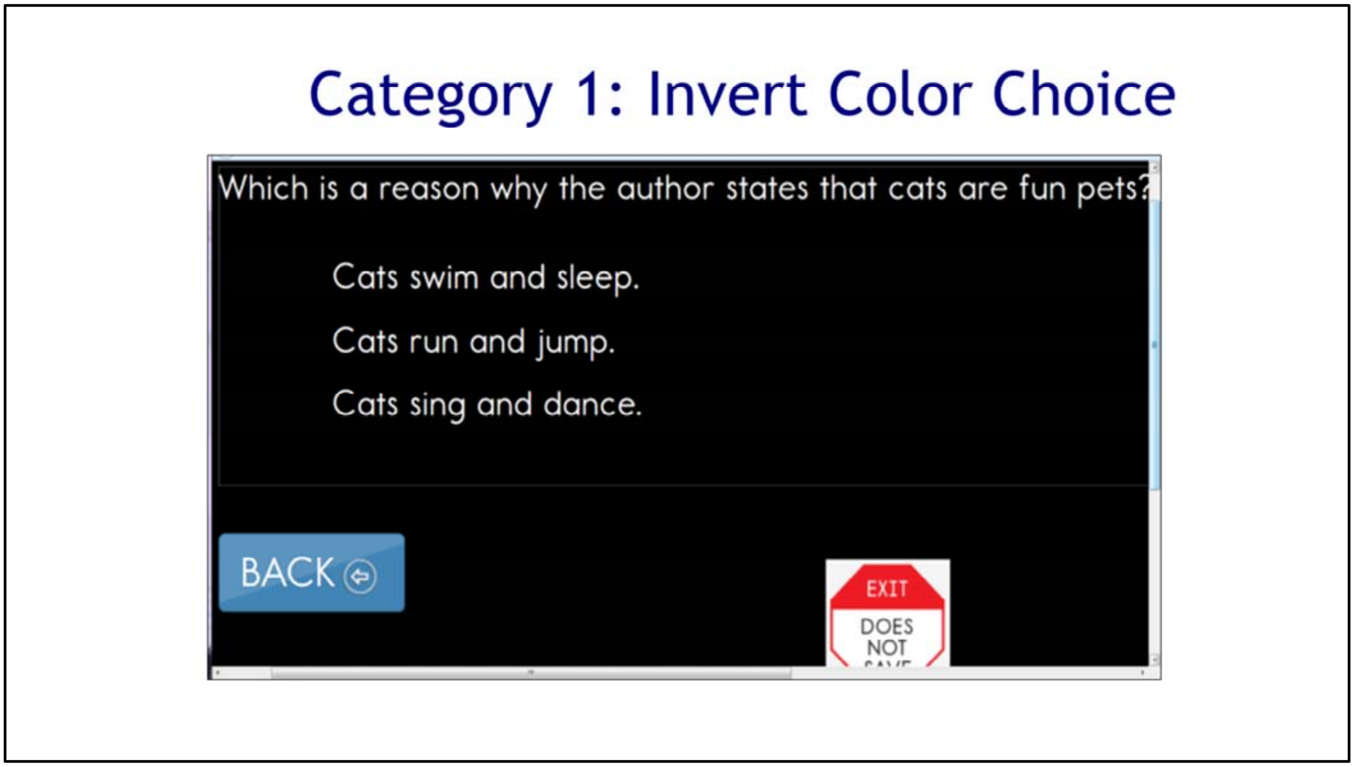
Category 1: Supports Provided in KITE via the Personal Needs and Preferences Profile

Accessibility Feature	Supports Provided Within DLM via PNP
Category 1	
Magnification	X
Invert Color Choice	X
Color Contrast	X
Overlay Color	X
Read Aloud with highlighting – Text to Speech (TTS)	
• Text Only	X
• Text & Graphics	X
• Graphics Only	X
• Nonvisual	X

Category 1 includes options that change the computer display. They include Magnification, Inverted Color Choice, Color Contrast, Overlay Color, and various Read Aloud options. When Read Aloud is selected, further options are provided regarding which information should be read aloud. Descriptions about how to select supports provided by the Personal Needs and Preferences Profile are found in the Accessibility Manual. Educators are advised to test all options in advance to make sure they are compatible and provide the best access for students.

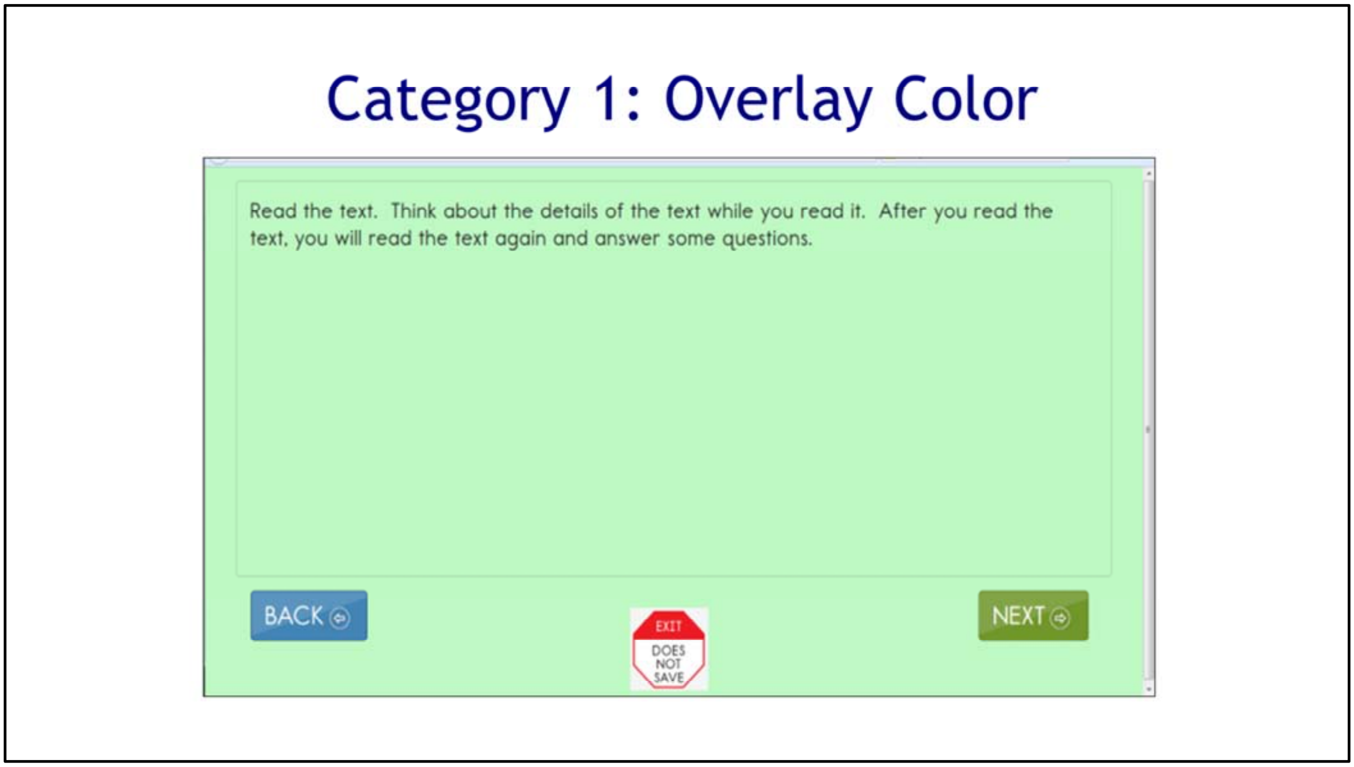


When Magnification is selected, the whole screen is zoomed in. Test administrators can choose to magnify two, three, four, or five times the original size. The example here shows the screen magnified two times on top and then five times on the bottom. It is important to note that magnification often means that the entire item is no longer be viewable on the screen and scrolling may be required.

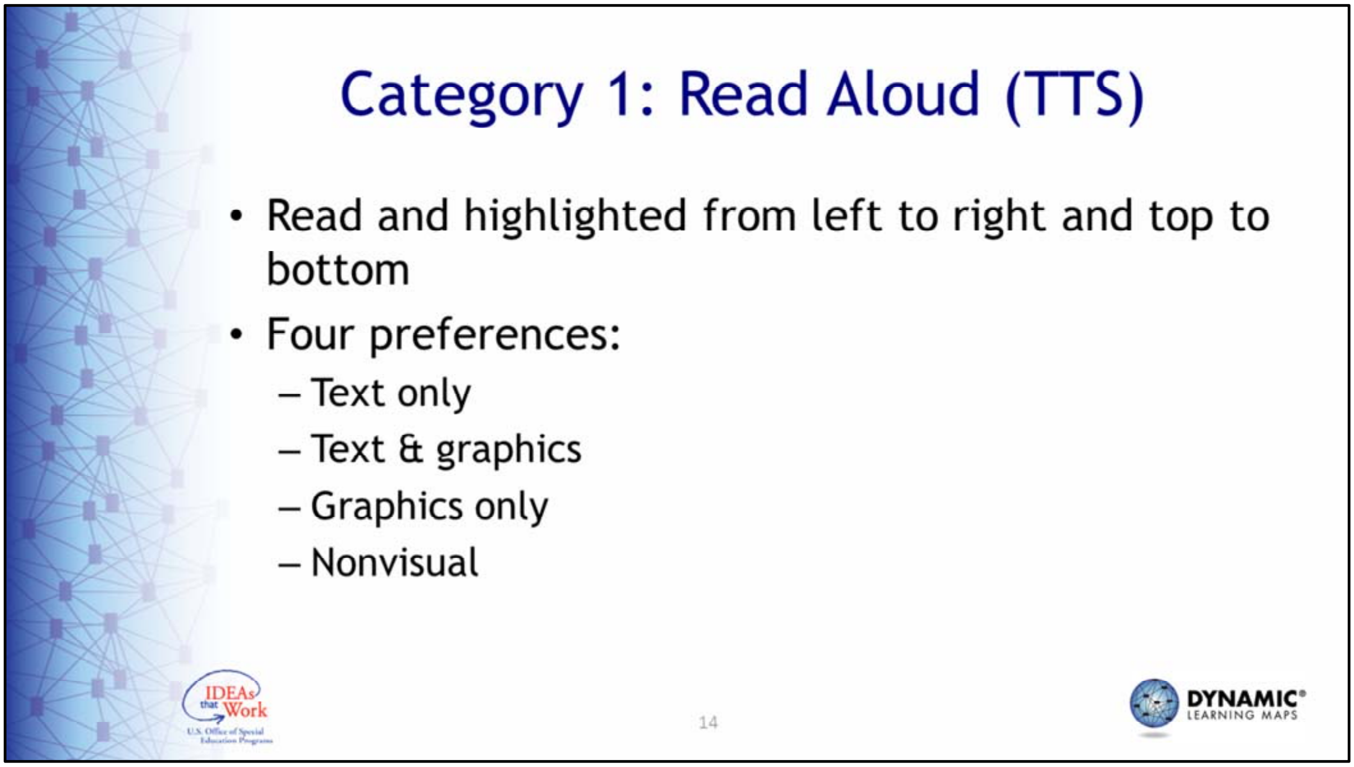


When the Invert Color Choice feature is selected, the background is black and the font is white or gray. Shown here is an example of Invert Color Choice at four times magnification.

When the Color Contrast feature is activated, the background and font color change. The options are white background with green or red font and black background with gray or yellow font. The image here is an example of the white background with green font.



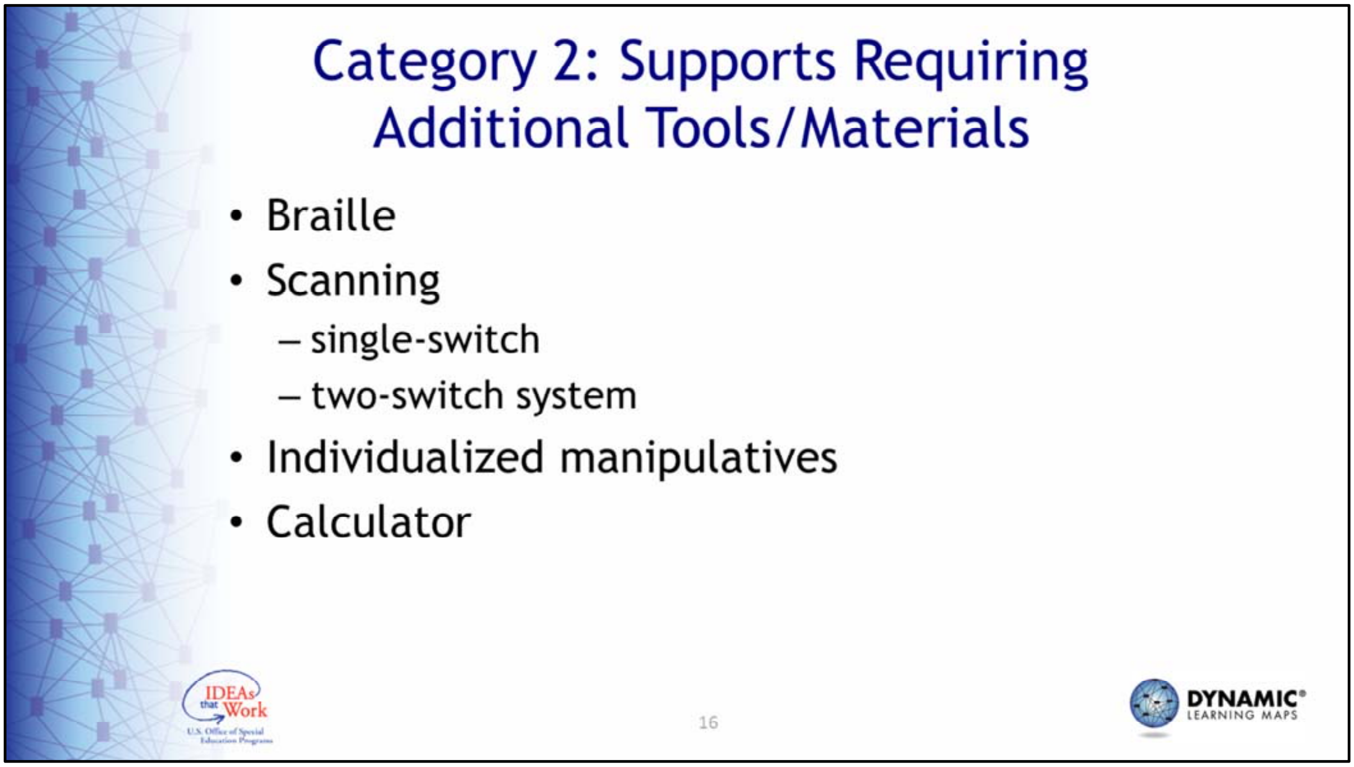
The final visual feature available is the use of an Overlay Color. In Overlay Color, the background overlay color options are blue, green, pink, gray, and yellow. The default is white. The font remains black regardless of which color overlay is selected. This is an example of the overlay color in green.



There are several types of Text to Speech or Computer Read Aloud options. When Computer Read Aloud is selected, the text is highlighted as it is read. The team decides if only the text should be read aloud and/or if the student also needs to hear descriptions of the graphics on the screen. This would be the case for students with significant visual impairments who need to hear graphic descriptions. Nonvisual is intended to be for students who have no vision. This option provides audio information regarding all text and images on the screen as well as audio information about the layout of the page and navigation tools.

Category 1: Read Aloud (TTS)

If the Text To Speech feature is available and chosen for a student in PNP, the READ button appears at the bottom of the screen. Here, a red arrow is pointing to the read aloud button.

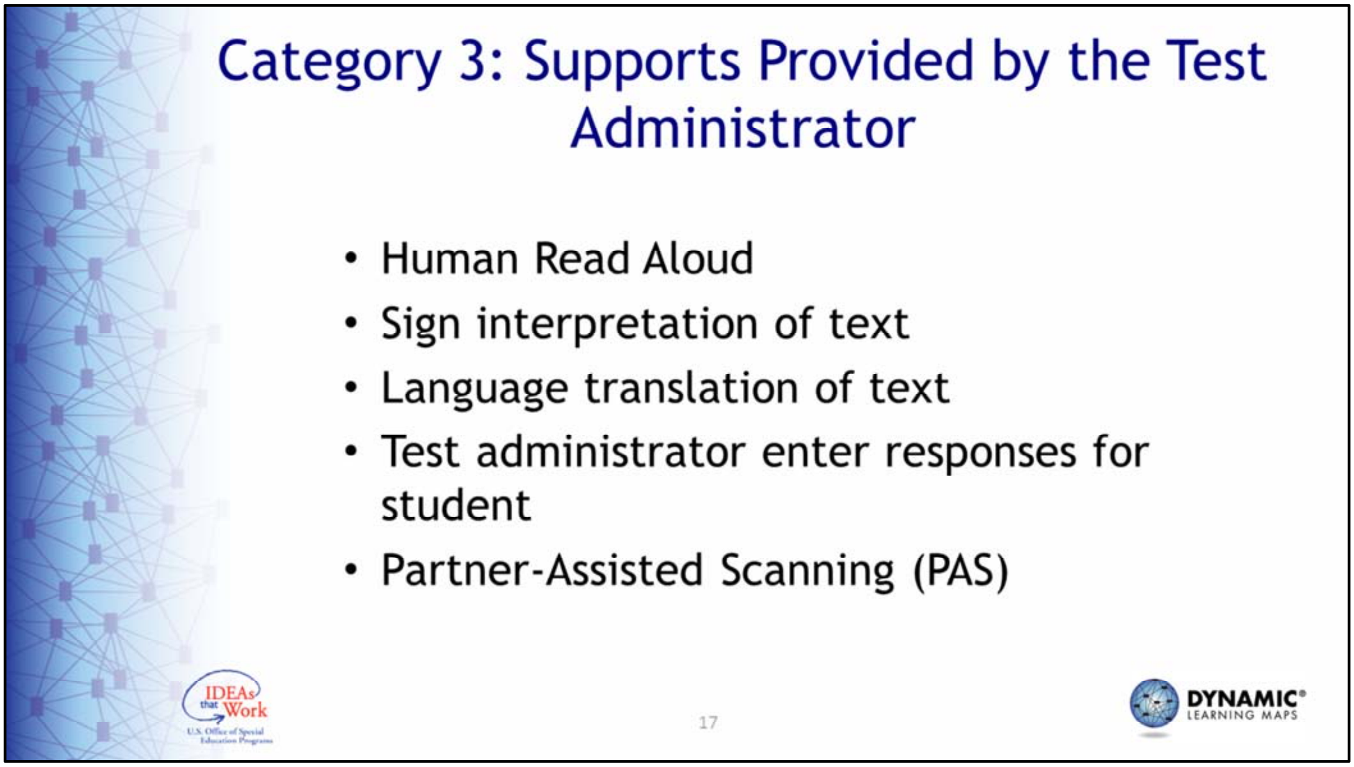


Category 2 includes Supports Requiring Additional Tools/Materials. These supports include braille, switches to support scanning, which include single-switch and two-switch access, ,the use of individualized manipulatives, and the use of a calculator. Although, single-switch access is the only feature on this list that changes the way the item accessed in KITE, each is recorded in the Personal Needs and Preferences Profile.

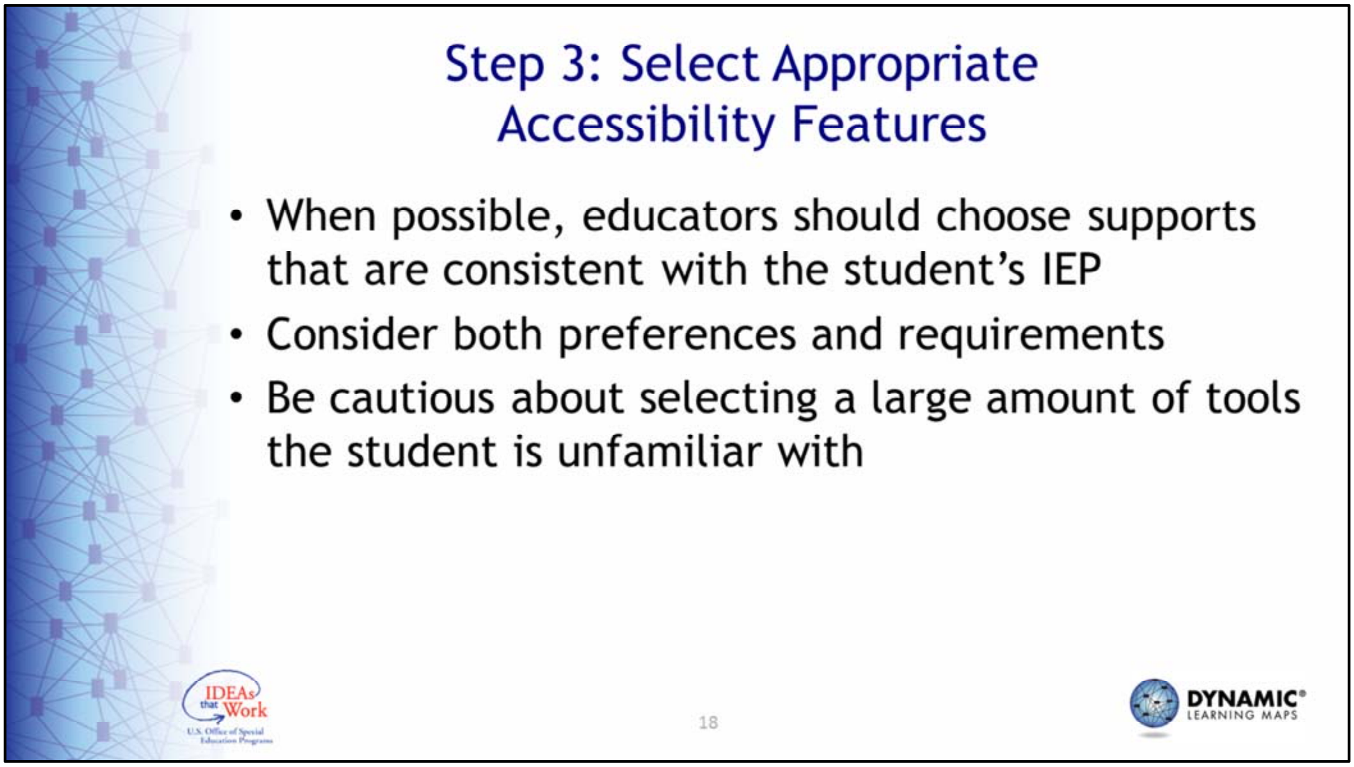
Access to braille ready files requires advanced planning. If you have a student who requires braille, be sure to seek information on accessing those files as early as possible.

Single-switch scanning requires a switch and switch interface set to emulate the Enter key on the keyboard. Educators set specifics for single-switch scanning in the Personal Needs and Preferences or Access profile. Two-switch scanning requires a switch interface set to emulate the Tab and Enter keys on the keyboard. For more information about scanning and using other familiar assistive technologies or adaptive equipment, please see the Accessibility Manual.

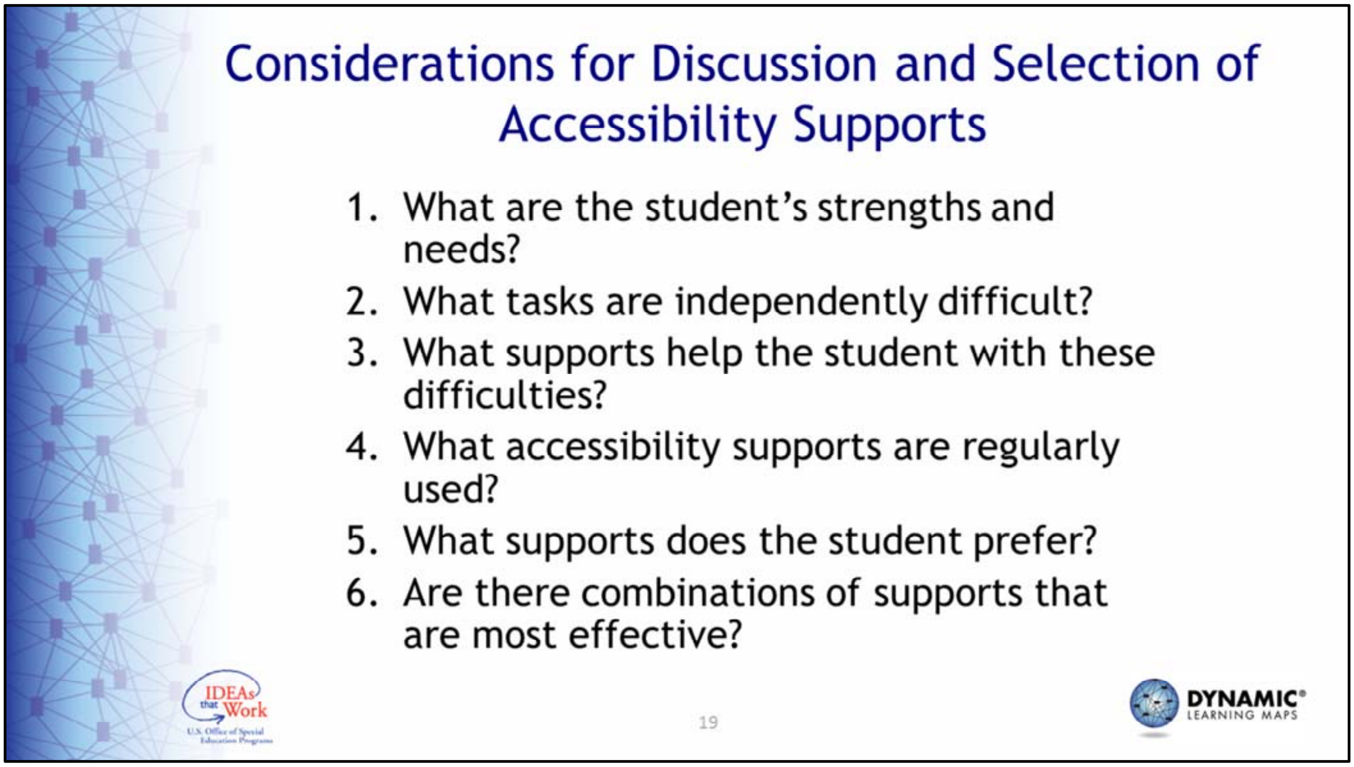
Throughout the DLM assessment, educators may change manipulatives to best meet the needs of the students being assessed. In the few cases where this is not allowable, the exception is clearly indicated on the Testlet Information Page. Additionally, students may use calculators for almost all items on the DLM assessment. In the few cases where a calculator is not allowable, the exception is clearly indicated on the Testlet Information Page. For more information about the use of manipulatives that are familiar to students and calculators, consult the Test Administration Manual.



Category 3 supports are provided by the test administrator. These supports all require the active engagement of the test administrator during testing. For example, the test administrator might read aloud all of the text on the page because the student does not respond well to the computerized voice. The test administrator might sign the content to the student using a sign system that is meaningful to the student. For students who are English language learners or who respond best to a language other than English, test administrators may translate the text for the student if this practice is allowed by their state. Test administrators are also allowed to enter the responses selected by students when students are unable to independently record their responses in the system. Finally, test administrators may use Partner-Assisted Scanning to present the answer options to students who cannot use switches to scan independently and accurately.

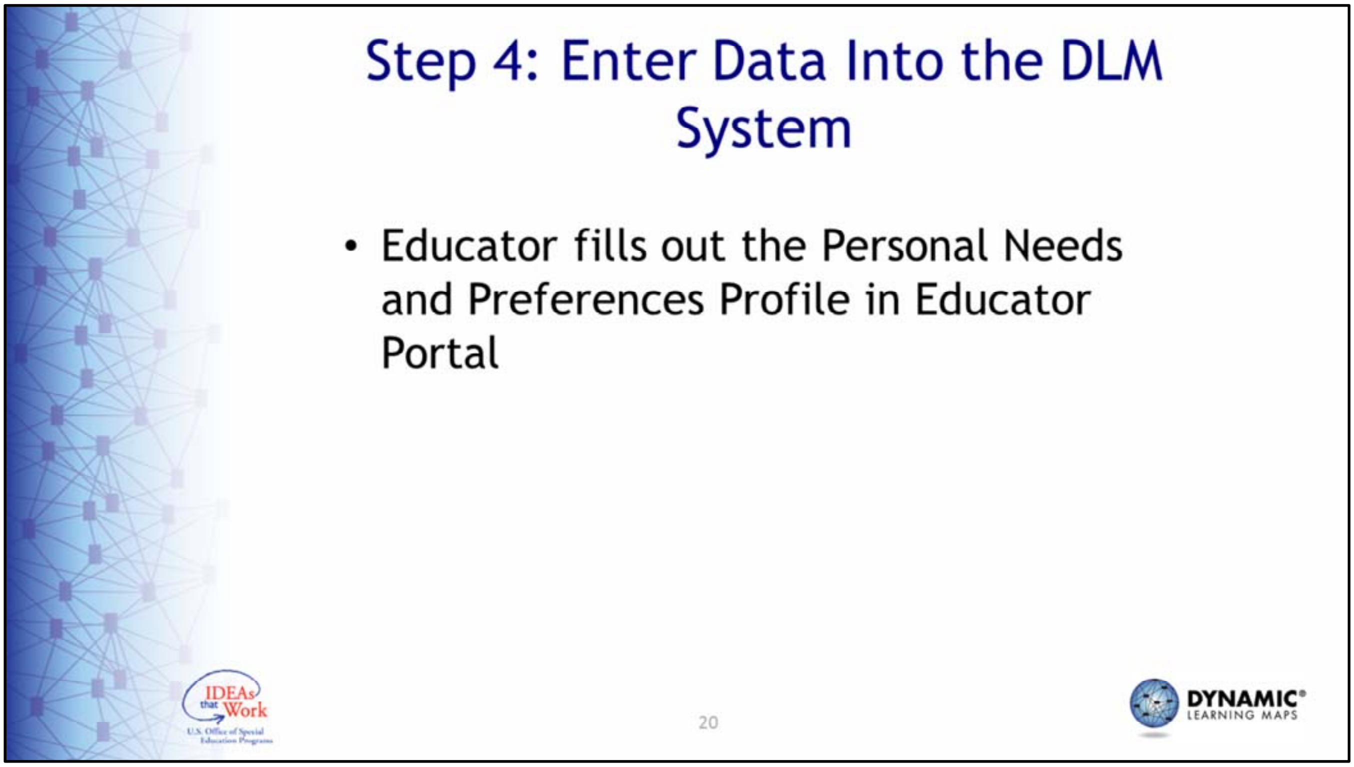


After teams have ensured that the student is eligible to participate in the alternate assessment and taken time to understand the accessibility options available in the DLM system, the team must select the options that each student will use. Educators should choose supports that are required by the student's current IEP to address the student's needs during the assessment. In addition, supports based on student's preference should be considered. For example, students may prefer a different font color and should have the option to use the preferred color during the DLM assessment even if the color is not required to access the system. The team should be cautious about selecting too many features. Furthermore, the team should avoid features and supports that are not familiar to the student. Access to too many options or unfamiliar options may be distracting or detrimental to the student. Consult you state's appendix to the Accessibility Manual for more information.

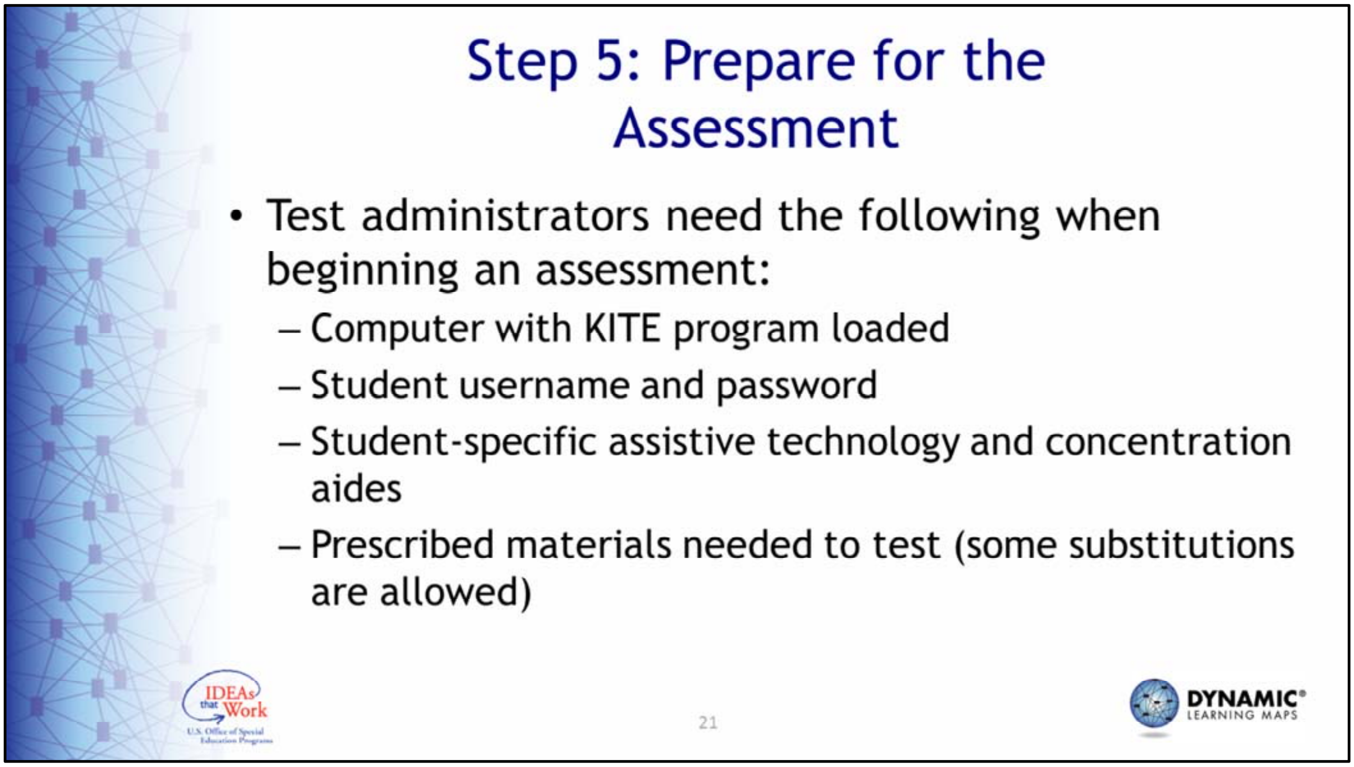


Guiding questions are available in the Accessibility Guide to assist a student's team in making decisions related to supports for the DLM assessments. Examples of these questions include:

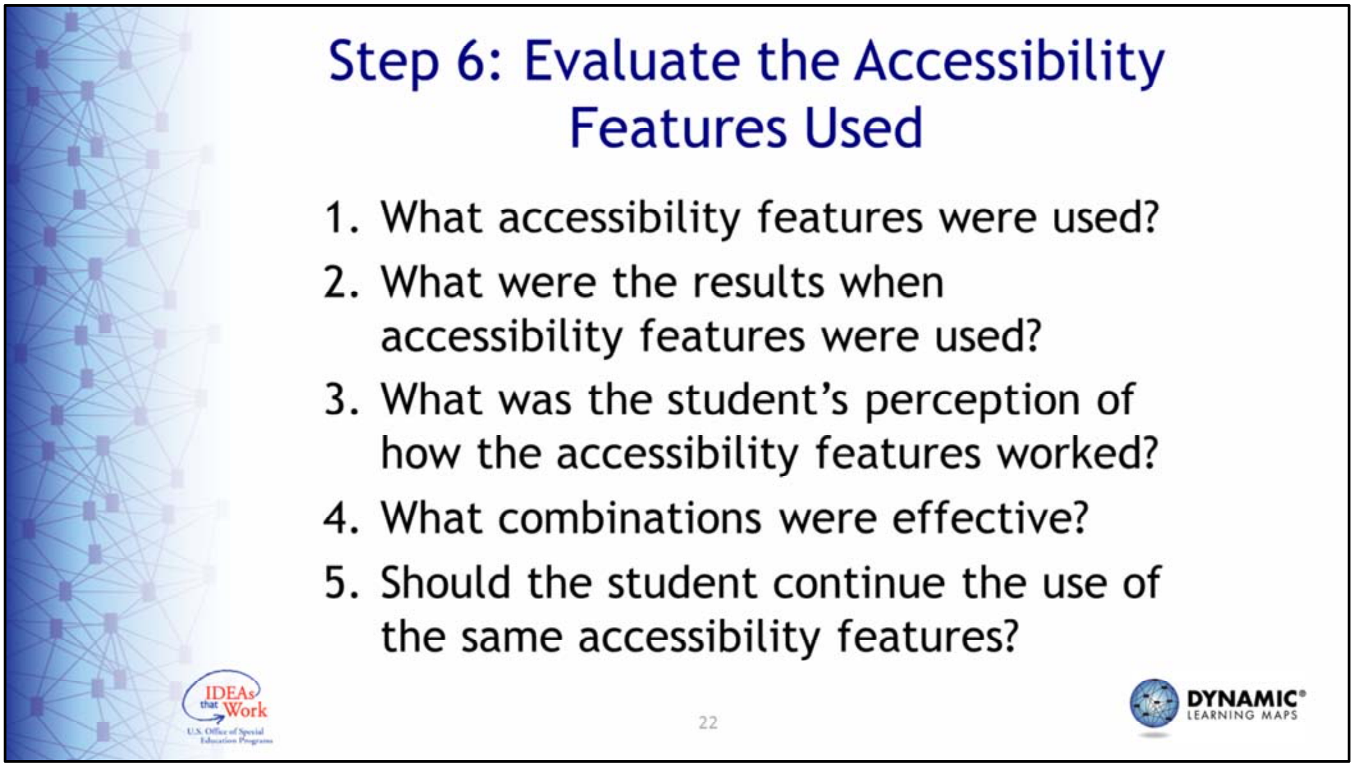
(1) What are the student's learning strengths and needs?
(2) What tasks are difficult for the student to complete independently?
(3) What current supports help the student with these difficulties?
(4) What accessibility supports are regularly used by the student during instruction and assessments in the classroom?
(5) What supports does the student prefer?
(6) Are there combinations of supports that are most effective?



After identifying the student, considering support needs and preferences, and determining what is appropriate, the information must be entered into the system. The Personal Needs and Preferences or Access Profile is completed in Educator Portal. Step-by-step instructions for Step 4 are available in the Accessibility Manual. If a student is missing from the list of students in Educator Portal, contact the data steward for further assistance.



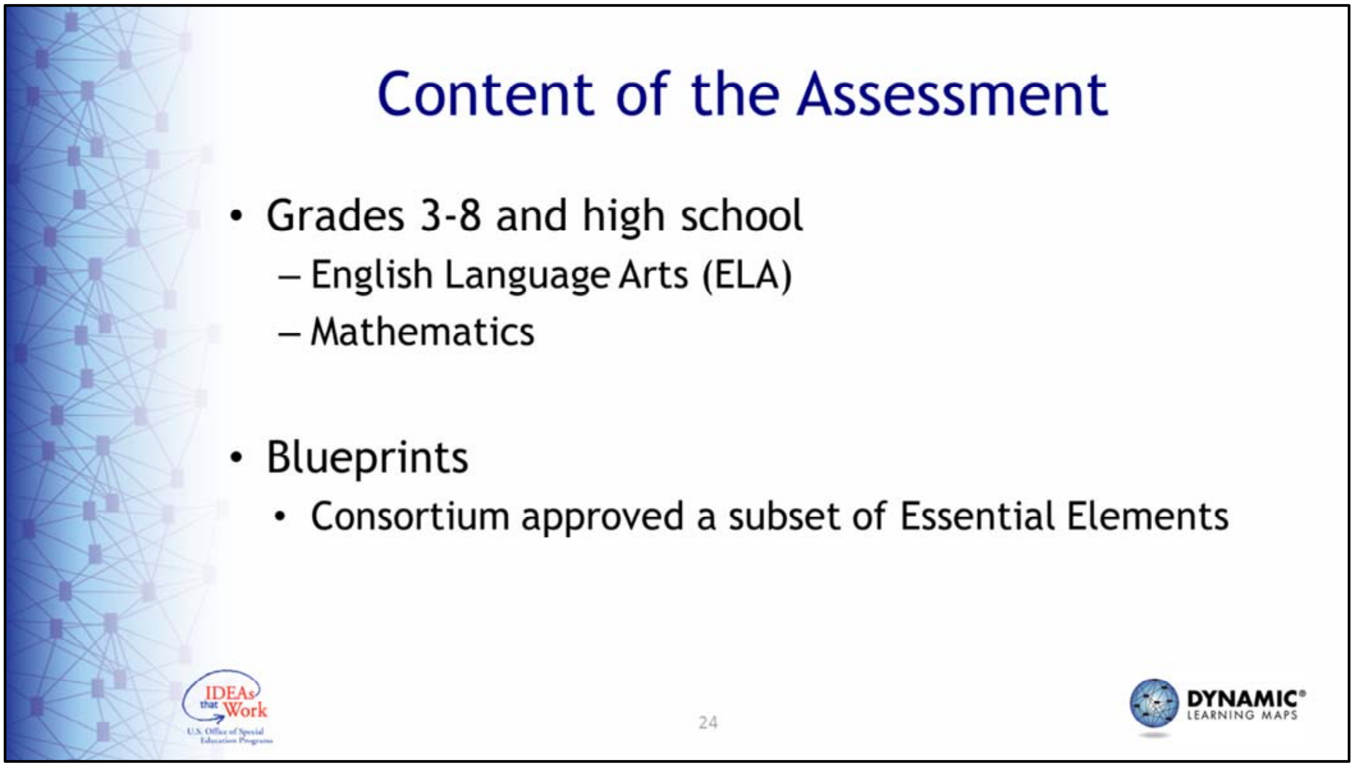
Step 5 involves the actual preparation to administer the assessment. Educators must ensure that they have access to a computer or iPad that has been set up to work with KITE during the assessment. They'll need to make sure they have accurate usernames and passwords to use when signing on to work with an individual student. Each student has a unique username and password in the KITE system. The test administrator must also make sure that all student-specific assistive technologies, such as switches, are working with KITE, and that any objects the student uses to increase concentration are available. Finally, educators must also log into Educator Portal to retrieve specific information about objects and materials needed to test a student before they begin a testlet. Specific information about Educator Portal is provided in the next module. Guidance about substitute materials is provided in the Test Administration Manual.



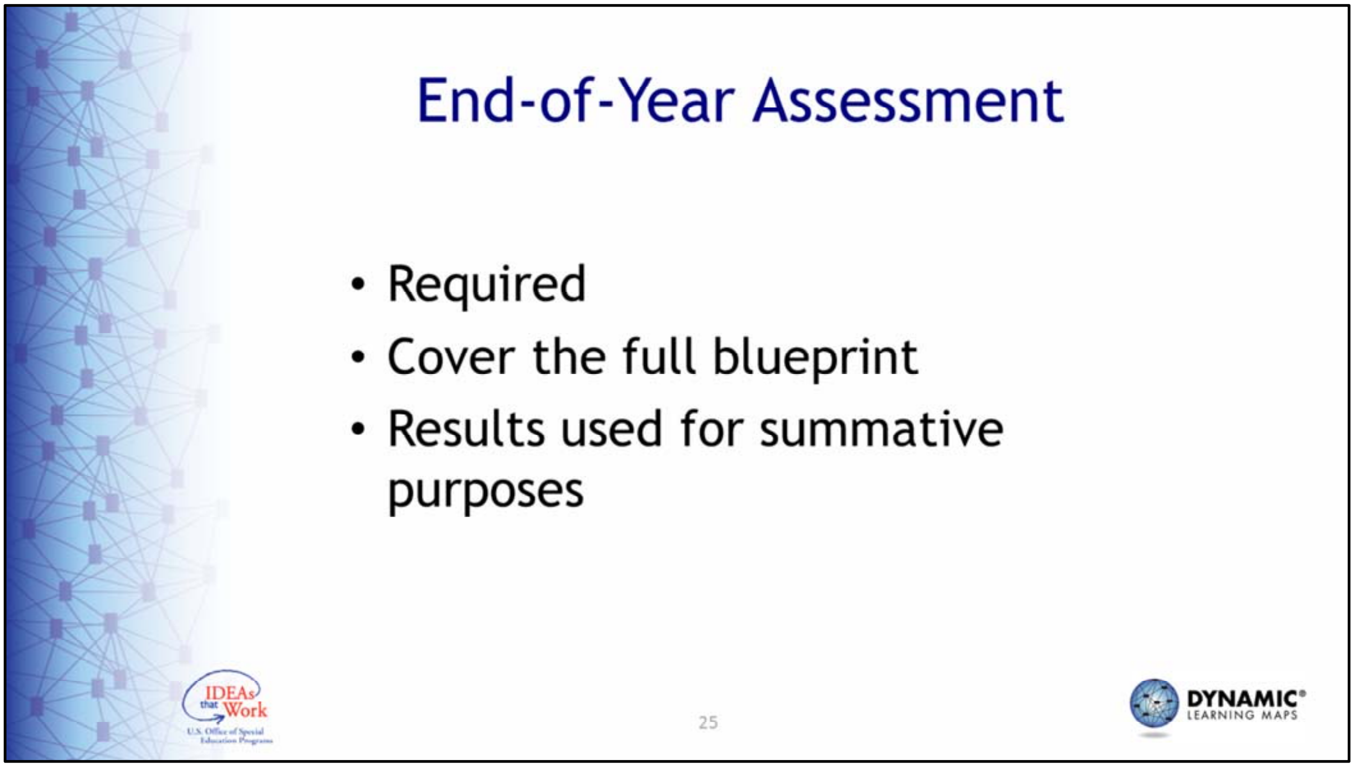
Step 6 happens after testing and completes the feedback loop for IEP teams. After the student completes all testlets in both content areas, the IEP team needs to evaluate the overall use and success of the supports selected. This step allows educators to improve support selection for future assessments. Again, a list of guiding questions is available in the Accessibility Manual. Some of those questions are:

(1) What accessibility features were used during the assessment?
(2) What were the results when the selected accessibility features were used?
(3) What was the student's perception of how well the accessibility features worked?
(4) What combinations of accessibility features were effective?
(5) Should the student continue to use the same accessibility features in the future?

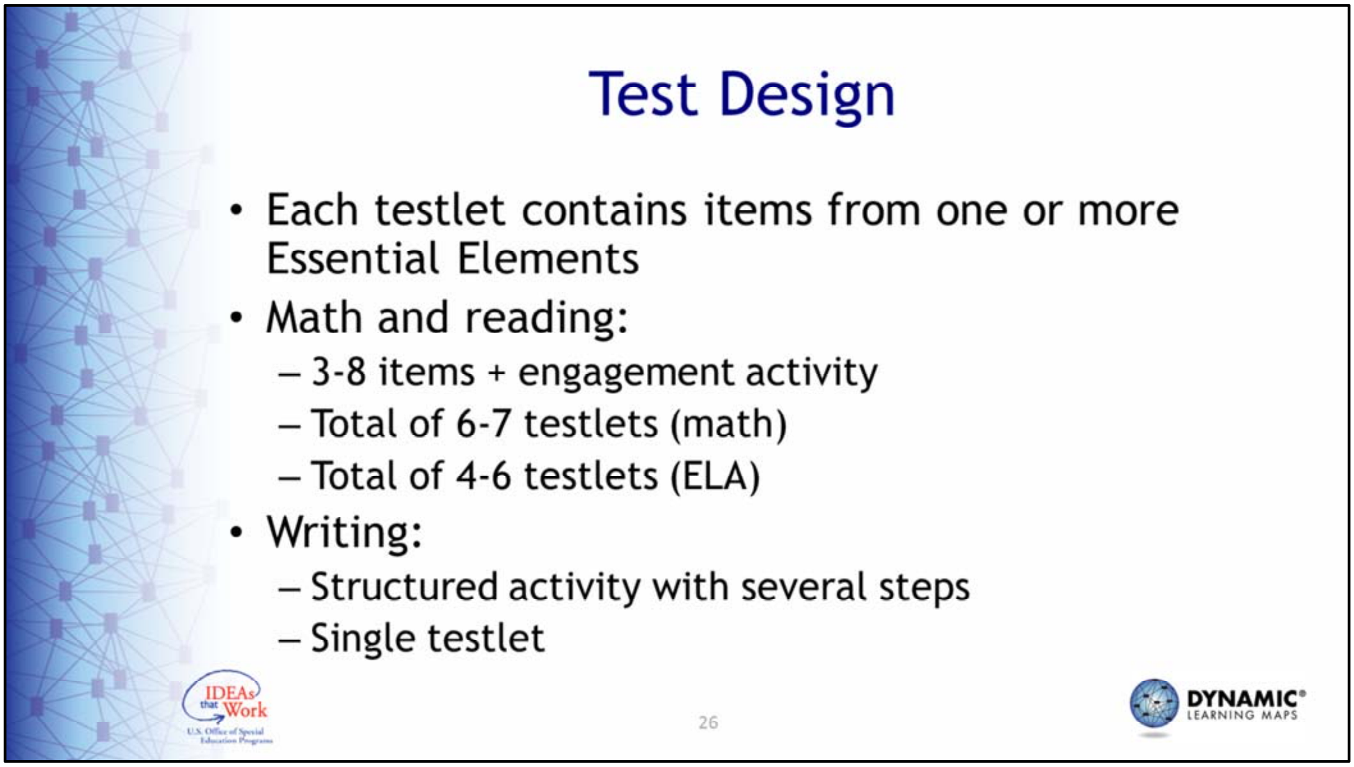
Pause for Activity



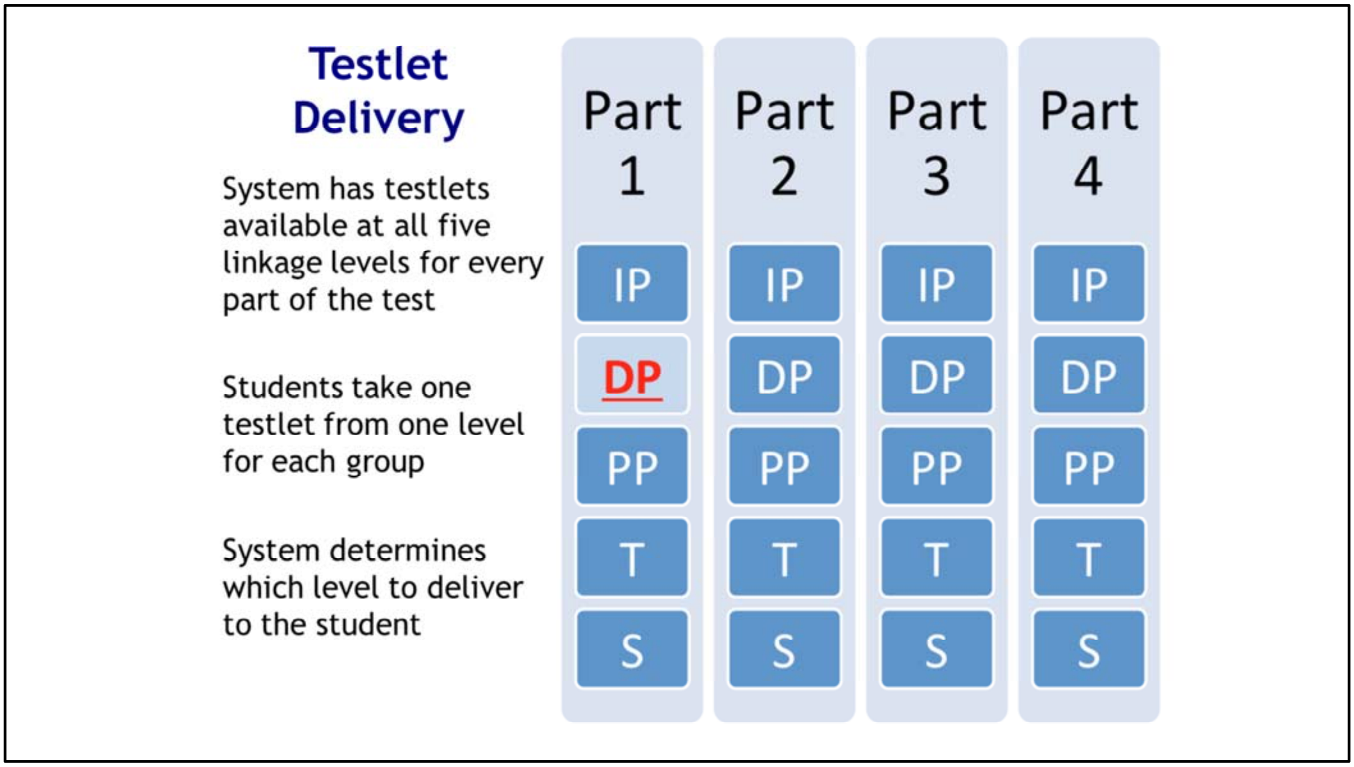
The DLM assessment in the content areas of English language arts and mathematics are given each year in grades 3-8 and high school. States have different requirements for high school, so it is important to refer to your state's requirements to determine when your high school students are tested. The test blueprint indicates which Essential Elements will be assessed at each grade level. States in the DLM Consortium decided which Essential Elements would be assessed in each grade or course and subject. In mathematics, between 8 and 16 Essential Elements are assessed in each grade. In English language arts, there are 16 to 18 Essential Elements in reading, writing, and language that are assessed in each grade. In states that use end of instruction assessments for certain courses instead of grade-level assessments in high school, there are 12 to 13 Essential Elements assessed in each ELA course and 8 to 9 Essential Elements assessed in each mathematics course.



The DLM assessment system includes two types of assessment. They are the End-of-Year and Instructionally Embedded assessment. In your state, the End-of-Year assessment is required. It is used for summative purposes. Your state has chosen its own window within the consortium-wide window that runs mid-March through early June. In this spring, or end-of-year, window, all students take testlets that cover the whole blueprint. Results reflect the student's performance that academic year.

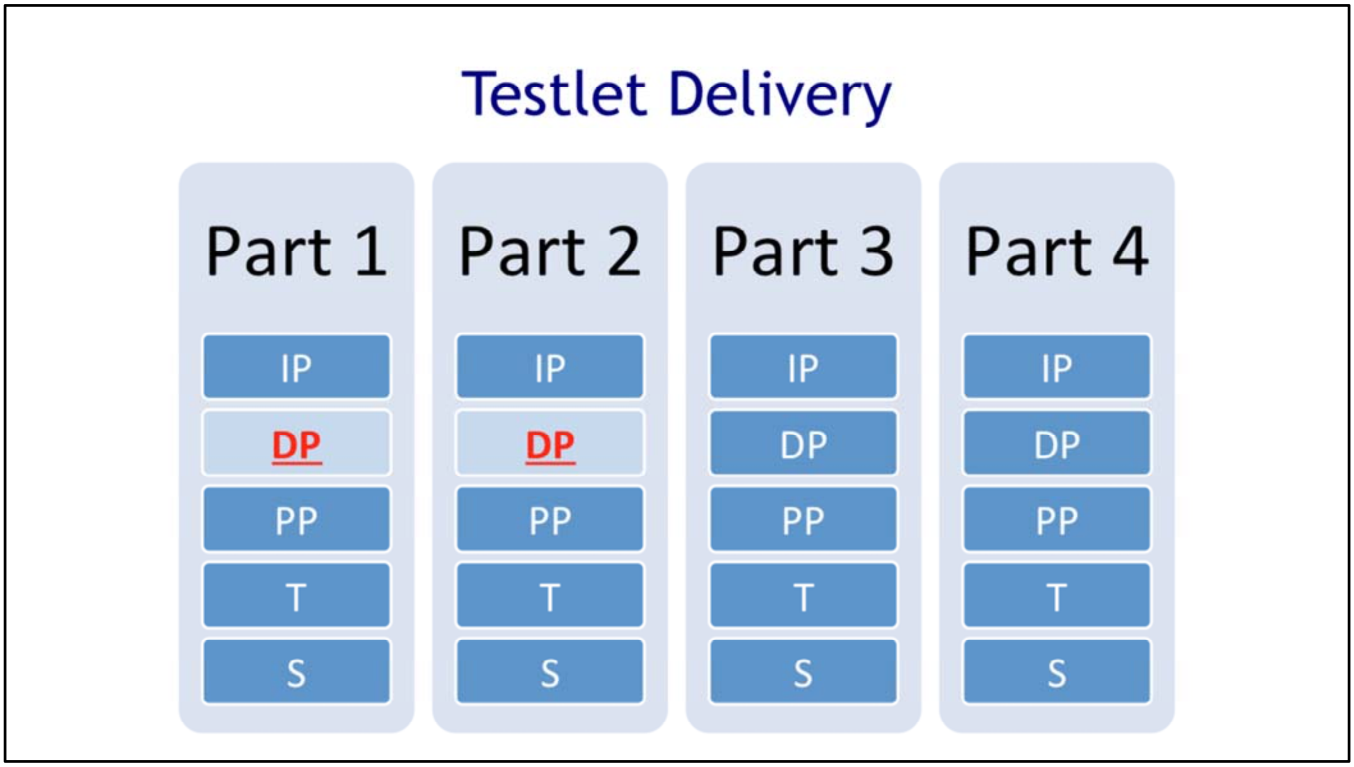


As described in the first module, the assessment is organized in testlets. In the End-of-Year Assessment, each testlet includes items from one or more Essential Elements in the blueprint. Most testlets contain an engagement activity and 3-8 items. Depending on grade level, students are assigned a total of 4-6 testlets in English language arts and 6-7 testlets in math. In addition, there is a single writing testlet at each grade level. High school students who take End of Instruction assessments have a similar number of testlets to take.

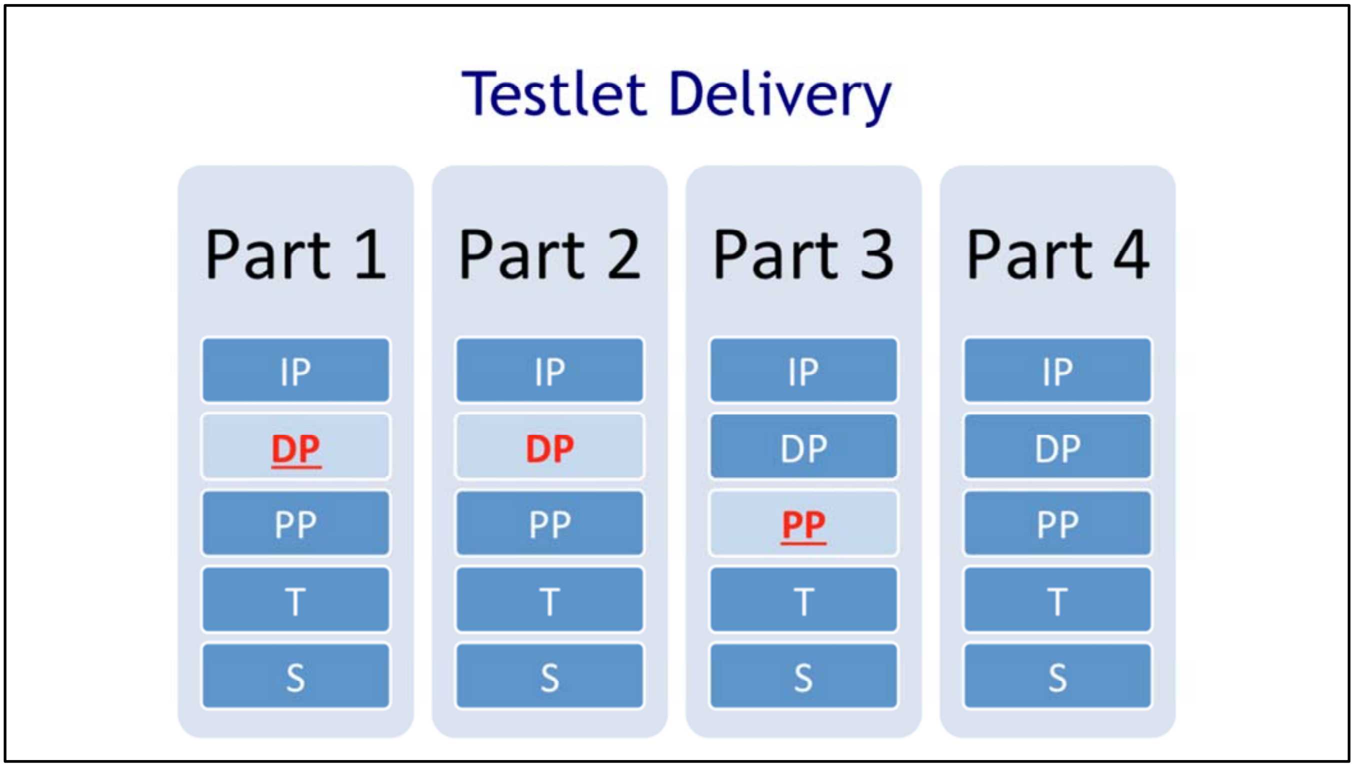


Remember that each student will receive several testlets to make up the whole test – as few as four and as many as seven, depending on the grade and subject. The system has testlets ready at each linkage level. In order to cover the whole test, a student is assigned a testlet at one linkage level for each part of the test. In this simplified example, there are four parts. The student receives only one testlet for each part of the test. The student will never receive two testlets for two different linkage levels for the same part of the test.

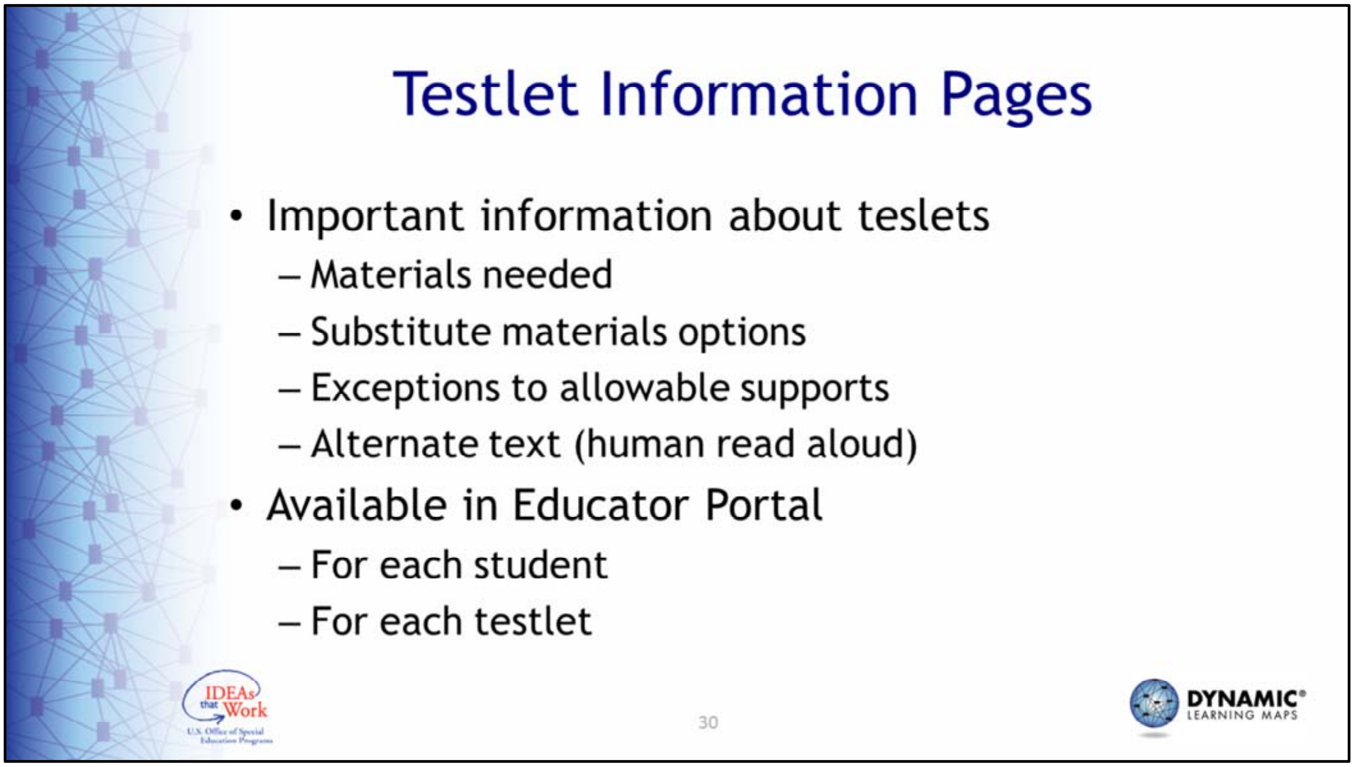
Each testlet is chosen for the student based on information about the student and the learning map. The first testlet is chosen based on the information provided about the student in the First Contact survey. In this example, the information in the First Contact survey leads the system to deliver a testlet at the distal precursor level for the first part of the test.



The second testlet is then assigned based on the student's performance in the first testlet . In this example, the system delivers another Distal Precursor testlet based on all of the available information.



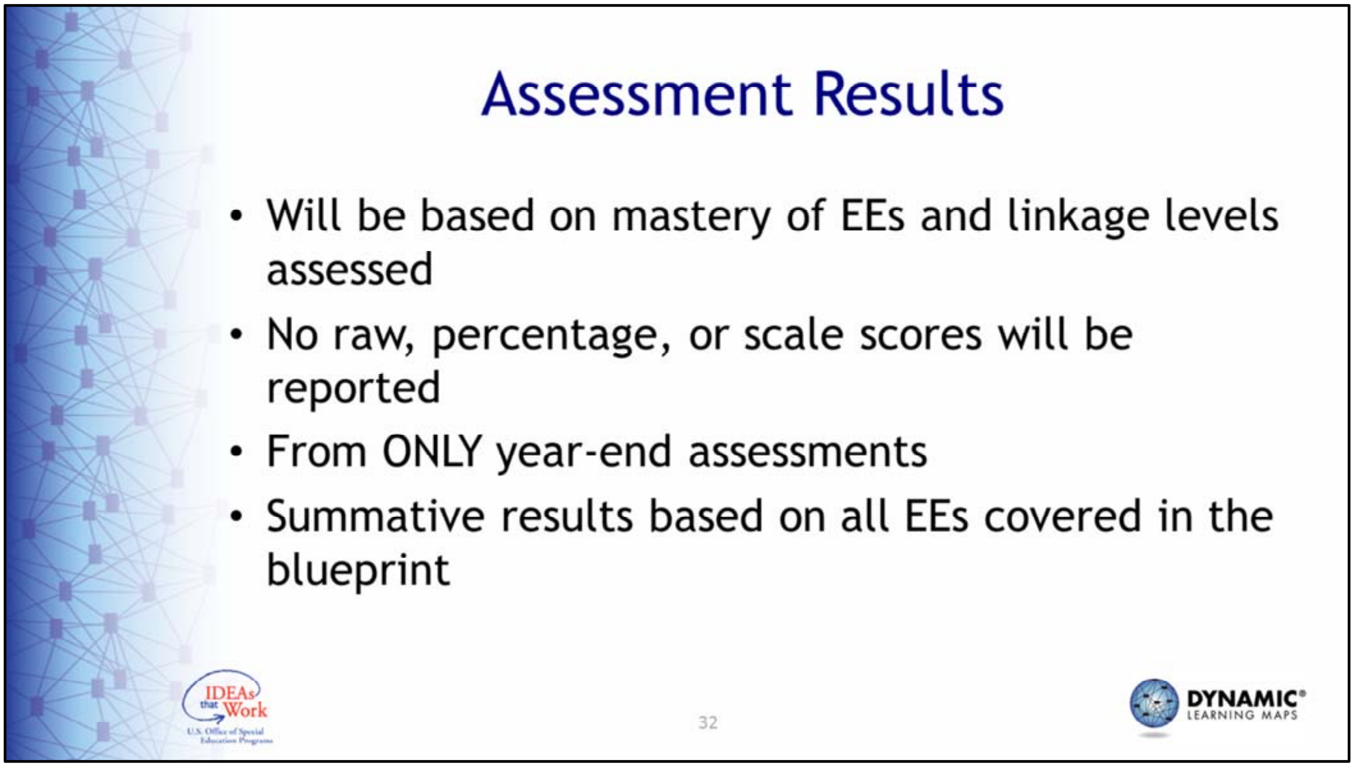
As the student moves to the third testlet, the system has even more information. It delivers a testlet at a more complex linkage level for the next part. In this example, the student's performance on Part 1 and Part 2 leads the system to deliver a testlet for Part 3 at the Proximal Precursor level. The fourth part of the test will be based on additional information provided by the student's responses to Part 3. To learn more about how to monitor which testlets a student has completed and how many are remaining, consult the Test Administration Manual and look for additional supports on each State's Educator's Resource Page on the DLM website.



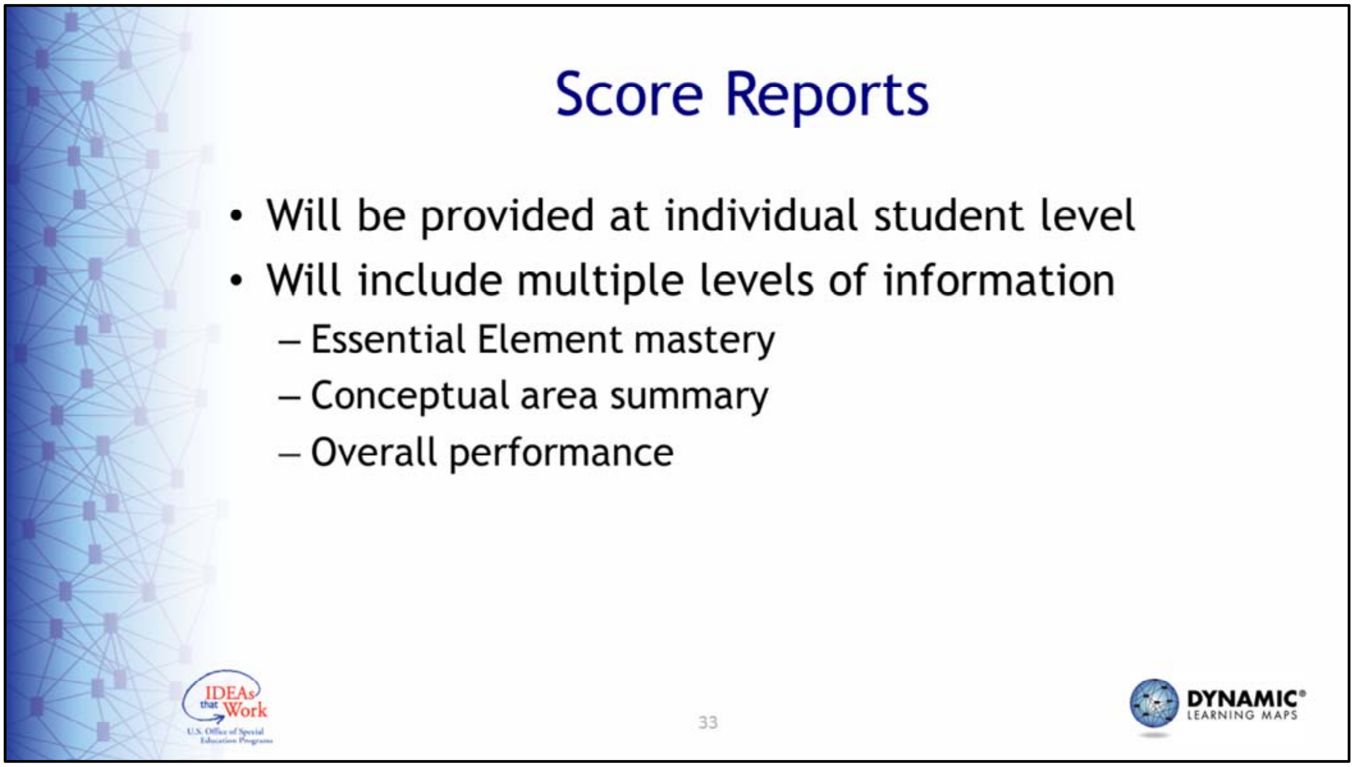
As the student moves through the testlets, Testlet Information Pages (TIPs) provide the test administrator with important information. This includes specific information about the materials needed, whether or not substitute materials are allowable, and specific details regarding exceptions to typically allowable supports. For example, if the student is not allowed to use a calculator or the test administrator must refrain from providing definitions for words, those rules would be clearly states on the Testlet Information Page.

TIPs are available in Educator Portal. Download or print TIPs for each Essential Element tested. When you are ready to test, match the test name on the TIP with the testlet you choose in KITE. At the end of testing, delete TIPs saved electronically and securely shred TIPs that you printed. For step-by-step directions to access TIPs, look for the About Testlet Information Pages guide on your state’s Educator Resource Page on the DLM website.

The way student results are calculated in DLM works differently from traditional alternate assessments.



Student scores will be based on student mastery of Essential Elements at different linkage levels. There are no raw scores, percentages, or scale scores. Summative results are based on the mastery probabilities for all linkage levels in all Essential Elements in which the student was assessed.



DLM provides summative score reports at the individual student level. Each report includes results about mastery of each Essential Element and the associated linkage levels. It also reports results for each conceptual areas in English language arts and mathematics. There are descriptions for each performance level a student may reach.

Each state in the DLM Consortium has different rules about how alternate assessment results are used in accountability systems. DLM provides each state a data file with student results for accountability purposes, including performance levels. States then use that information to make final accountability determinations for educators, schools, and districts.

This concludes required training Module 2. You must successfully complete a quiz assessing your understanding of this module before you can administer any Dynamic Learning Maps Alternate Assessments. Complete this quiz before continuing on to the next module.

DYNAMIC® LEARNING MAPS

DLM Required Training Part 2_YE Assessment

1. All of the DLM® Essential Elements are assessed at each grade level in end-of-year DLM assessment. True **False**

    Feedback if True is Selected: For each grade, a subset of all the available Essential Elements will be tested. This is called the Blueprint. States in the DLM Consortium decided which Essential Elements would be available for assessment in each grade and subject. In mathematics, between 11 and 16 Essential Elements are available for assessment in each grade. In English language arts, there are 17 to 20 Essential Elements in reading, writing, and language that are available for assessment in each grade.

2. The technology platform designed to deliver the DLM assessment is called KITE. **True** False

    Feedback if False is Selected: The DLM technology platform is called KITE™. The KITE platform has embedded features to increase accessibility and enrich the interaction between students and the content.

3. Which of the following is true about the First Contact Survey? (select all that apply)
    a. **The First Contact survey determines the best linkage level for the first time the student uses the system.**
    b. The First Contact Survey only has to be completed one time for each student.
    c. **The First Contact Survey includes questions about a student's sensory and motor characteristics, computer access, attention, communication, and academic skills.**
    d. **The First Contact Survey is completed before testing begins.**

    Feedback if "b" is Selected: The First Contact survey is completed prior to the assessment and updated as needed across the year and from one year to the next. It is important to keep the First Contact survey updated because it determines the best linkage level for the first time the student uses the system each year. Remember that the linkage levels reflect different levels of content complexity relative to the grade-level Essential Elements so the information entered must remain up-to-date. The information gathered through the First Contact survey includes a student's sensory and motor characteristics, computer access, attention, communication and academic skills.

4. Which of the following are recommended by DLM as part of the six-step process for IEP teams to use to select, administer, and evaluate the DLM accessibility features? (select all that apply)
   a. **Include only eligible students**
   b. **Learn about the DLM accessibility features**
   c. **Discuss and select appropriate supports and tools with the IEP team**
   d. Match supports in the DLM system with accommodations listed in the student's IEP
   e. **Practice using the chosen accessibility features**
   f. **Evaluate the accessibility features that were used**

   Feedback if "d" is Selected: After teams have confirmed that a student is eligible to participate in the DLM assessment, they should learn about the accessibility features available in the DLM system and determine appropriate supports and tools for the student. These supports will include appropriate supports that are listed as accommodations in the student's IEP, but they can also include supports that extend beyond those in the IEP that are preferred by the student. Before completing the DLM assessment, teams should provide students with opportunities to practice using the chosen accessibility features to ensure that they are supportive for the student rather than overwhelming or confusing. Finally, teams should evaluate the accessibility features that were used to inform decisions for future administrations of the DLM assessment.

5. Each of the following is a component of the general eligibility guidelines for participation in the DLM Alternate Assessment EXCEPT:
   a. The student has a significant cognitive disability.
   b. The student is primarily being instructed using the Essential Elements as content standards.
   c. **The student cannot be successful with the general assessment even with accommodations.**
   d. The student requires extensive, direct individualized instruction and substantial supports to achieve measurable gains in the grade- and age-appropriate standards.

   Feedback for any wrong answer: DLM provides the following three general eligibility guidelines for participation in the DLM Alternate Assessment. Criterion 1: The student has a significant cognitive disability. Criterion 2: The student is primarily being instructed using the Essential Elements as content standards. Criterion 3: The student requires extensive direct individualized instruction and substantial supports to achieve measurable gains in the grade- and age-appropriate standards. Individual states may set additional eligibility criteria that help establish which students are eligible to take the DLM Alternate Assessment. IEP teams should refer to their state department of education for further guidance in this area.

6. DLM uses a personal learning profile comprised of the Personal Needs and Preference Profile (PNP) and the First Contact Survey to address the unique needs of individual students.

   True False

   Feedback if False is Selected: DLM uses a Personal Learning Profile for individual students to address their unique needs. Educators create the Personal Learning Profile based on their knowledge of student needs, and this information supports the access needs of individual students. The First Contact Survey helps to address the unique needs of individual students by providing information that KITE uses to deliver a testlet at the appropriate level of complexity the first time the student uses the system.

7. Test administrators are advised to test all accessibility options in advance to make sure they provide the best access for students.

   True False

   Feedback if False is Selected: As members of a student's team, test administrators should learn about the accessibility features available in the DLM system and determine appropriate supports and tools for the student. This includes completing practice activities and working with students to complete released testlets to make sure the selected features are beneficial.

8. Which of the following are supports that can be provided by the test administrator during testing? (select all that apply)
   a. **The test administrator may Read Aloud all of the text on the screen.**
   b. **The test administrator may sign the content to the student using a sign system that is meaningful to the student.**
   c. **The test administrator may enter the responses selected by students.**
   d. The test administrator may reduce the number of answer options in an item.

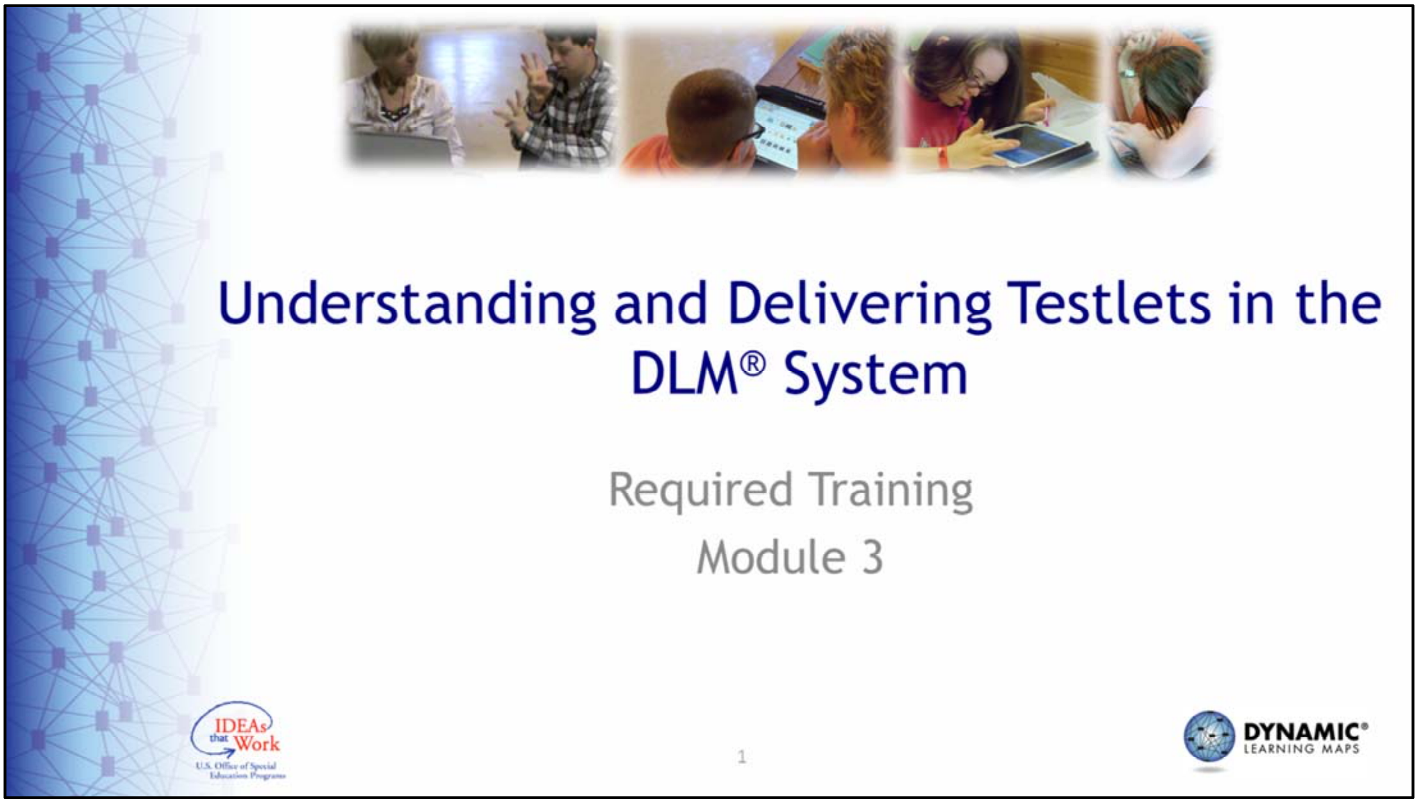
   Feedback if "d" is Selected: While test administrators may not reduce the number of options, add pictures or symbols to printed words in answer options, or reword items, there are numerous ways they can support students. For example, the test administrator might read aloud the text on the page because the student does not respond well to the computerized voice. The test administrator might sign the content to the student using a sign system that is meaningful to the student. Test administrators are also allowed to enter the responses selected by students when students are unable to independently record their responses in the system. Finally, test administrators may use Partner-Assisted Scanning to present the answer options to students who cannot use switches to scan independently and accurately.

9. Testlet Information Pages (TIPs) provide the test administrator with specific information about the materials needed prior to administering a testlet.
    True False

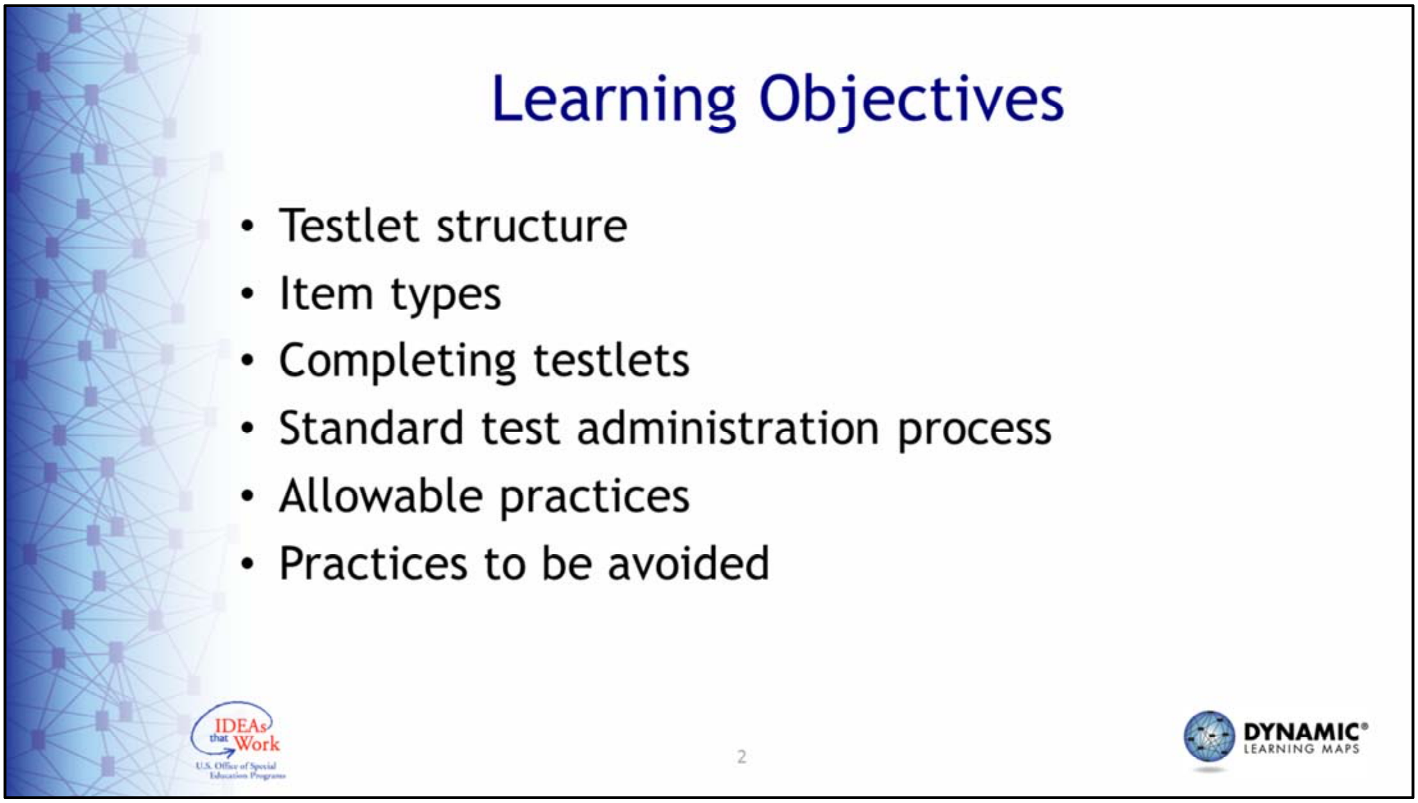
    Feedback if False is Selected: Testlet Information Pages (TIPs) provide the test administrator with important information about each testlet students complete. This includes specific information about the materials needed, whether or not substitute materials are allowable, and specific details regarding exceptions to typically allowable supports. For example, if the student is not allowed to use a calculator or the test administrator must refrain from providing definitions for words, those rules would be clearly states on the Testlet Information Page.

10. All states in the DLM Consortium have the same rules about how alternate assessment results are used in accountability systems.
    True **False**

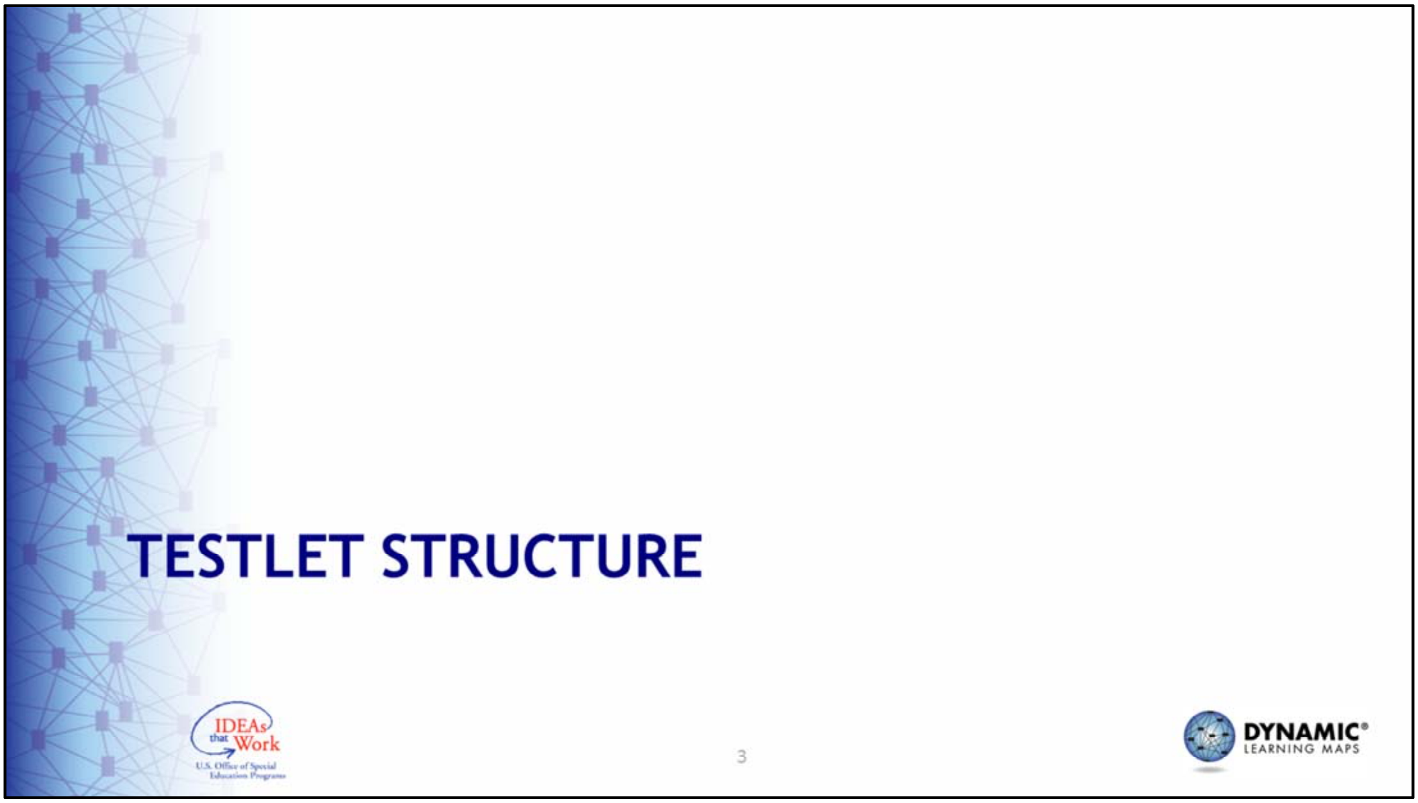
    Feedback if True is Selected: Each state in the DLM Consortium has different rules about how alternate assessment results are used in accountability systems. For that reason, DLM also gives each state a data file with student results, including performance levels. States then use that information to make final accountability determinations for educators, schools, and districts.



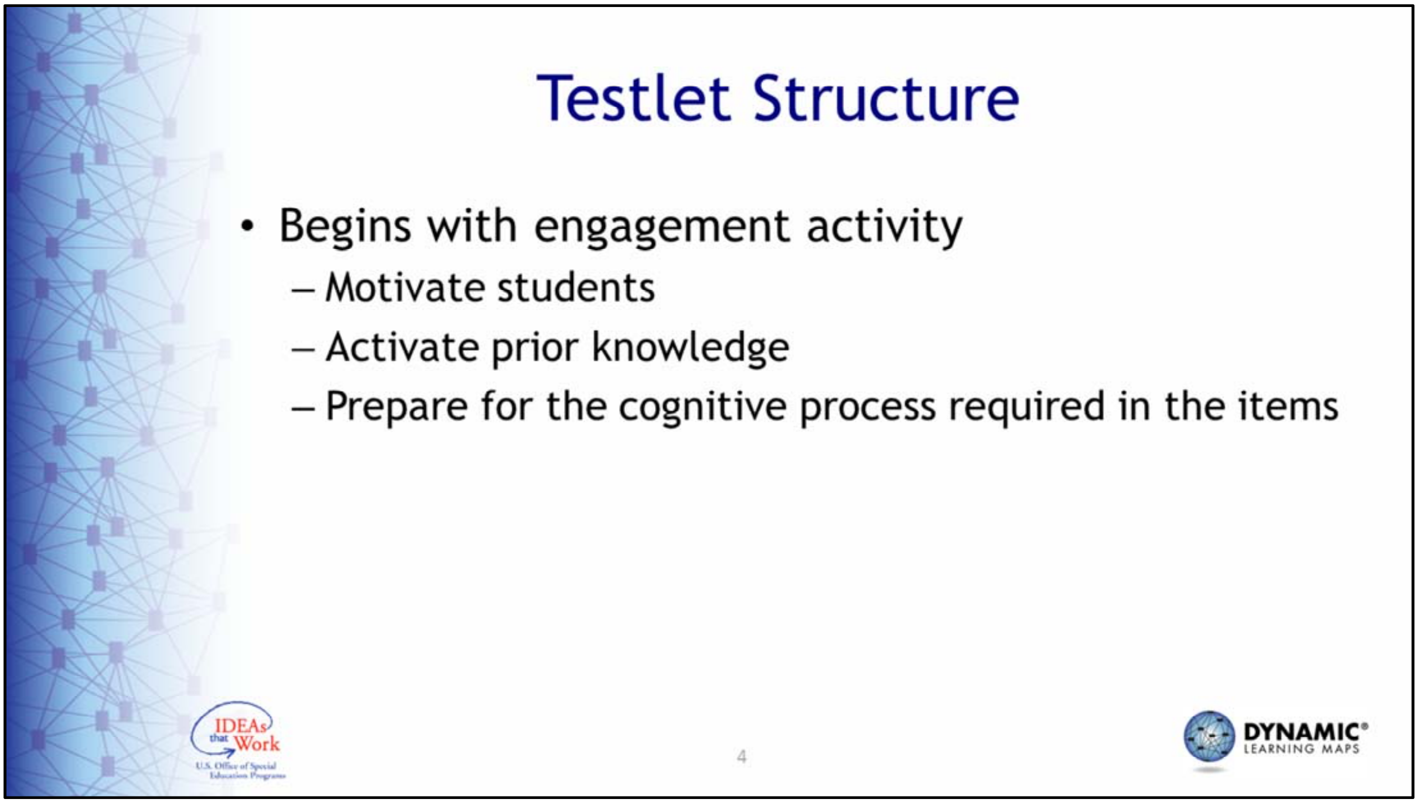
This training, *Understanding and Delivering Testlets in the DLM® System,* is the third in a series of required training modules for educators who are responsible for delivering the DLM Alternate Assessment based on alternate achievement standards. It focuses on the features of testlets and the things test administrators must do to prepare for a testing session.



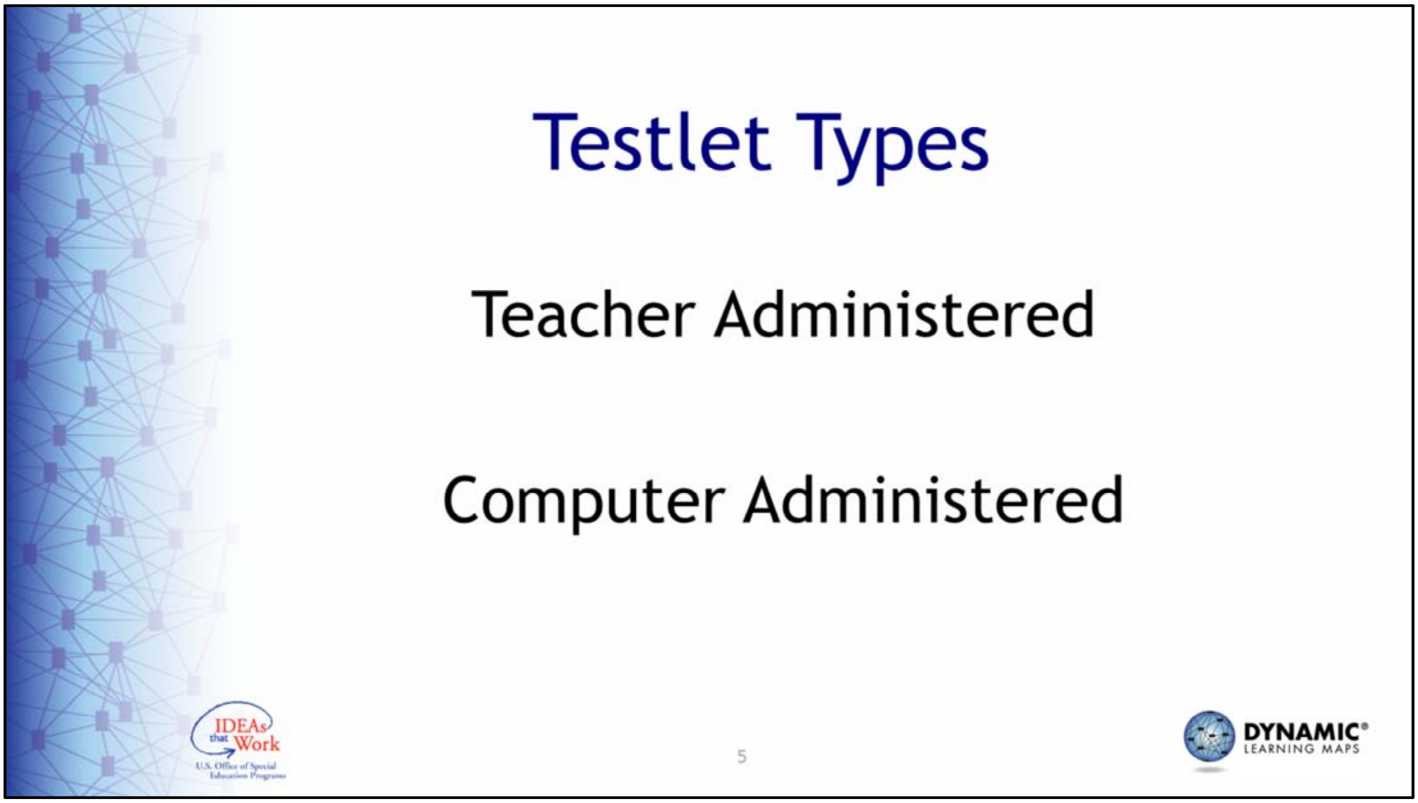
In this module you will learn about testlet structure, various item types, the process for completing testlets, test day preparations, standard test administration processes, allowable practices in test administration, and practices to be avoided for all types of testlets in the KITE™ system.



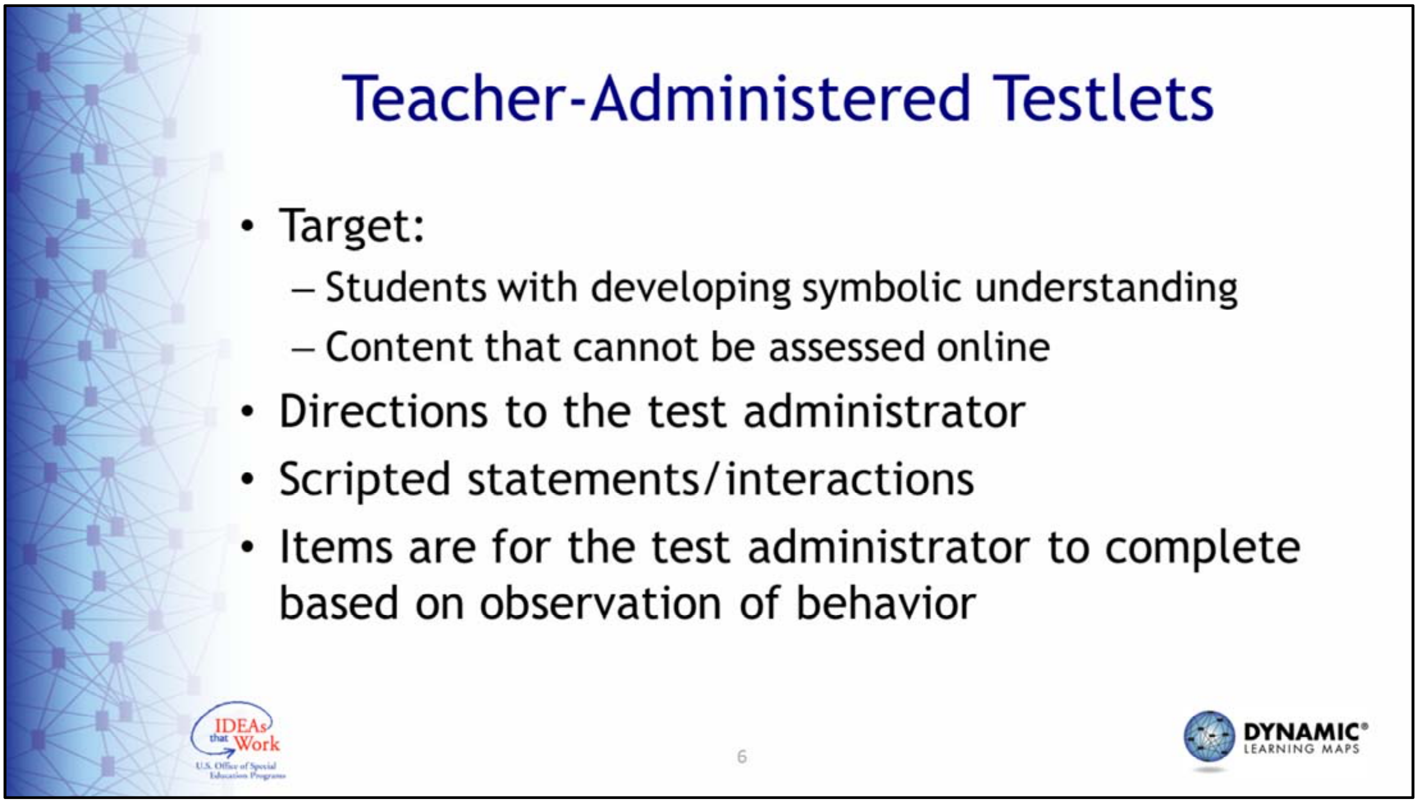
First, let’s take a look into the structure of testlets in DLM.



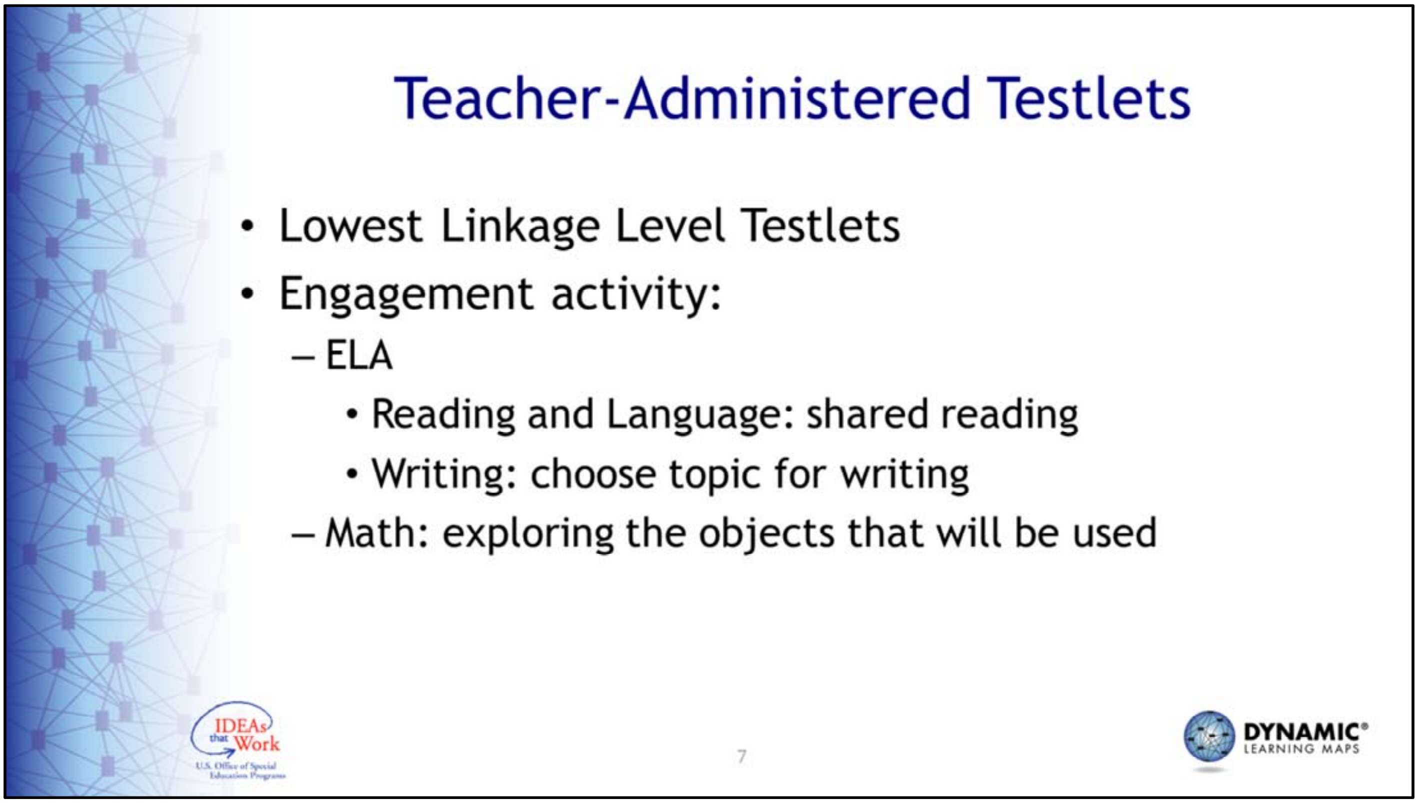
All testlets in the DLM Alternate Assessment include two primary parts: the engagement activity and the actual items or questions. The engagement activities are designed to motivate students, activate prior knowledge, and prepare students for the cognitive process required in the items that follow.



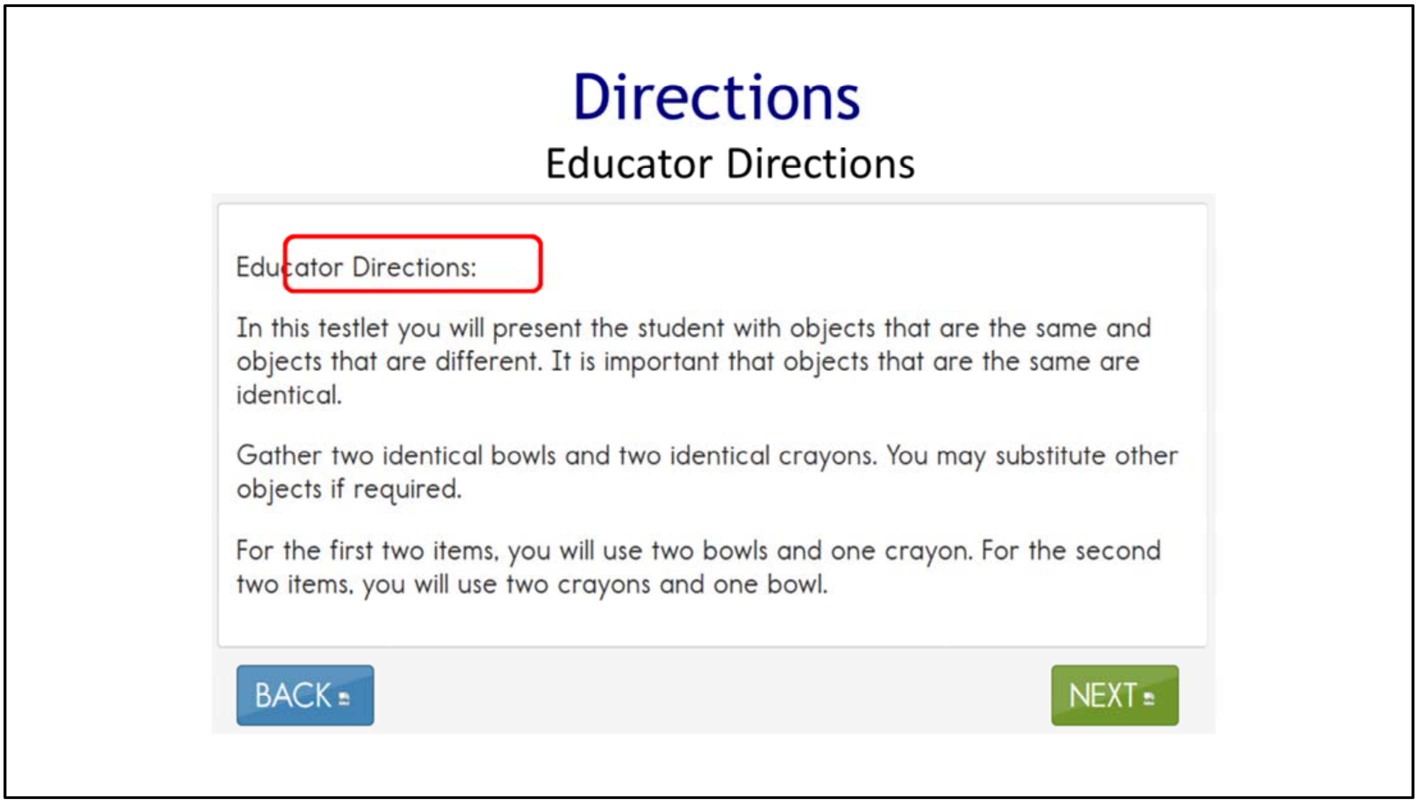
There are two general types of testlets used in the KITE system. The first type is called a teacher-administered testlet. The teacher-administered testlets use the KITE platform to direct teachers in administering the testlets to students. In these teacher-administered testlets, the test administrator enters all student responses and observations of students in KITE, but the student does not interact directly with the system. The second type is called a computer-administered testlet. It is intended for use by students who can interact directly with the computer. Generally speaking, most students will participate using computer-administered testlets. Students may interact with the computer using special devices, such as alternate keyboards, touch screens, or switches as necessary. Furthermore, students who can interact with the academic content of computer-delivered assessments but need support for the physical access can communicate their responses to the test administrator who will key in the response for the student. With teacher-administered testlets, the teacher is interacting with the computer. With computer-administered testlets, the student is interacting with the computer, sometimes with supports.



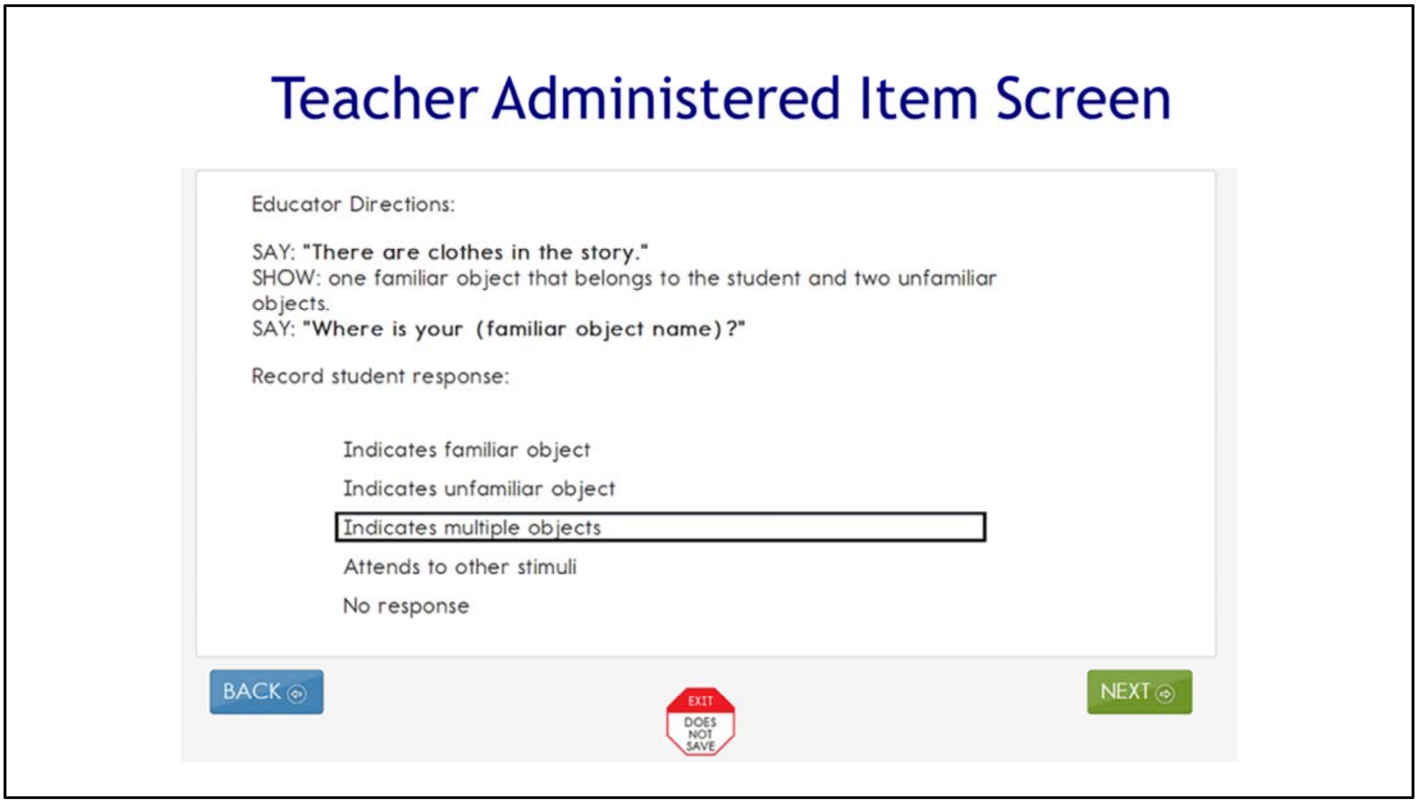
The teacher-administered testlets are used for students who cannot interact directly with the KITE system. Sometimes this is because students are still developing symbolic understandings. Other times the content cannot be assessed with information presented on the computer screen. Teacher-administered testlets provide step-by-step, scripted directions that guide the test administrator through the standardized testlet administration process. Items in teacher-administered testlets are written to the test administrator, who delivers each item and then enters responses based on observation of the student's behavior.



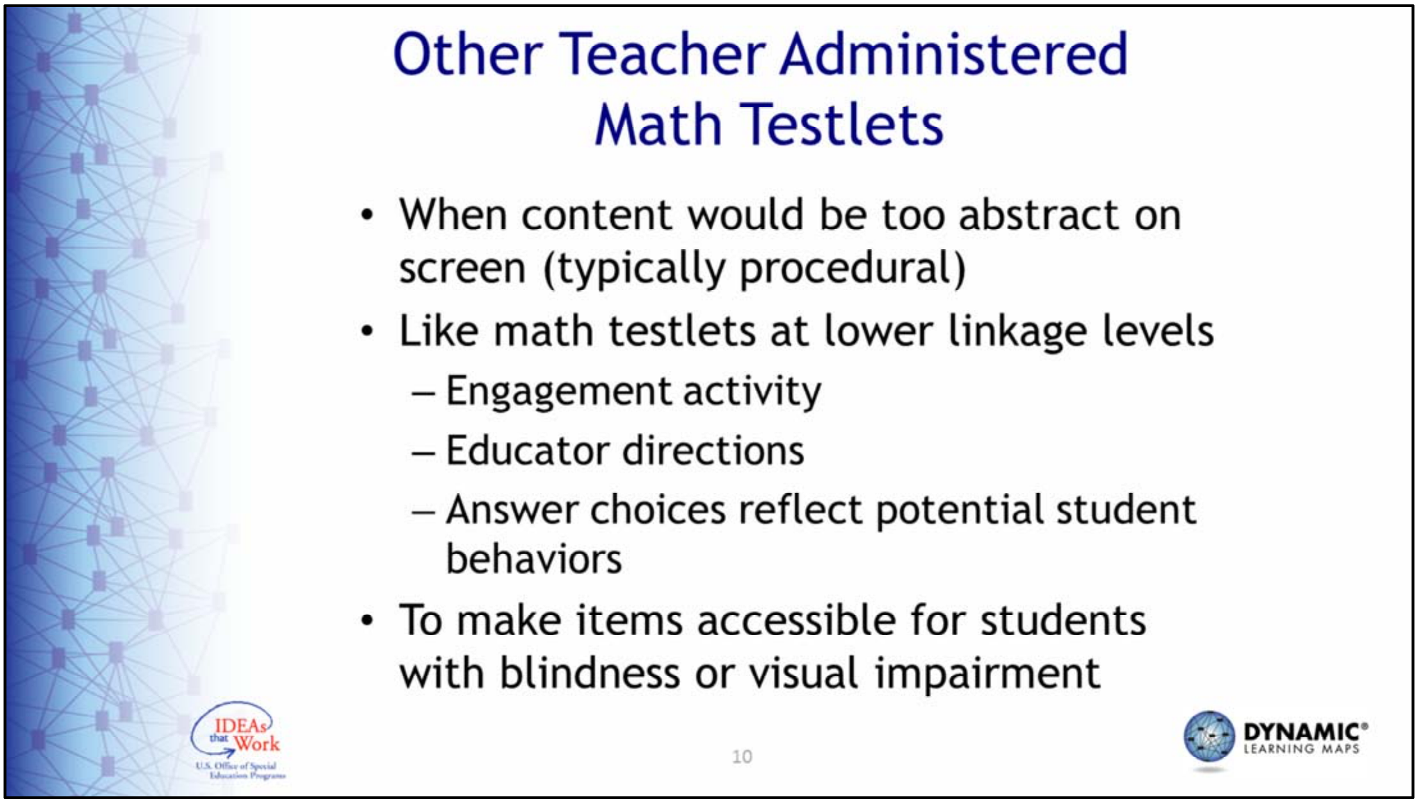
Most teacher-administered testlets are written at the Initial Precursor and Distal Precursor levels. The teacher will log into the KITE client as the student and follow the step-by-step directions for the test administrator, called Educator Directions. These directions guide the test administrator first through the completion of the engagement activity and then the rest of the testlet. In the English language arts testlets that address reading and language, the engagement activity is a shared reading of a text written for the assessment. In the English language arts testlets that address writing, the engagement activity involves choosing topic to write about. In math, the engagement activity requires the test administrator to provide the students with an opportunity to explore the objects that will be used in the testlet itself.



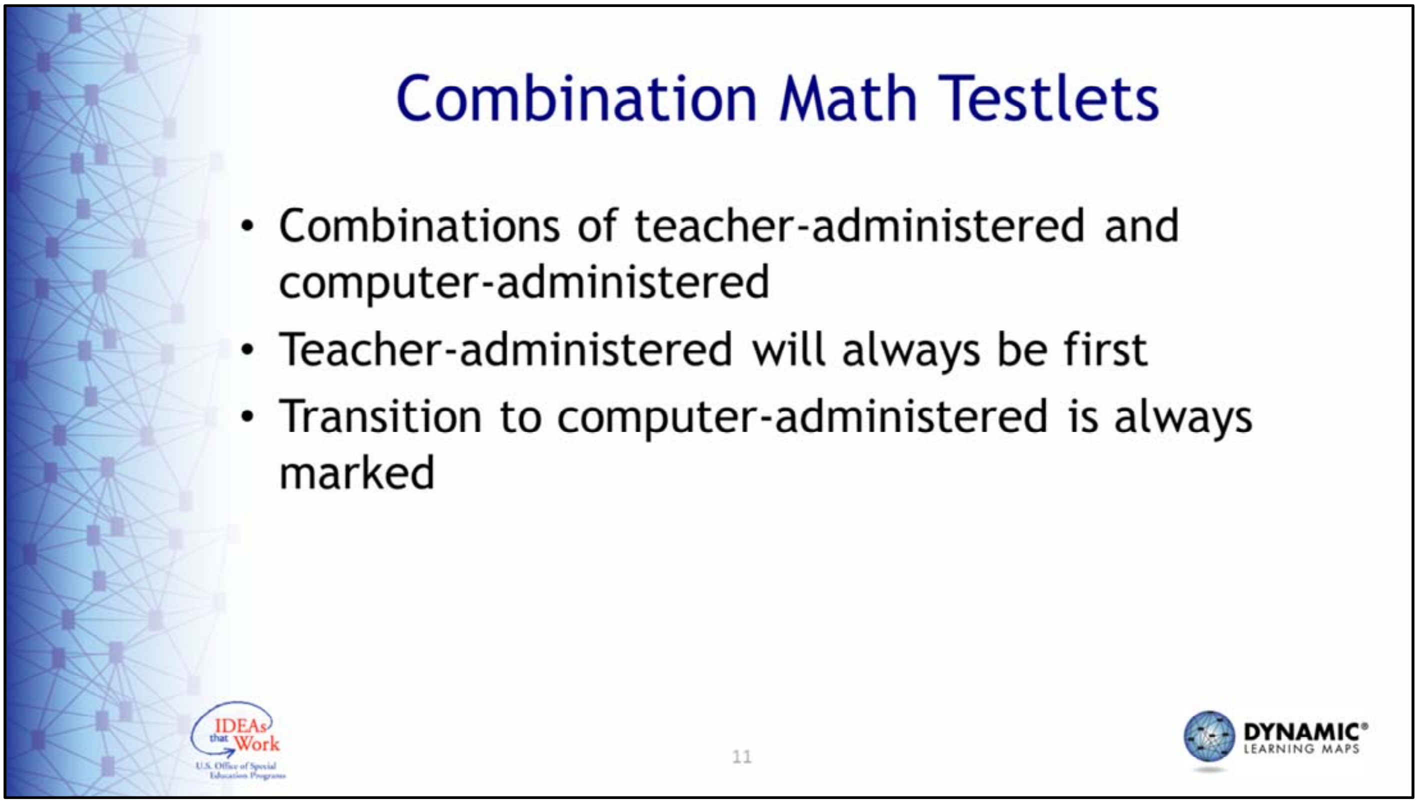
Educator Directions guide the test administrator through the testlet administration. The directions starts by telling the test administrator, in a general way, what will happen in the testlet. Then the directions specify the materials that need to be collected. The last part of the Teacher Directions page outlines the objects needed, for how many items, and in what order. Educators can find this list of objects prior to administering the testlet on the TIPs page in Educator Portal.



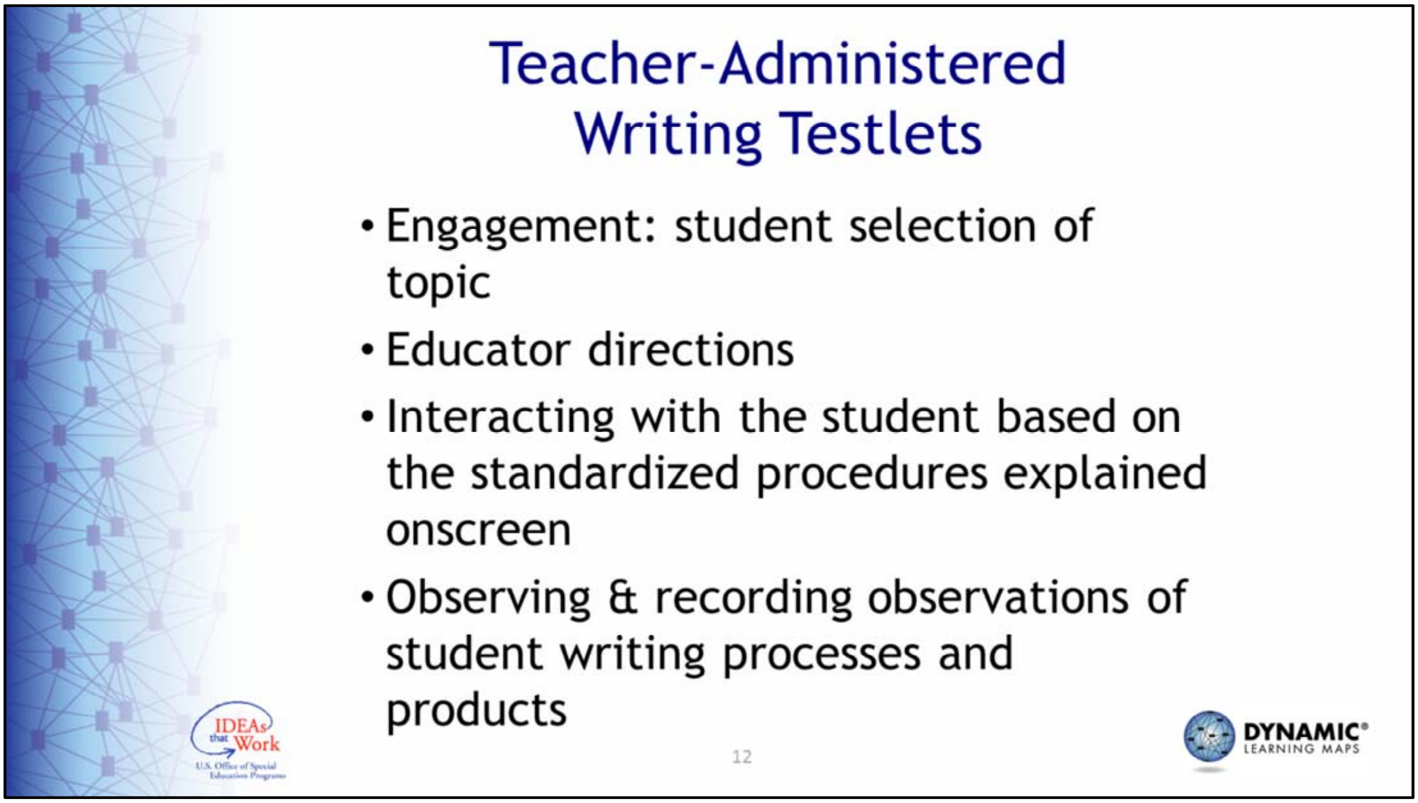
In teacher-administered testlets, answer options appear on an educator direction screen like the one shown here. The educator directions provide instructions on how to interact with the student. The text presented in bold after SAY are spoken directly to the student. The actions described after SHOW are performed by the test administrator for the student. As the test administrator completes the steps, she or he then observes how the student responds to the item and records that response by selecting the best match from the list of statements on the bottom of the page. Once selected, the test administrator then uses the navigation buttons to move to the next screen.



In addition to teacher-administered testlets directed at students developing symbolic language skills, teacher-administered testlets are used on rare occasions in math when representing the content on the screen in a computer-administered testlet would make the task too abstract. Educators select the onscreen answer choice that describes the student's response to the item. Teacher-administered testlets are also used in math to make items accessible for students with visual impairment.

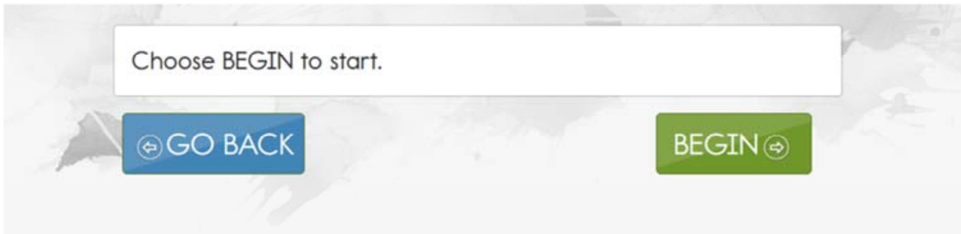


Although most testlets are either computer-administered or teacher-administered, a few math testlets combine the two types. These are delivered to students who can complete computer-administered items, but these testlets include items that assess content that is best presented by the teacher following the onscreen directions. In these combination testlets, the teacher-administered items are always presented first. Then the transition screen tells the test administrator that the remaining item or items are for the student to complete independently on the computer.

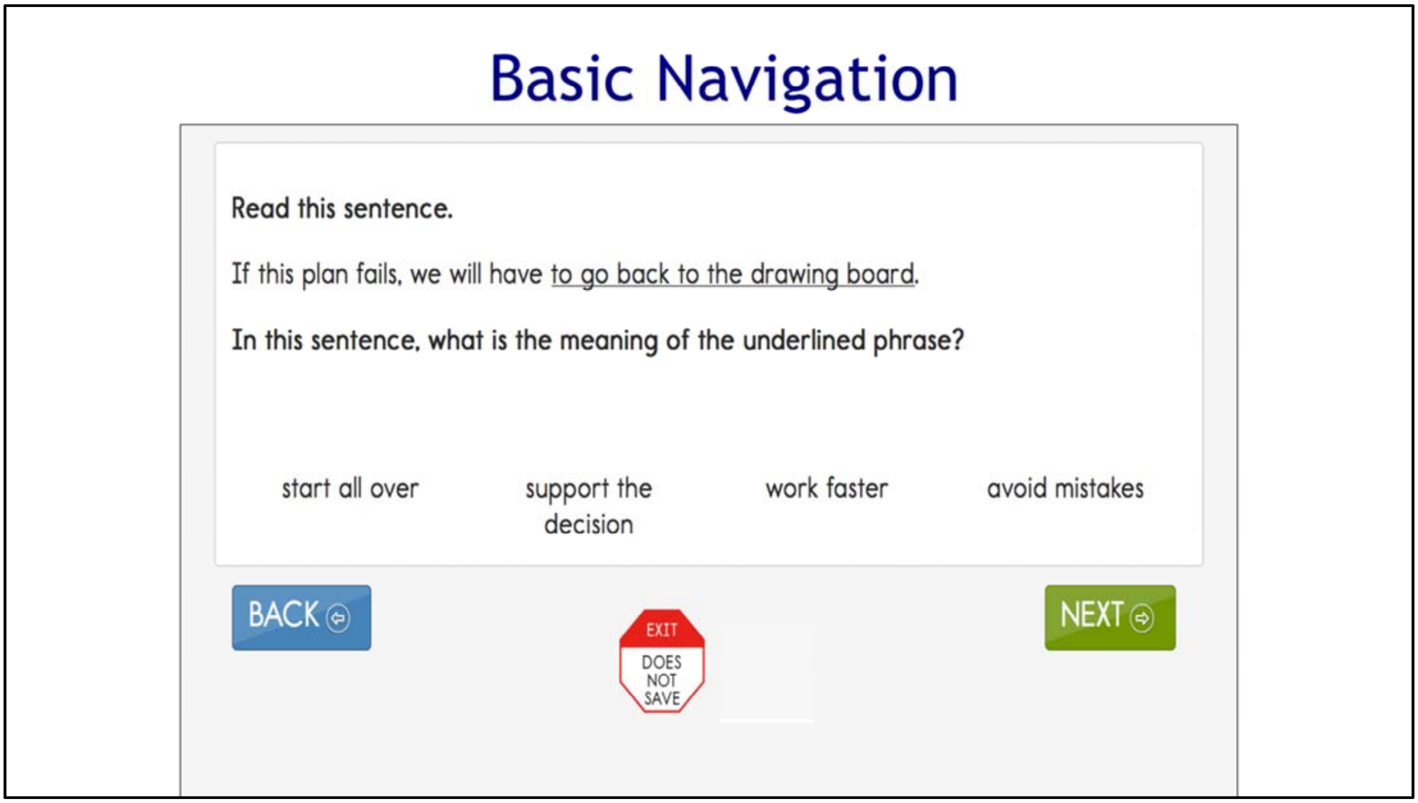


All writing testlets are teacher administered-testlets. They have engagement activities that require students to select a writing topic. The test administrator then follows step-by-step directions and interacts with the student off the computer. Items are embedded throughout the interaction. The items require teachers to observe students as they write or evaluate the written product and then select the onscreen options that best reflect their observations. The student's writing product is not submitted in the system.

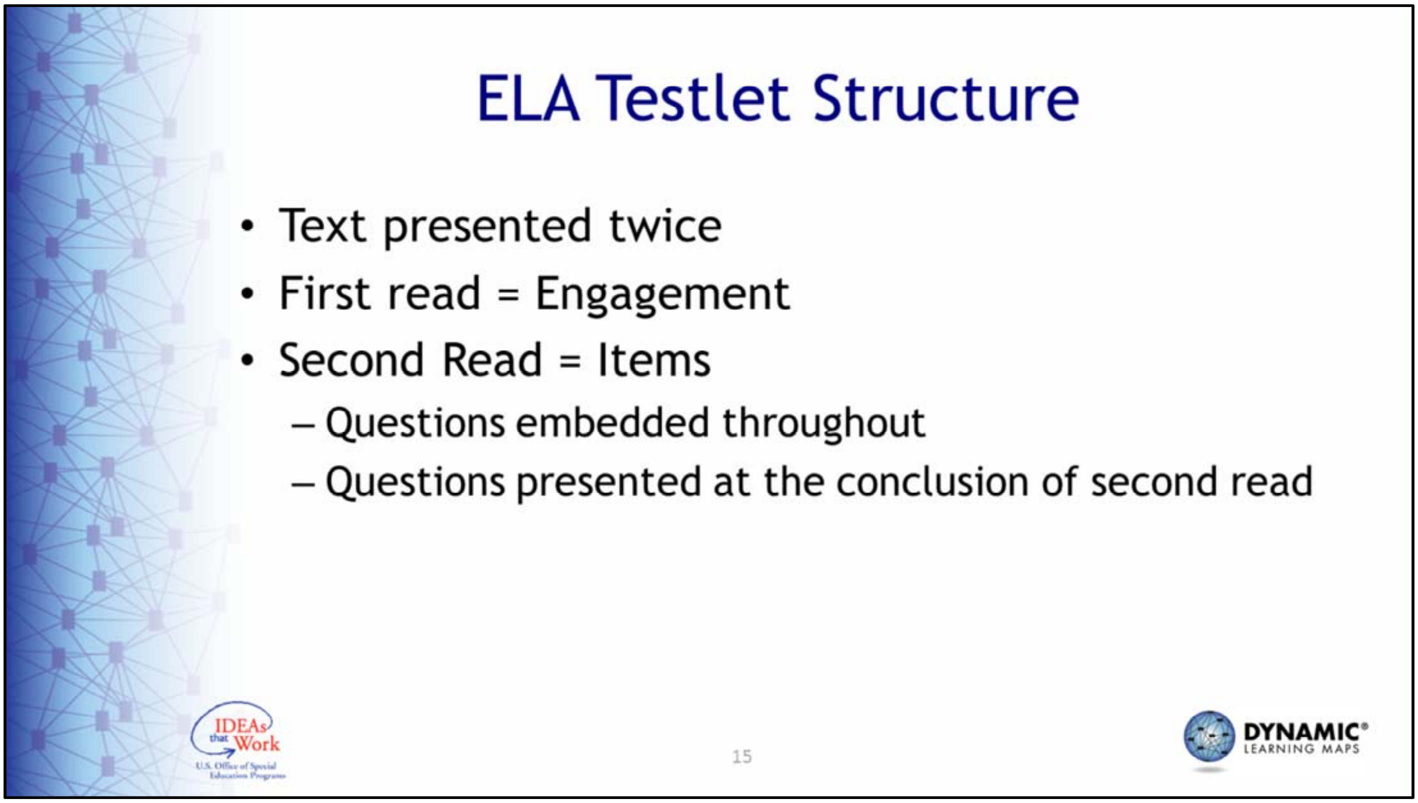
Beginning Screen



All teacher-administered and computer-delivered testlets begin with a screen at the beginning of the testlet to signify the start of a testlet.

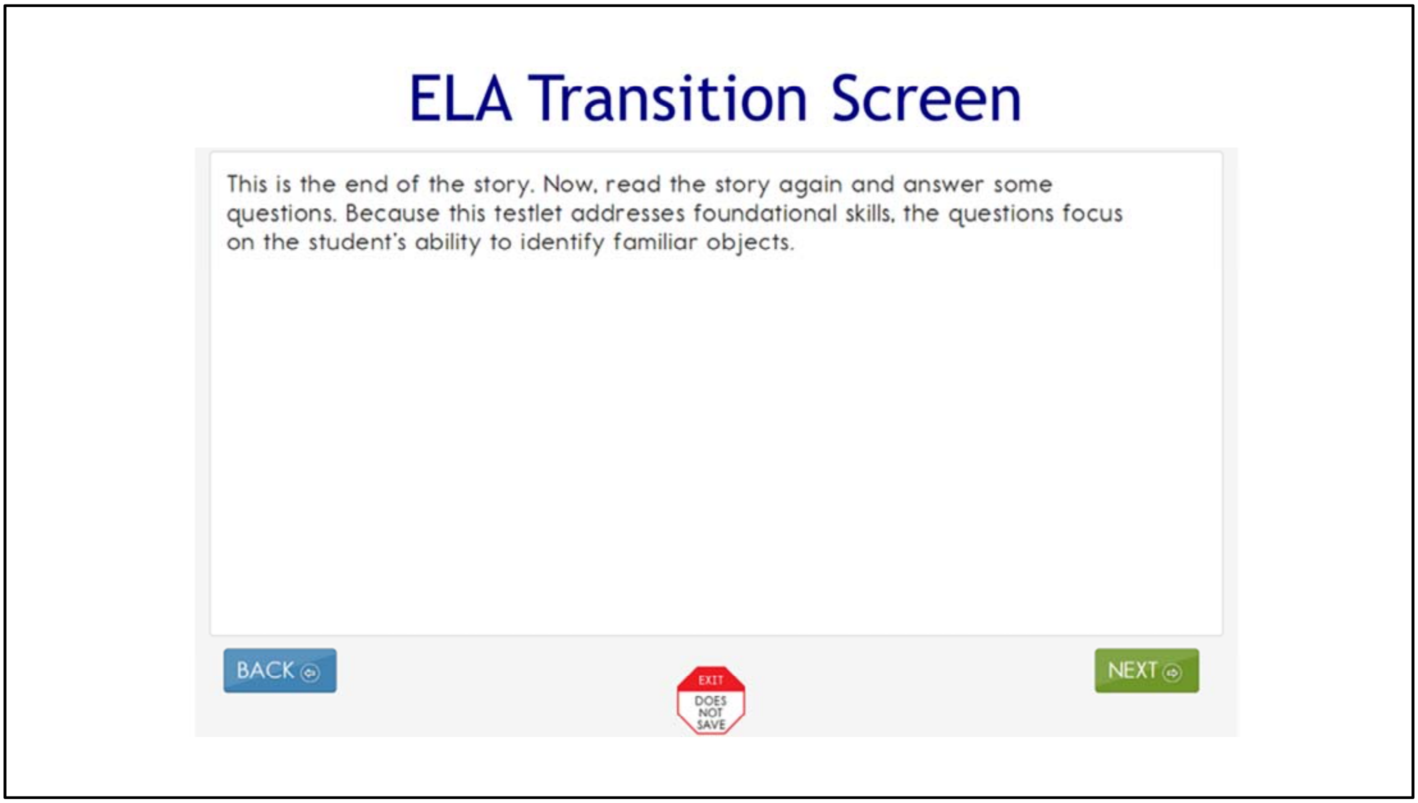


Every page of a testlet has basic navigation buttons. BACK and NEXT buttons navigate within a testlet much like the back and next buttons on an internet browser. In the bottom center of the screen is an EXIT DOES NOT SAVE button. This allows the user to immediately stop the test, if this practice is allowed in your state. However, responses in that section of the test are not saved, so the student will have to start that testlet over again when logging back in. Do not use this button once a student has answered all the questions in a testlet and it is ready to be submitted. If the student just needs a break, the system also allows for a 28-minute period with no activity before the student is logged out of the system automatically.



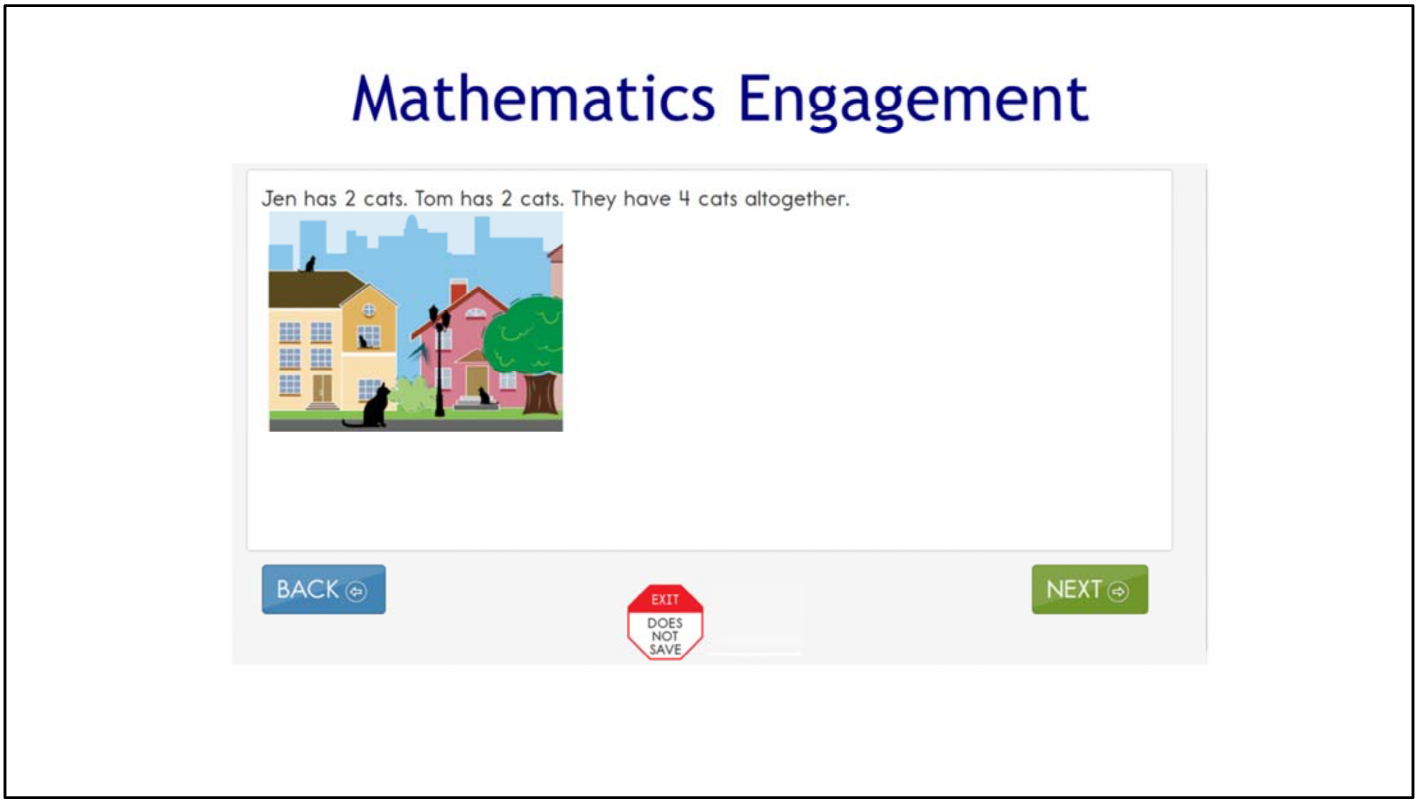
All English language arts testlets assessing reading and language Essential Elements, including computer-administered and teacher-administered testlets, include two readings of the same text. The first reading is intended to familiarize the student with the entire text. It serves as an important engagement activity that helps students activate background knowledge and prepare for the cognitive processes to be addressed through items in the second reading. Educators should use appropriate engagement techniques students are familiar with from instruction. During the second reading of the text, students may encounter items that are embedded in the text at appropriate points or items that are presented at the conclusion of the second read. These two different placements of items serve to reduce cognitive load and limit reliance on long-term memory.

In ELA computer-administered testlets, a screen like this one directs the students to read the text and think about the details while reading. Some students will read the text independently. Others will listen to the text if that option is set in the student's Personal Needs and Preferences Profile (PNP). Some students taking computer-administered testlets may require support to navigate the test from one screen to the next while reading the book.

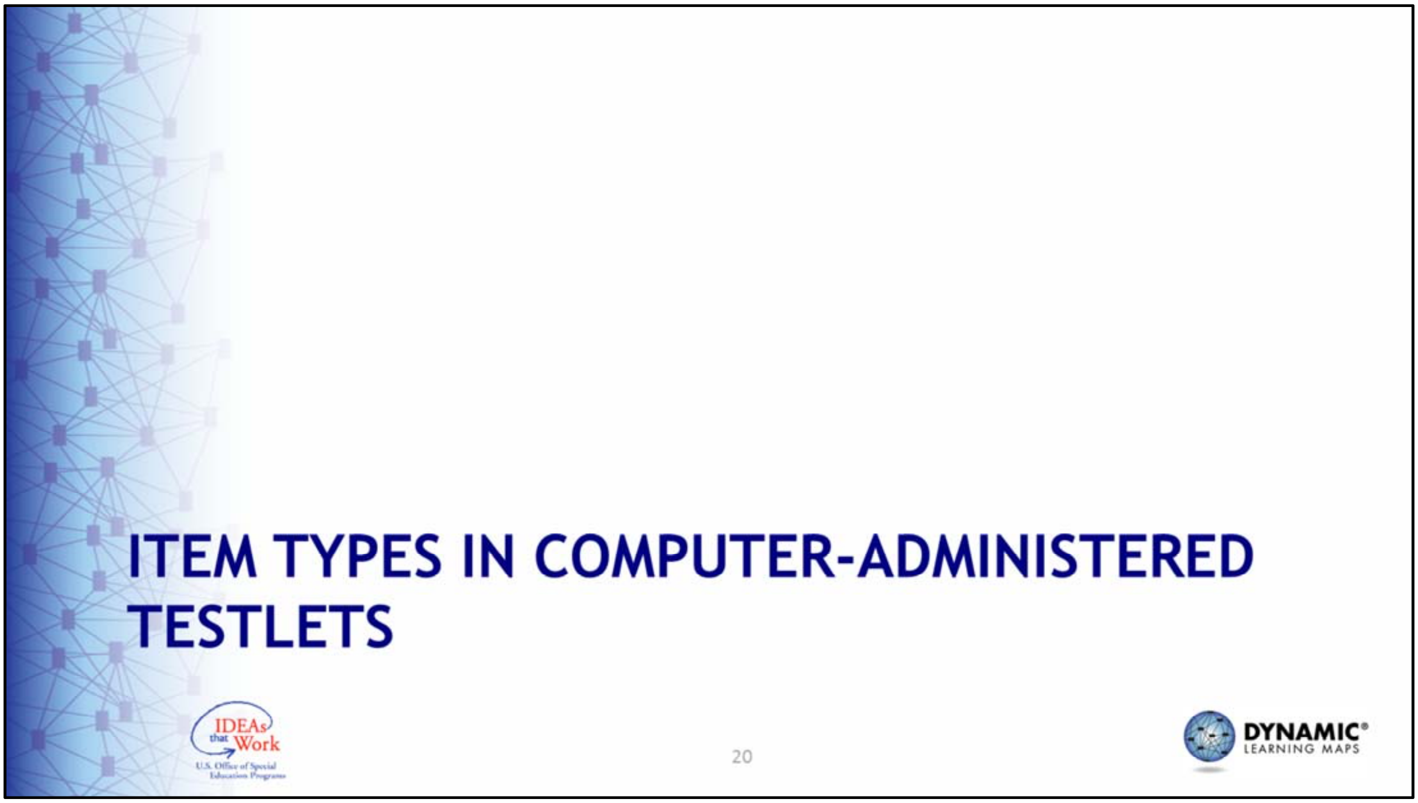


All testlets in ELA have a transition screen that appears at the end of the first reading of the text. In the reading testlets at the Initial Precursor level, the transition screen reminds the test administrator that the items do not specifically target comprehension of the text, but target other essential foundational skills.

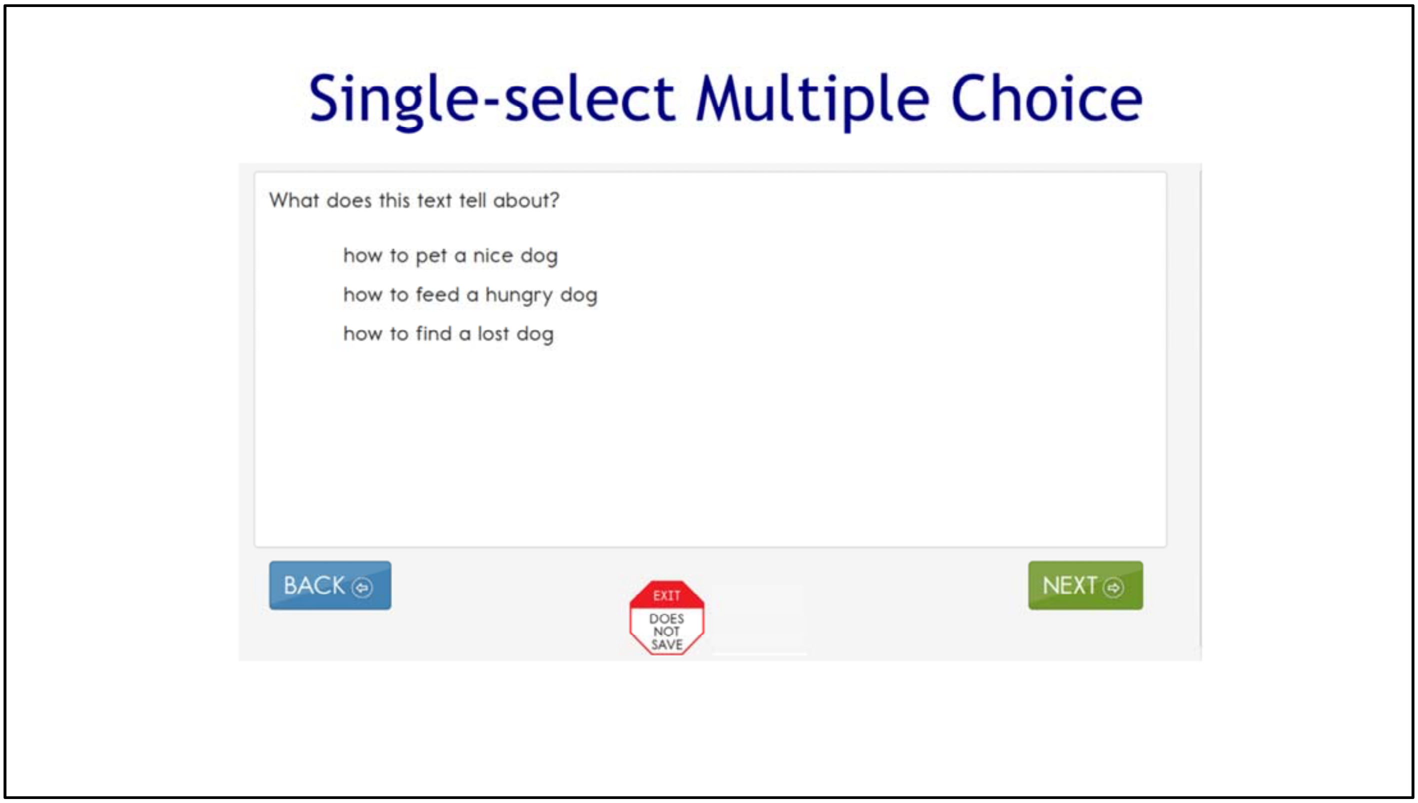
During the second read of the text, there are questions. While students may need support to enter their responses, it is expected that the students will provide answers to the questions independently. At most linkage levels, the questions that are asked during the second read directly assess text comprehension; however, most initial precursor testlets and many distal precursor testlets include questions that are assessing more general cognitive and linguistic understandings in the context of shared reading. In these testlets, the shared reading provides a meaningful academic context to assess developing foundational skills related to the grade level Essential Element.



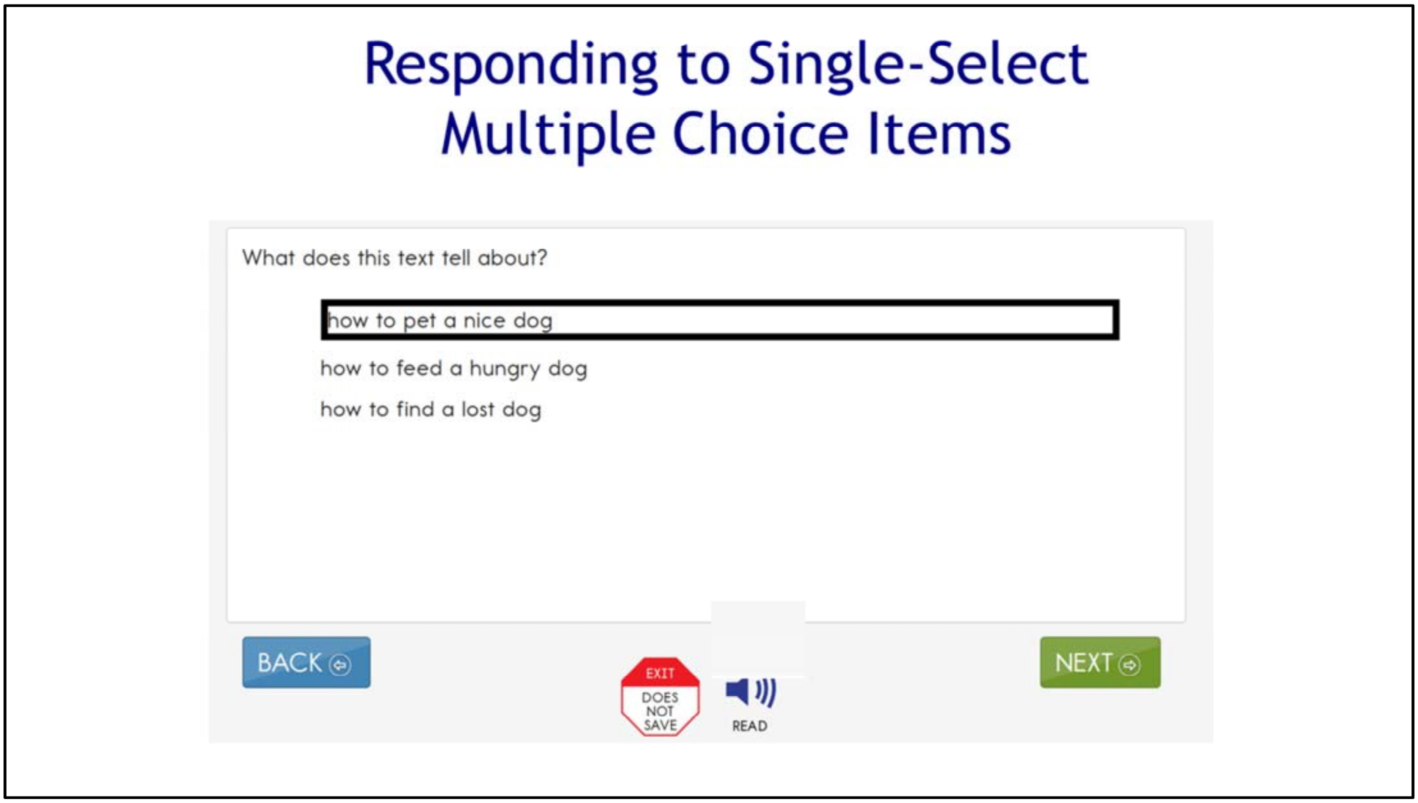
In mathematics, the engagement activity in this example provides a context – cats – and activates a cognitive process about putting things together. This activity prepares the student for items about addition.



The computer-administered testlets in KITE have many different item types.

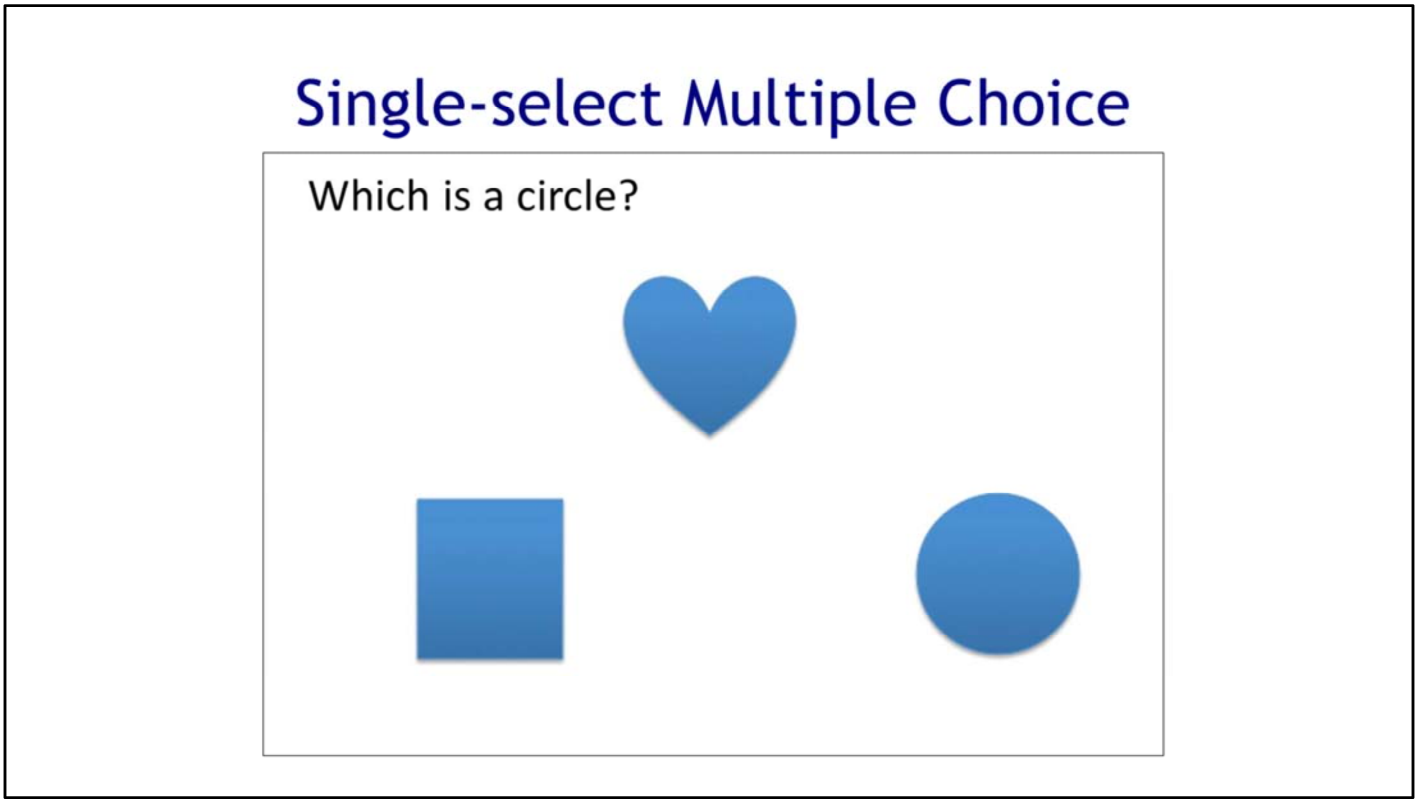


Most items in computer-delivered testlets are single-select multiple choice items. When the student comes to the item, no answer choices will be highlighted.

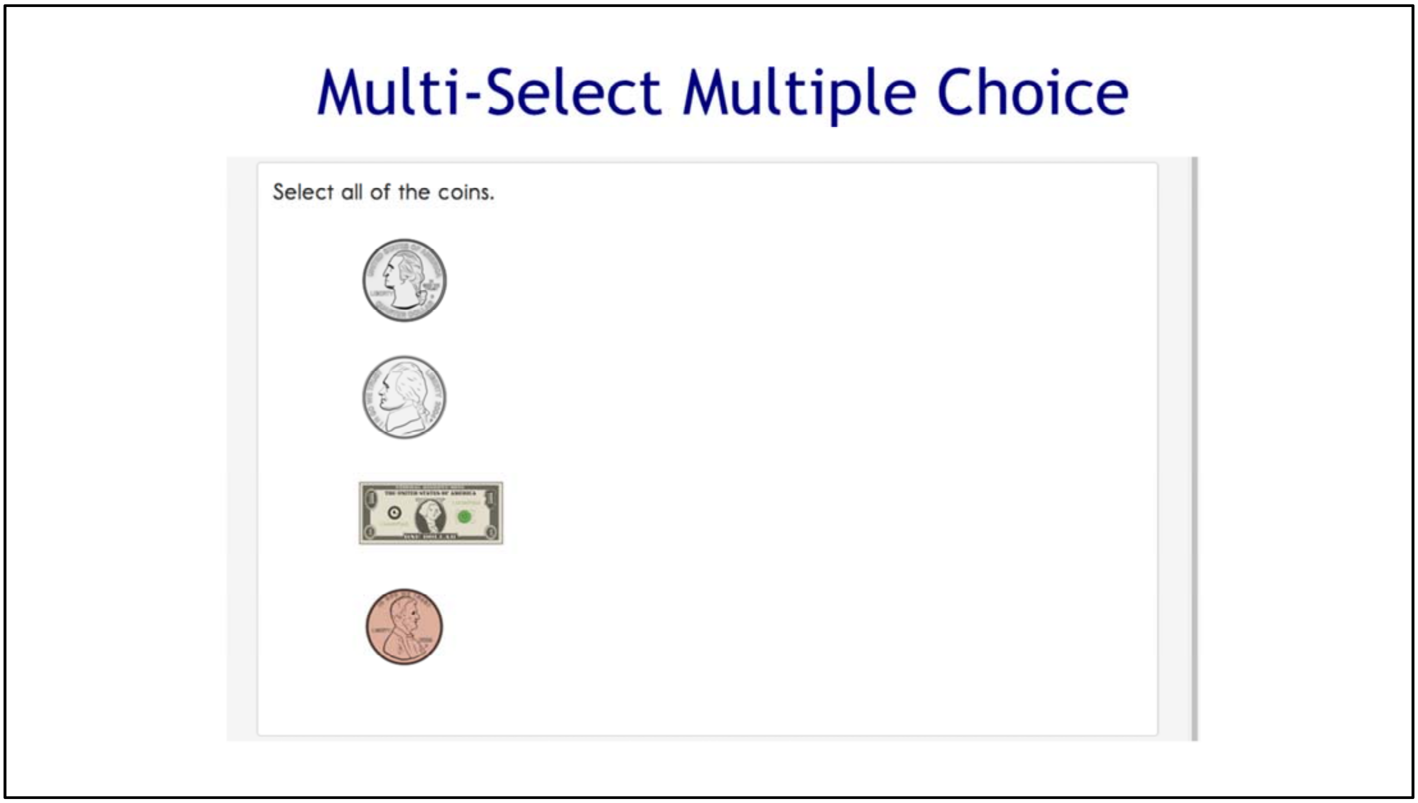


Once the student selects a response, a box appears around the answer choice. The student is able to select NEXT or BACK to travel through the testlet screens, and the same answer choice will stay selected.

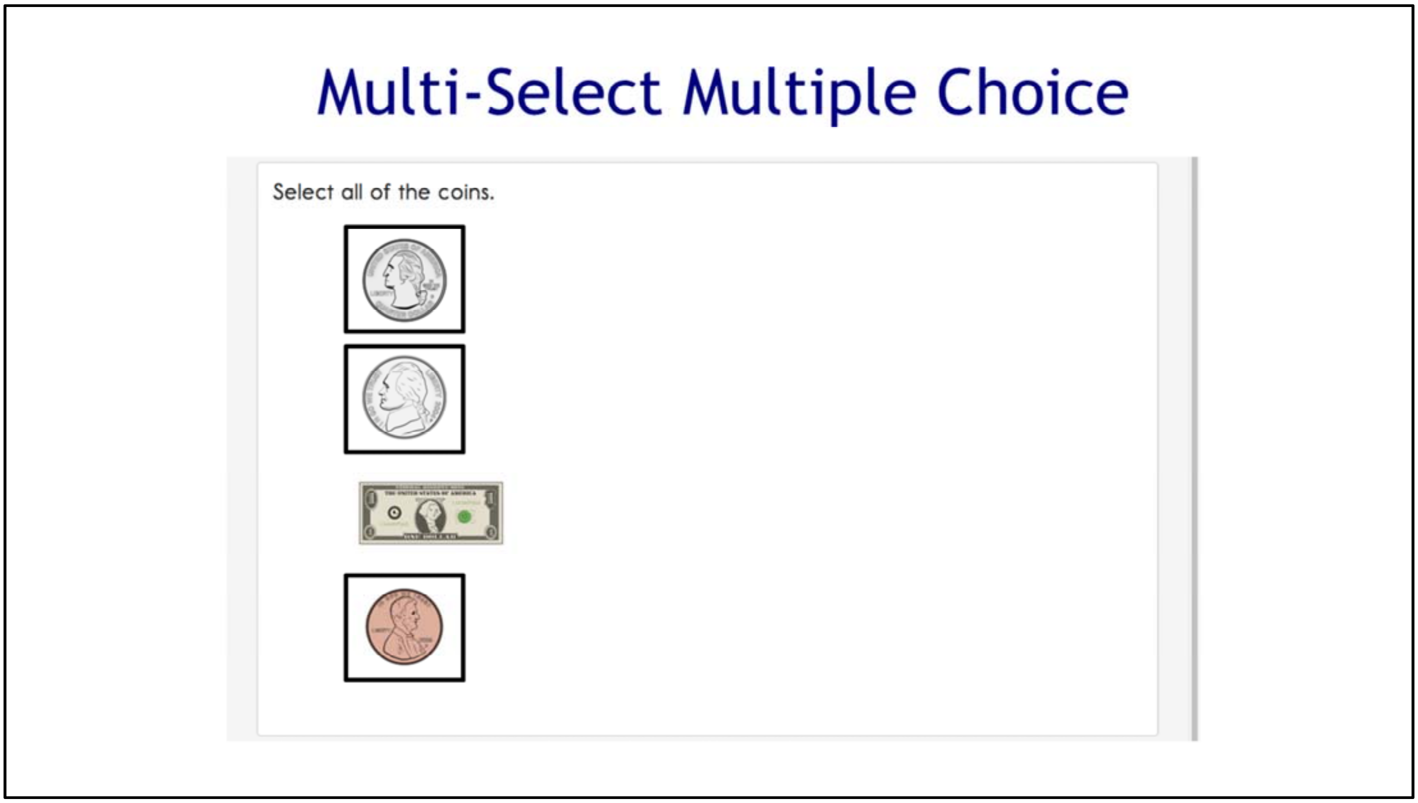
If the student would like to change an answer at any time while in the same testlet, he or she may go back to the screen and simply select a different answer choice.



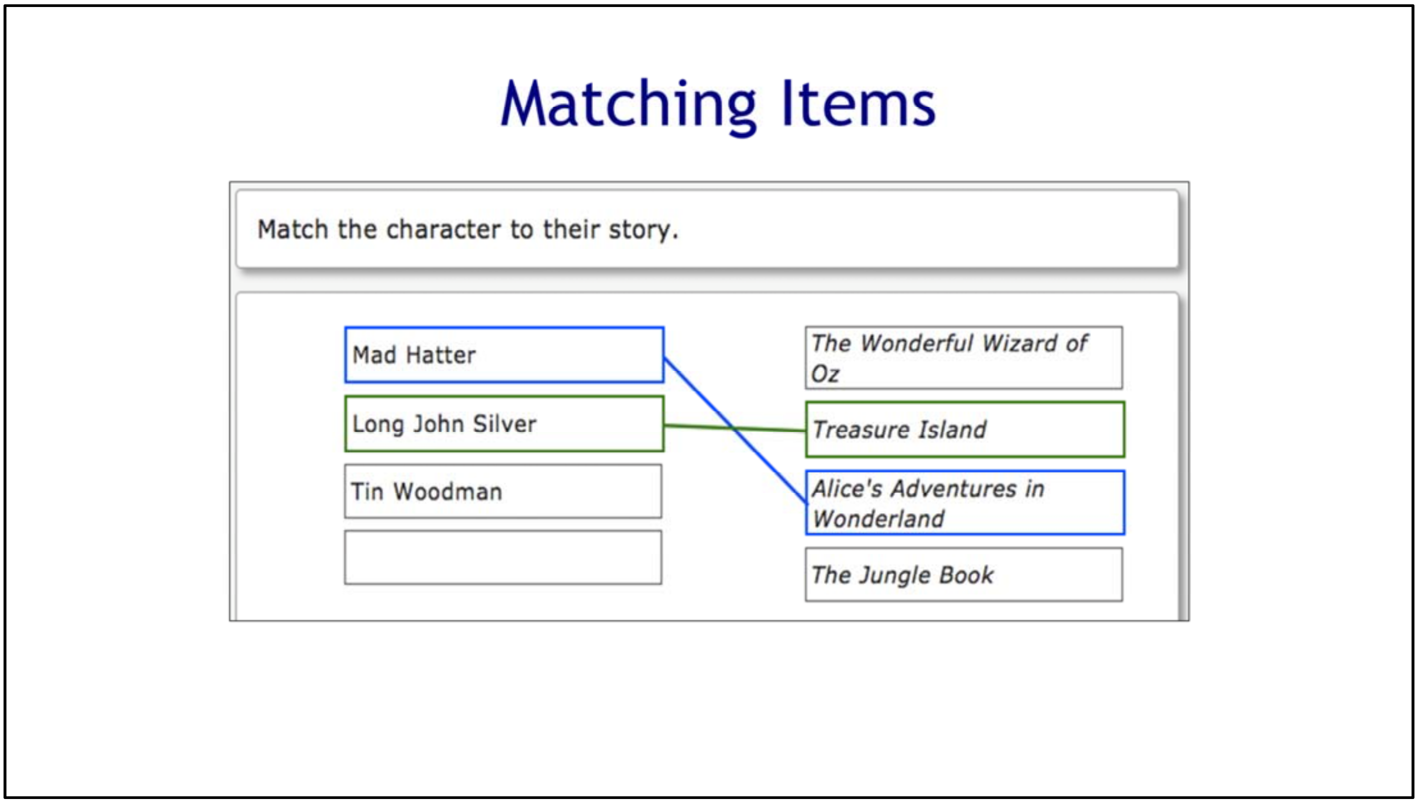
Another type of item students may encounter is a single-select multiple choice item with pictures as the answer choices.



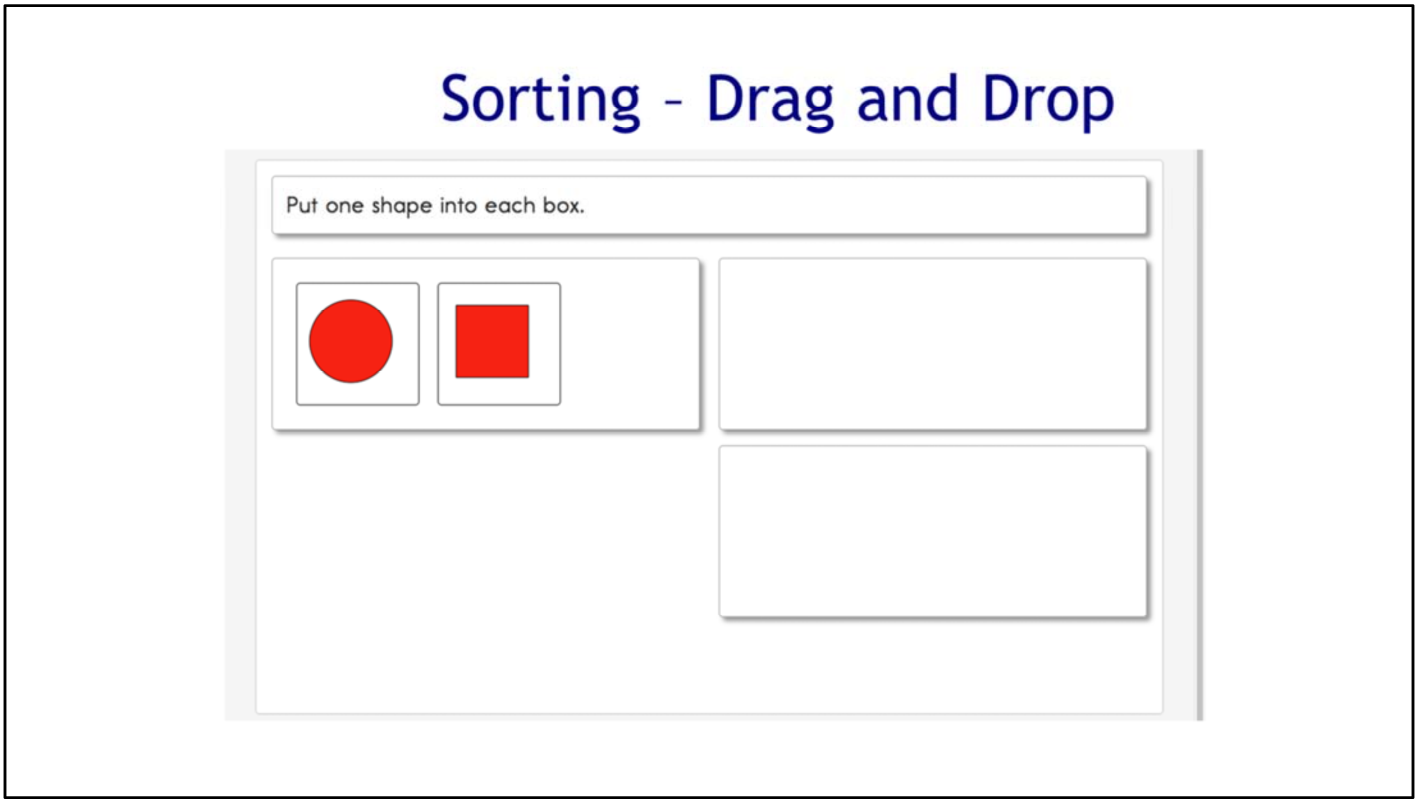
Students may see multi-select multiple choice item. In this type of item, students select more than one response.



In this case, multiple boxes will appear around the student choices when selected.

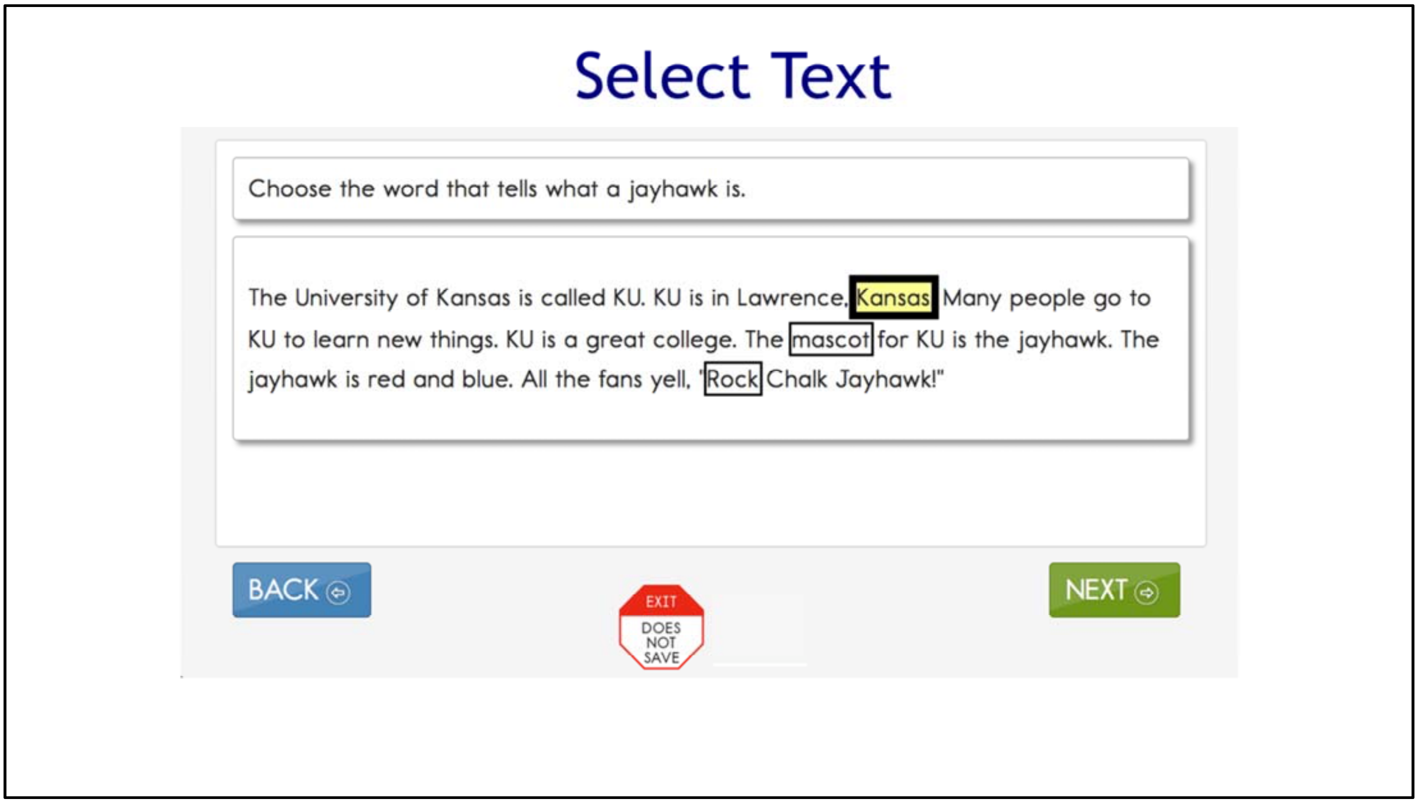


A few computer-administered items in KITE require students to match items from two lists as shown in this example. For each pair, the student selects an item from the list on the left and then selects the match from the list on the right.



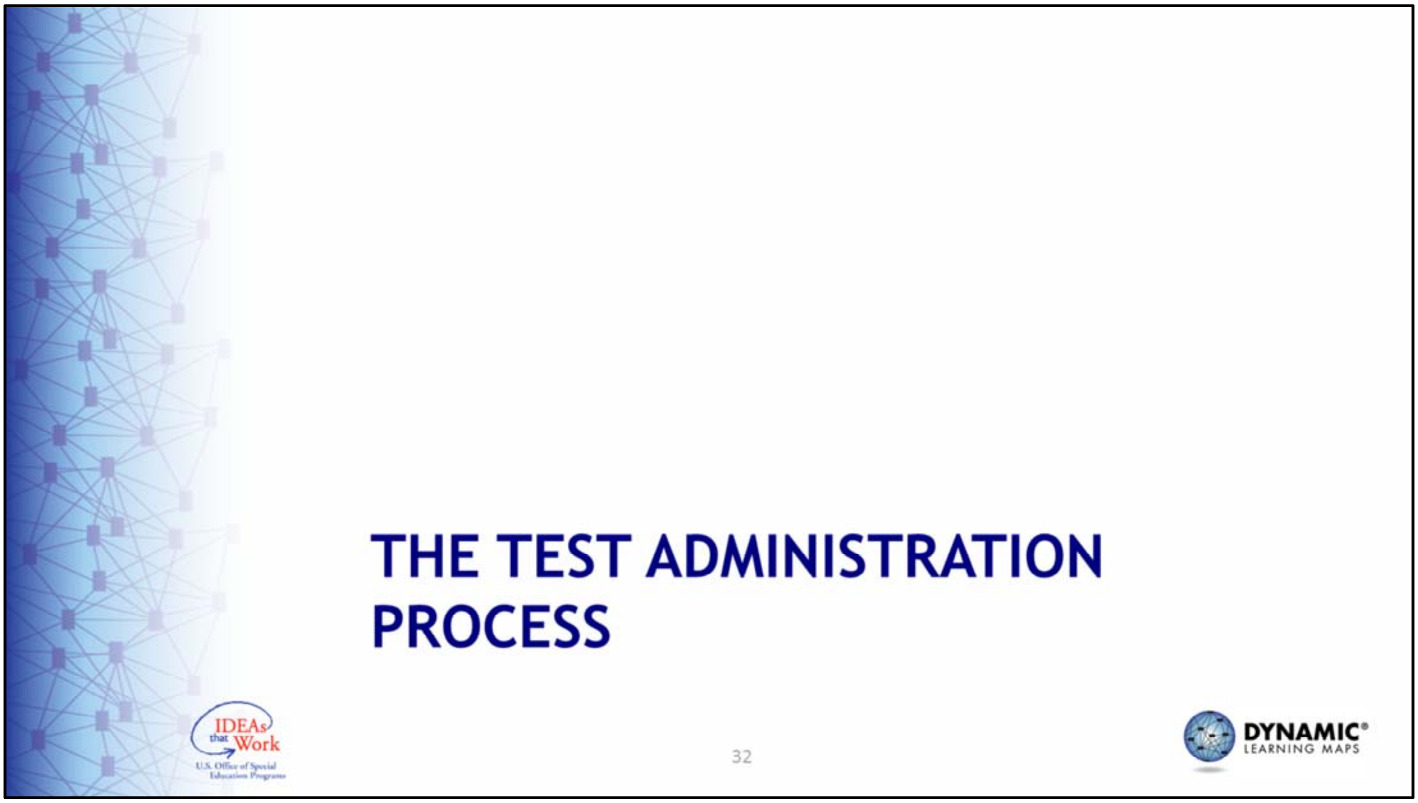
Some items require a drag and drop. If students cannot use a mouse or touch screen to drag items from one box to another, the test administrator may move items to the boxes indicated by the student.

Similar to drag and drop, students may encounter items that require them to select answer options and then click a destination box to put them in. In this example, students would click on a food item and then the box that says, “Group 1”.



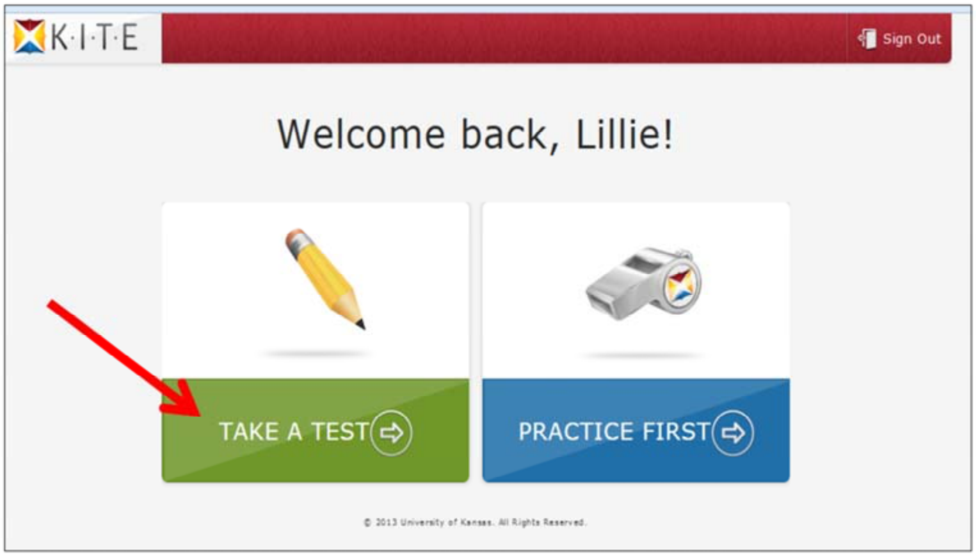
The last type of computer-delivered item is called select text. These are only used in some English language arts assessments at upper grade levels. Here the student chooses the appropriate word in a text based on the question. Certain words will have a box around them to indicate they are answer options that the students may click to select.


Pause for Activity



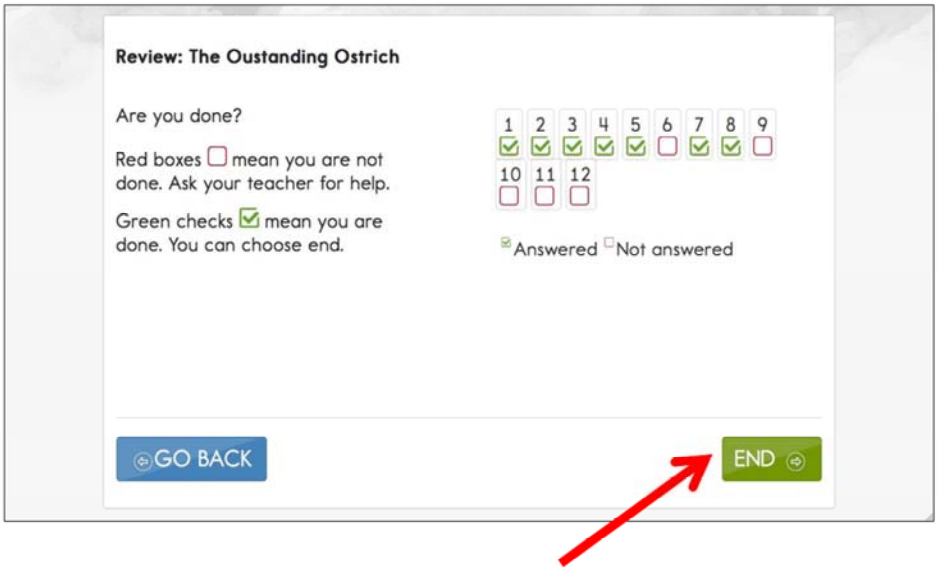
The following portion of the training will cover test administration procedures.

Log Into KITE

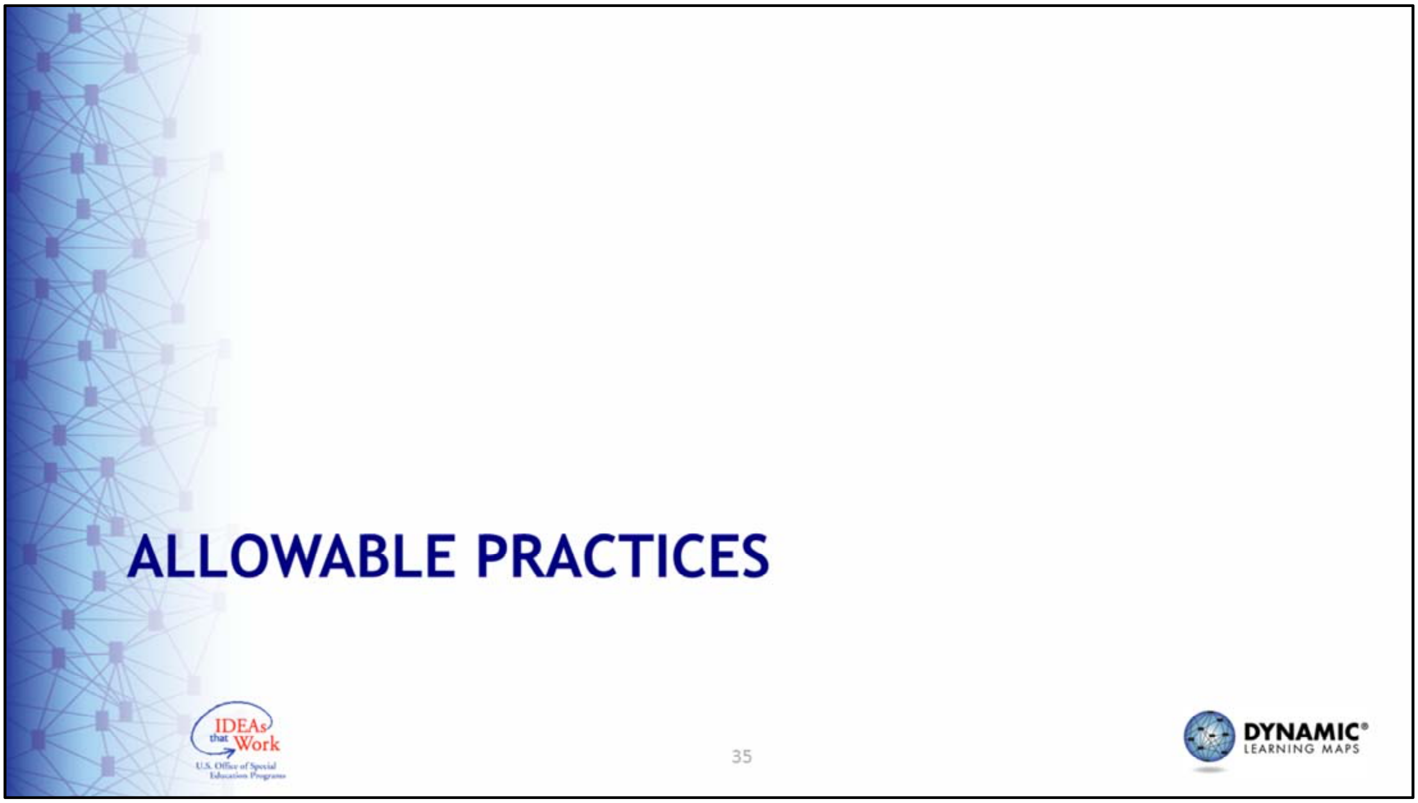


Educators support students as necessary as they log into KITE. Sometimes this means the adult logs in for the student. Once the student is logged in, the next step is to select Take a Test.

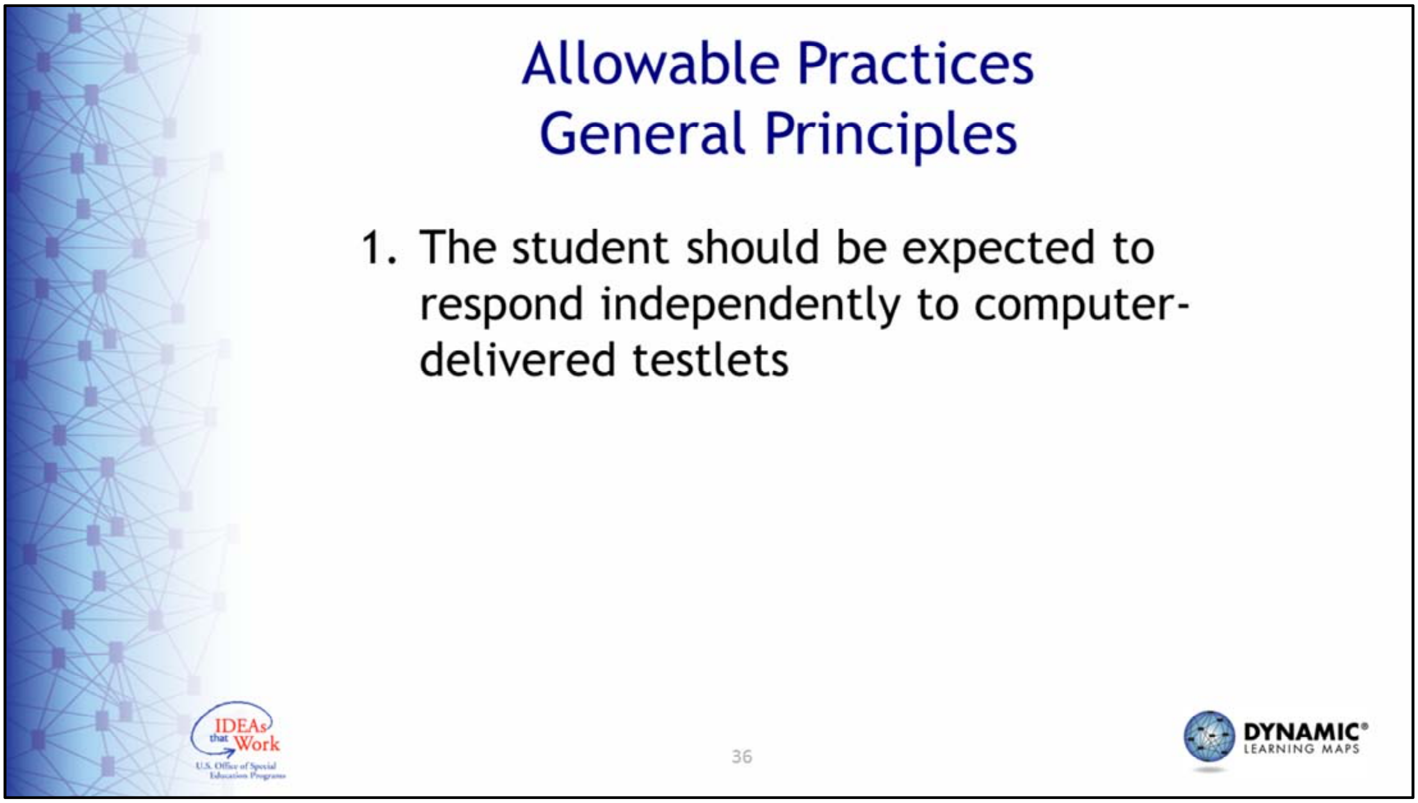
End of Testlet



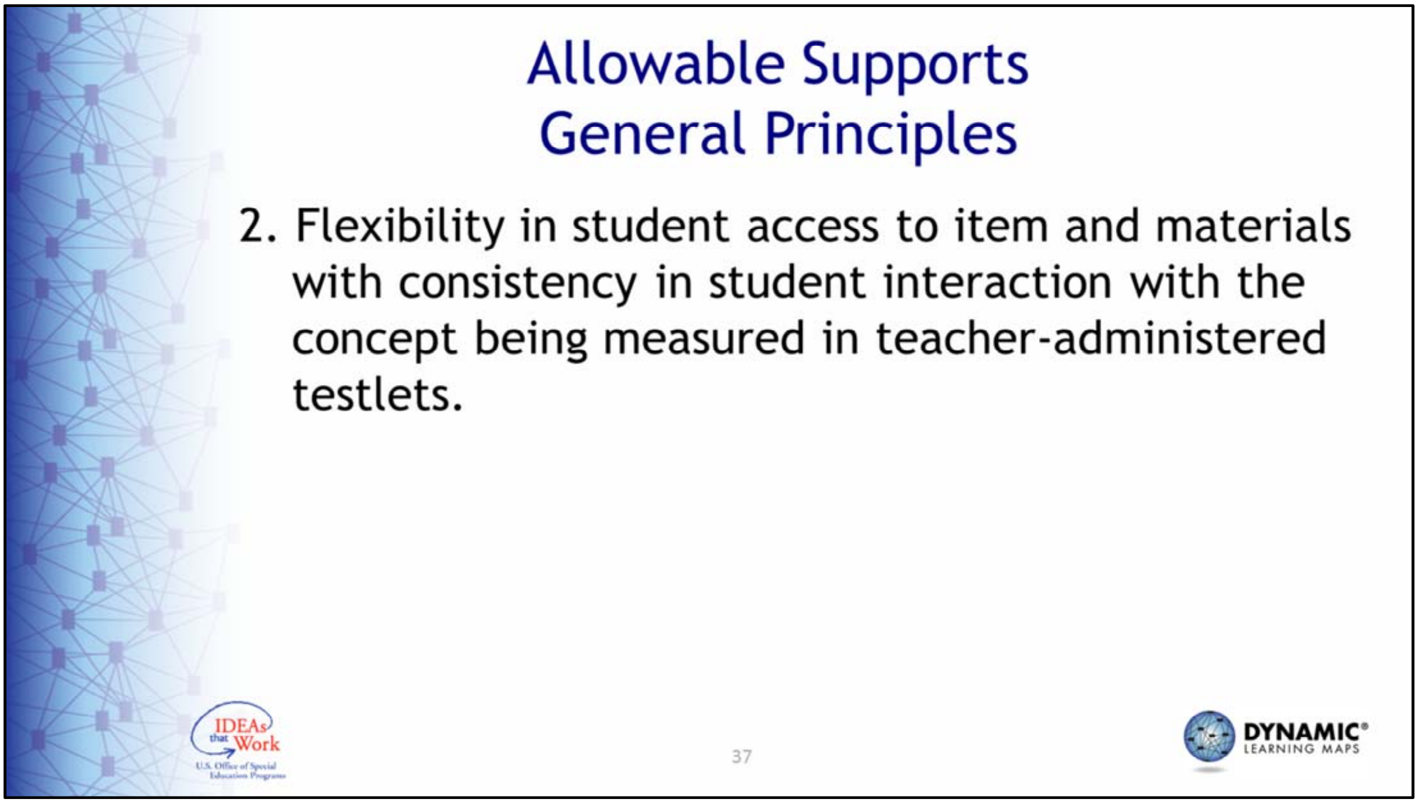
The screen shown here appears at the end of a testlet. Either the student or the test administrator should pause and make sure the student has answered all the test questions. Empty red boxes indicate items that have not been completed. If the student has not answered all of the items, the student may choose an unanswered item icon to jump back to a specific item, or press the GO BACK button to find and answer all the incomplete items. The END button should only be selected when a student has completed the testlet and is ready to submit it.



The user interface in KITE has been specially designed for students with significant cognitive disabilities. However, students will need various levels of support to interact with the computer. This section will review allowable practices in providing that support. These practices are in addition to the accessibility features described in Module 2 and in the Accessibility Manual.

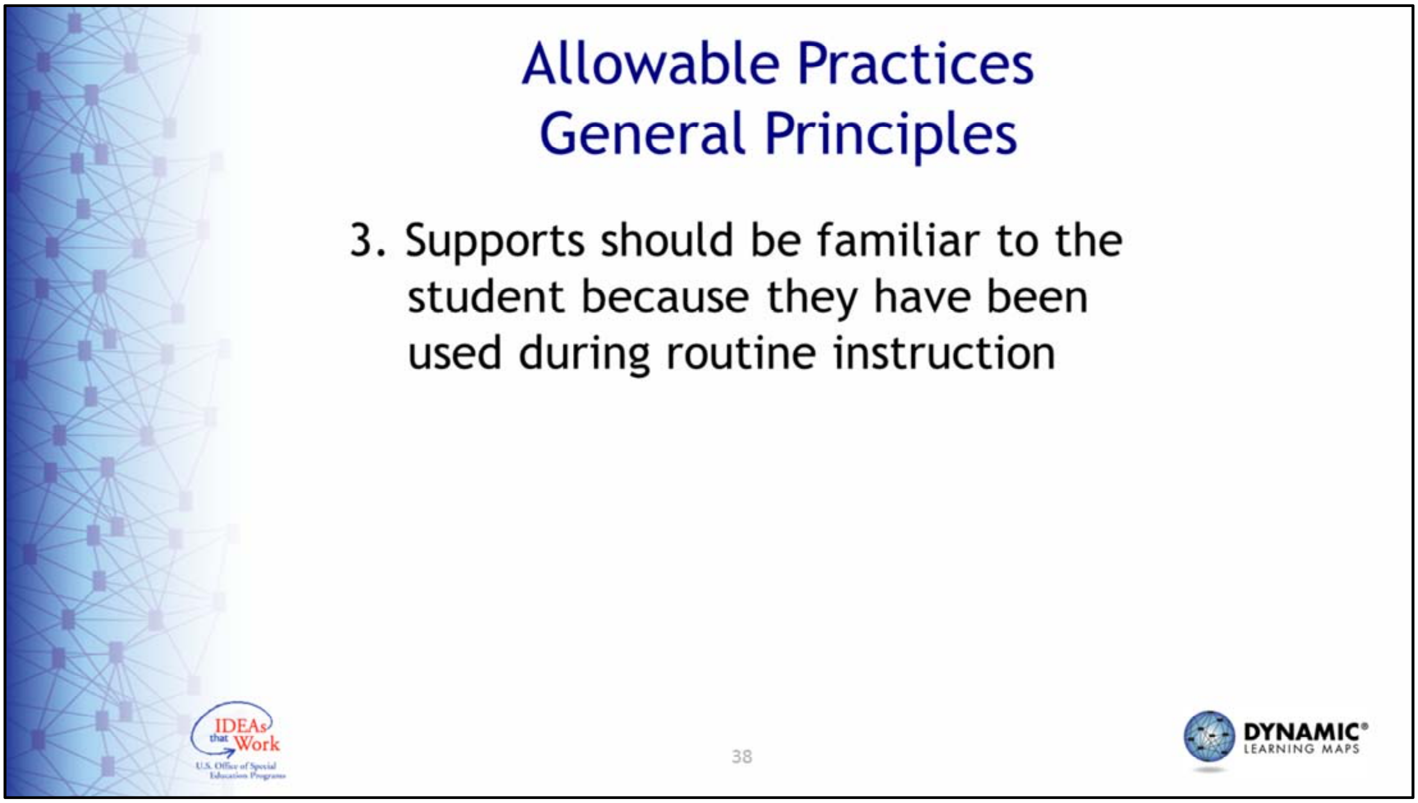


First, the student should be expected to respond independently. No matter what additional supports IEP teams and test administrators select in the Personal Needs and Preferences profile, all items should be completed with the primary goal of student independence at the forefront. Even if more supports are needed to provide physical access to the computer-based system, the student should be able to interact with the assessment content and respond to the content independently.

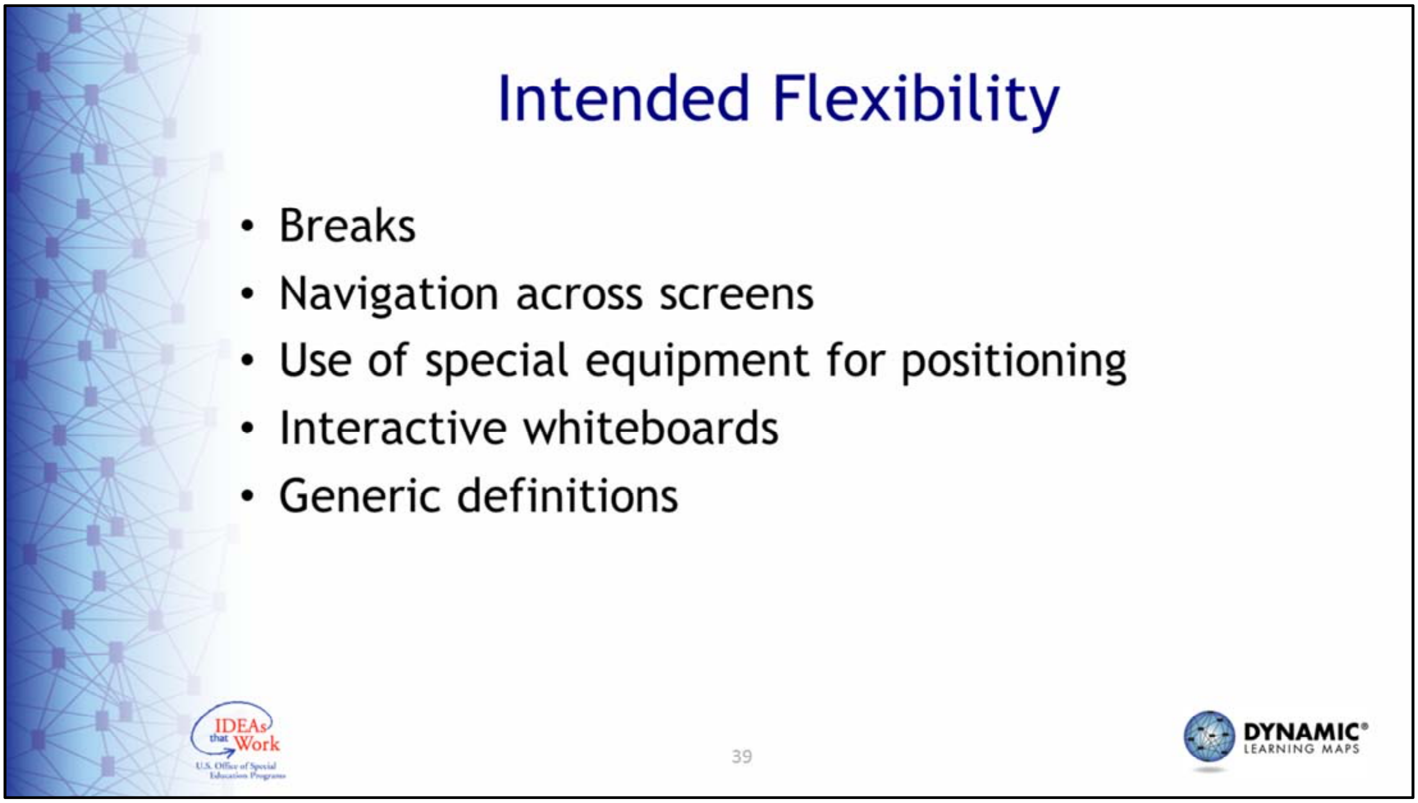


Second, in teacher-administered testlets, there should be flexibility in the ways that students access the items and materials. For example, the test administrator may read aloud any part of the assessment including passages in ELA. As another example, DLM standard administration procedures define typical arrangements for the test administrator, student, and computer. However, the test administrator may need to adapt the physical arrangement based on a student's needs and use of special equipment. Similarly, test administrators may present the answer options off the computer in a format that makes them more accessible, but test administrators cannot reduce the number of answer choices or add pictures to represent answer items that only have printed choices on the computer screen.

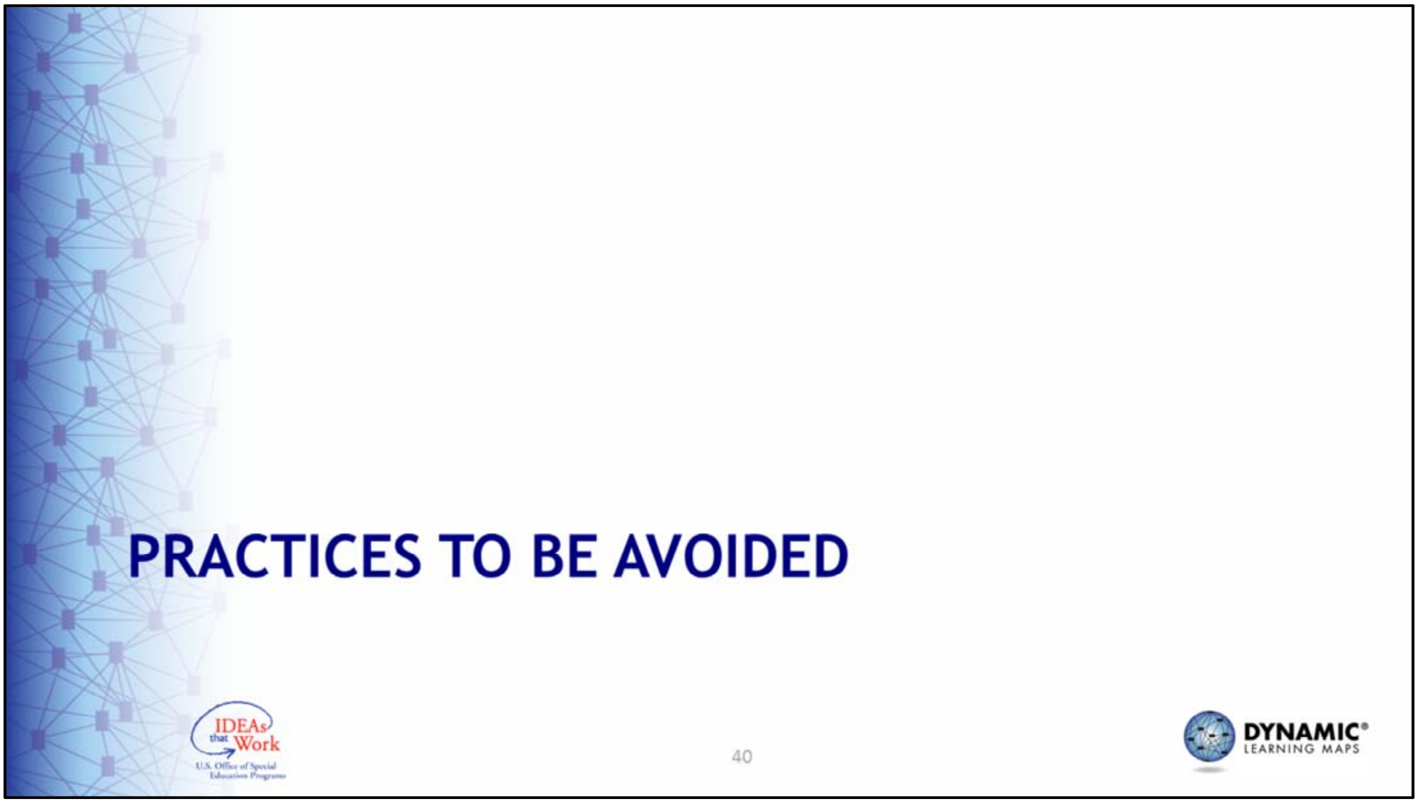
Other examples of this flexibility include the substitution of objects as needed. If the item calls for the use of an object that is inappropriate or unavailable, other objects may be substituted. While maintaining flexibility in access to the items and materials, it is also important to maintain consistency in the student's interaction with the concept being measured. This means that questions cannot be rephrased except to replace the name of objects when alternate objects are selected for a student.



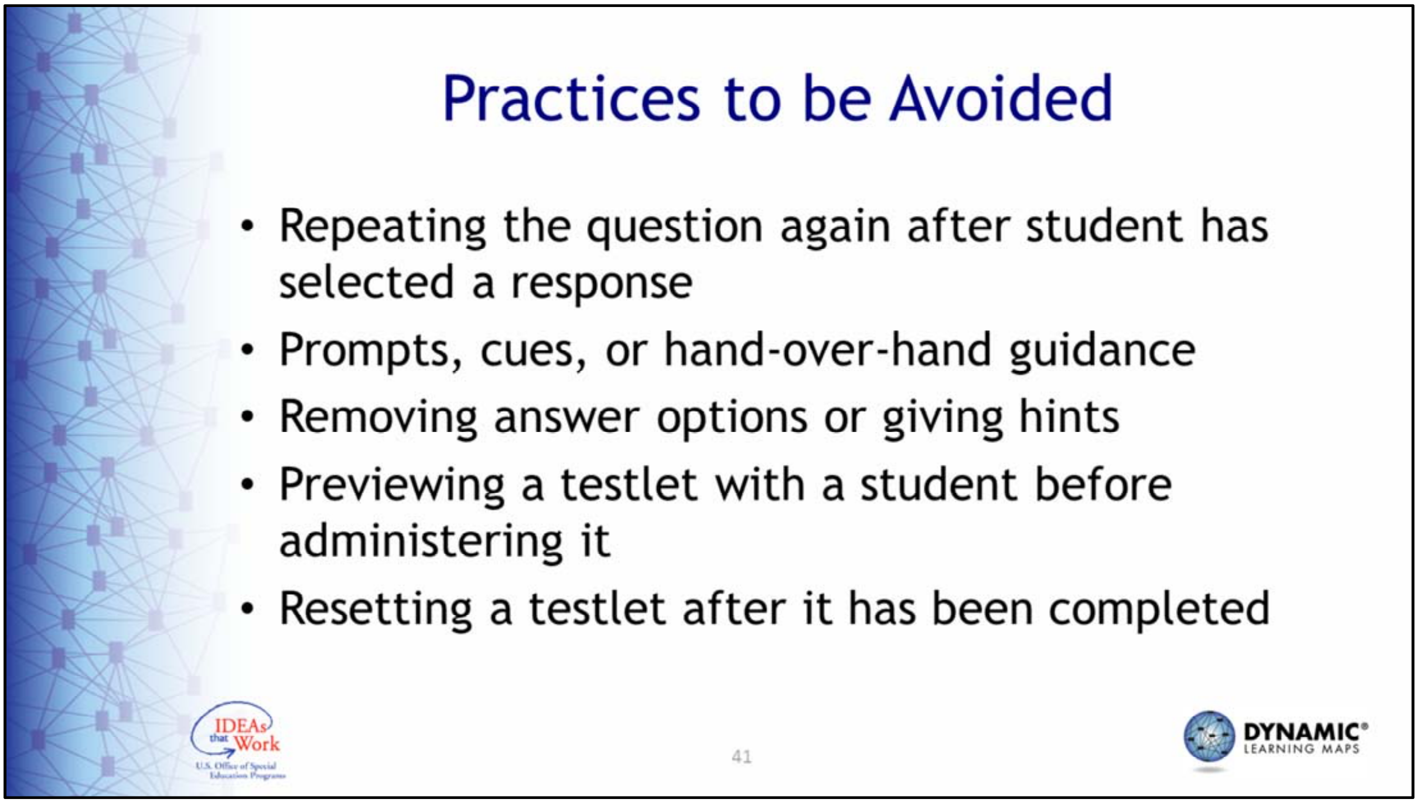
Third, supports that students use to complete testlets should be supports that are used consistently during routine instruction. Students who have never received a support prior to the testing day may not know how to make the best use of the support. For instance, if a student is not accustomed to using eye gaze to communicate a response to a proctor during an online instructional activity, it may be confusing to have the test administrator provide this support during testing. Or, if a student has never used computer read aloud, the student may not interact well with the voice being used by KITE. Make sure the student has had experience with the selected support that will be used during operational testing. This means providing the same support, or a very similar one, during your student's computer-based classroom instruction.



As noted elsewhere in DLM training, a number of supports are built into the DLM Alternate Assessment to provide flexibility for all students. For example, students may take breaks during or between testlets. Although the goal should be to complete a testlet in a single session, students can take breaks to avoid fatigue, reduced attention, or behavioral problems. In addition, test administrators may navigate across screens of the testlet after a student has responded to an item. Furthermore, students may use special equipment to access the test material, and the assessment can be administered on a broad range of devices including computers, iPads, and interactive white boards. Finally, if the student does not understand the meaning of a word used in the assessment, the test administrator may define the term generically and allow the student to apply that definition to the problem or question in which the term was used. Exceptions to this general rule are noted in the TIP for specific testlets where the item is assessing student’s knowledge of the particular word.



While many supports and practices are allowable for test administration, some practices should be avoided.



Practices that should be avoided are the ones that interfere with students' independent responses to the content of items. Test administrators may not repeat the question after the student has selected a response, or in any other way prompt the student to choose a different answer. The use of any physical prompts or hand-over-hand guidance is prohibited during the assessment. Test administrator cannot reduce the number of answer options presented in a question. Test administrators cannot prompt students, give hints, or indicate when a question was answered correctly or incorrectly. Test administrators cannot allow a student to preview a testlet and then use the Exit Does Not Save option to restart the testlet again later. Finally, DLM's policy is that testlets cannot be reset after they have been completed.

To learn more about allowable supports, check the TEST ADMINISTRATION MANUAL on the DLM webpage for your state. If educators still have questions whether a support is allowable, they may contact the Help Desk at 1-855-277-9751. If the test administrator provides supports outside of those that DLM has listed, your state may require you to describe those supports through a state reporting system. These supports should always be approved before they are used in order to avoid invalidating the student's assessment.

This concludes required training Module 3 for the DLM Alternate Assessment. You must successfully complete a quiz assessing your understanding of this module before you can administer any DLM tests. Complete this quiz before continuing to Module 4.

DYNAMIC® LEARNING MAPS

DLM REQUIRED TRAINING PART 3
POST-TEST

1. All testlets in the DLM® Alternate Assessment include two primary parts: the engagement activity and the actual items or questions.

   True False

   Feedback if False is selected: Engagement activities are an important component of the DLM assessment design. The engagement activities are designed to motivate students, activate prior knowledge, and prepare students for the cognitive process required in the items that follow.

2. In math, the engagement activity provides the students with an opportunity to practice the skills assessed in the testlet.

   True **False**

   Feedback if True is selected: In math, the engagement activity provides the students with an opportunity to explore the objects that will be used in the testlet itself, provides a context for the questions that will follow, and sometimes activates a cognitive process that will be required in the testlet. The engagement activity in math should not be used as an activity to teacher or practice the specific skills to be assessed in the testlet.

3. Which of the following is true regarding the teacher-administered testlets in DLM? (select all that apply)
   a. They use the KITE platform.
   b. They direct teachers in administering the testlets to students.
   c. The student interacts directly with KITE as much as possible.
   d. The test administrator enters all student responses and observations of students in KITE.

   Feedback if "c" is selected: The teacher-administered testlets use the KITE platform to direct teachers in administering the testlets to students. In these teacher-administered testlets, the test administrator enters all student responses and observations of students in KITE, but the student does not interact directly with the system. The teacher-administered testlets are used for students who cannot interact directly with the KITE system. Sometimes this is because students are still developing symbolic understandings. Other times the content cannot be assessed with information presented on the computer screen. Teacher-administered testlets provide step-by-step, scripted directions that guide the test administrator through the standardized testlet administration process. Items in teacher-administered testlets are written to the test administrator, who delivers each item and then enters responses based on observation of the student's behavior.

4. Most students will participate in the DLM assessment using computer-administered testlets.

   True False

   Feedback if False is selected: Computer-administered testlets are intended for use by students who can interact directly with the computer. Most students who participate in the DLM alternate assessment will participate using computer-administered testlets. Some students may interact with the computer using special devices, such as alternate keyboards, touch screens, or switches, but they will interact directly with the computer using computer-administered rather than teacher-administered testlets.

5. Requiring students to read the complete text in ELA before rereading to respond to items serves to activate background knowledge and prepare students for the cognitive processes to be assessed with the second reading.

   True False

   Feedback if False is selected: The first reading is intended to familiarize the student with the entire text. It serves as an important engagement activity that helps students activate background knowledge and prepare for the cognitive processes to be addressed through items in the second reading. During the first read, test administrators can use shared reading and other engagement techniques that are used during daily instruction while reading with the student. During the second reading of the text, students may encounter items that are embedded in the text at appropriate points or items that are presented at the conclusion of the second read. During the second read, the test administer does not interact directly with the student.

6. Most items in computer-delivered testlets are single-select multiple-choice items.

   True False

   Feedback if False is selected: There are several types of items in the DLM assessment, but most items in computer-delivered testlets are single-select multiple-choice items. Other item types are reserved for items that cannot be assessed appropriately with a single-select multiple-choice format.

7. Like other testlets in ELA, some writing testlets are computer-administered and others are teacher-administered.

   True **False**

   Feedback if True is selected: All writing testlets are teacher administered-testlets. They have engagement activities that require students to select a writing topic. The test administrator then follows step-by-step directions and interacts with the student off the computer. Items are embedded throughout the interaction. The items require teachers to observe students as they write or evaluate the written product and then select the onscreen options that best reflect their observations. The student's writing product is not submitted in the system.

8. In teacher-administered testlets, there should be flexibility in the ways that students access the items and materials. Which of the following are examples of allowable flexibility? (select all that apply)
   a. **The test administrator may adapt the physical arrangement of response options.**
   b. **The test administrator may substitute objects as the student needs.**
   c. **The student may respond off-computer, and the test administrator enters the selected response.**
   d. The test administrator may reduce the number of response options.
   e. The test administrator may rephrase questions.

   Feedback if "D" or "E" is selected: There should be flexibility in the ways that students access the items and materials on all DLM testlets. For example, the test administrator may read aloud any part of the assessment including passages in ELA. Test administrators may need adapt the physical arrangement of the computer, test administrator and student based on a student's needs and use of special equipment. Similarly, test administrators may present the answer options off the computer in a format that makes them more accessible, but test administrators cannot reduce the number of answer choices or add pictures to represent answer items that only have printed choices on the computer screen. Other examples of acceptable flexibility include the substitution of objects as needed. If the item calls for the use of an object that is inappropriate or unavailable, other objects may be substituted. Test administrators cannot be rephrase questions except to replace the name of objects when alternate objects are selected for a student.

9. The use of any prompts or hand-over-hand guidance is prohibited during the assessment.
   True False

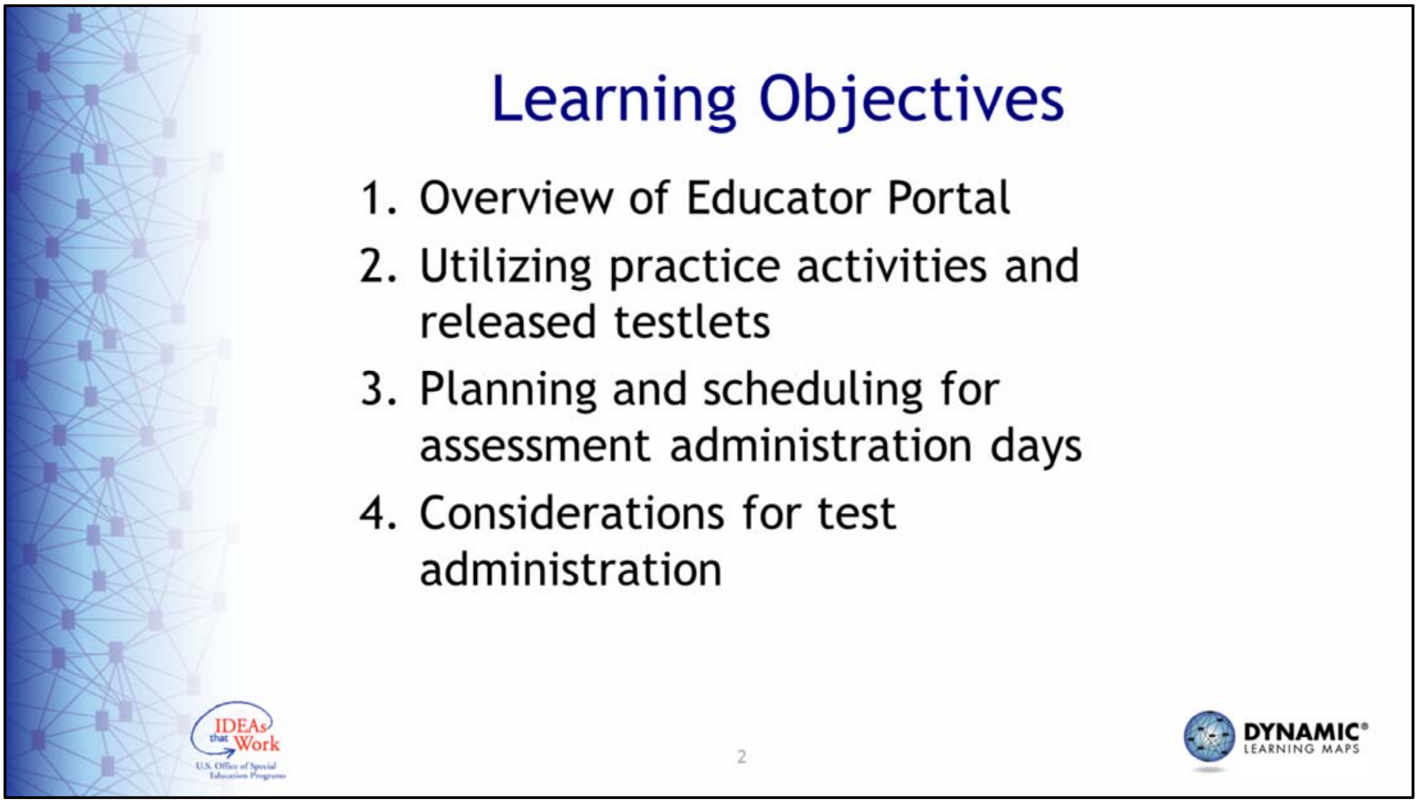
   Feedback if False is selected: The use of any physical prompts or hand-over-hand guidance is prohibited during the assessment. Test administrators cannot reduce the number of answer options presented in a question. Test administrators cannot prompt students, give hints, or indicate when a question was answered correctly or incorrectly.

10. Supports that students use to complete testlets should be supports that are used consistently during routine instruction.

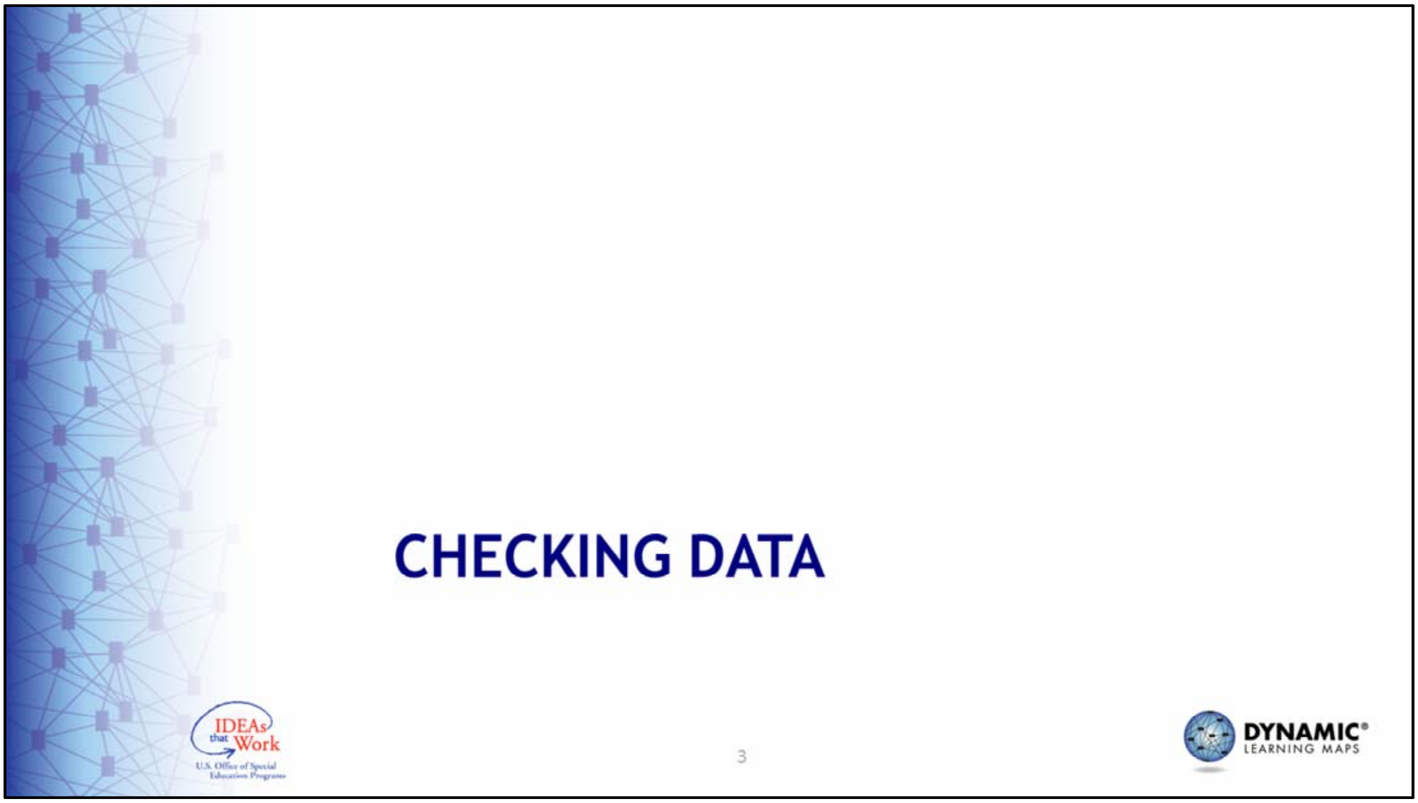
True False

Feedback if False is selected: Supports that students use to complete testlets should be supports that are used consistently during routine instruction. Students who have never received a support prior to the testing day may not know how to make the best use of the support. For instance, if a student is not accustomed to using eye gaze to communicate a response to a proctor during an online instructional activity, it may be confusing to have the test administrator provide this support during testing. Or, if a student has never used computer read aloud, the student may not interact well with the voice being used by KITE. Make sure the student has had experience with the selected support that will be used during operational testing. This means providing the same support, or a very similar one, during your student's computer-based classroom instruction.

This training, *Preparing to Administer the Assessment,* is the fourth of four required training modules for educators who are responsible for delivering the DLM® Alternate Assessment. This training is required for all test administrators prior to test administration.

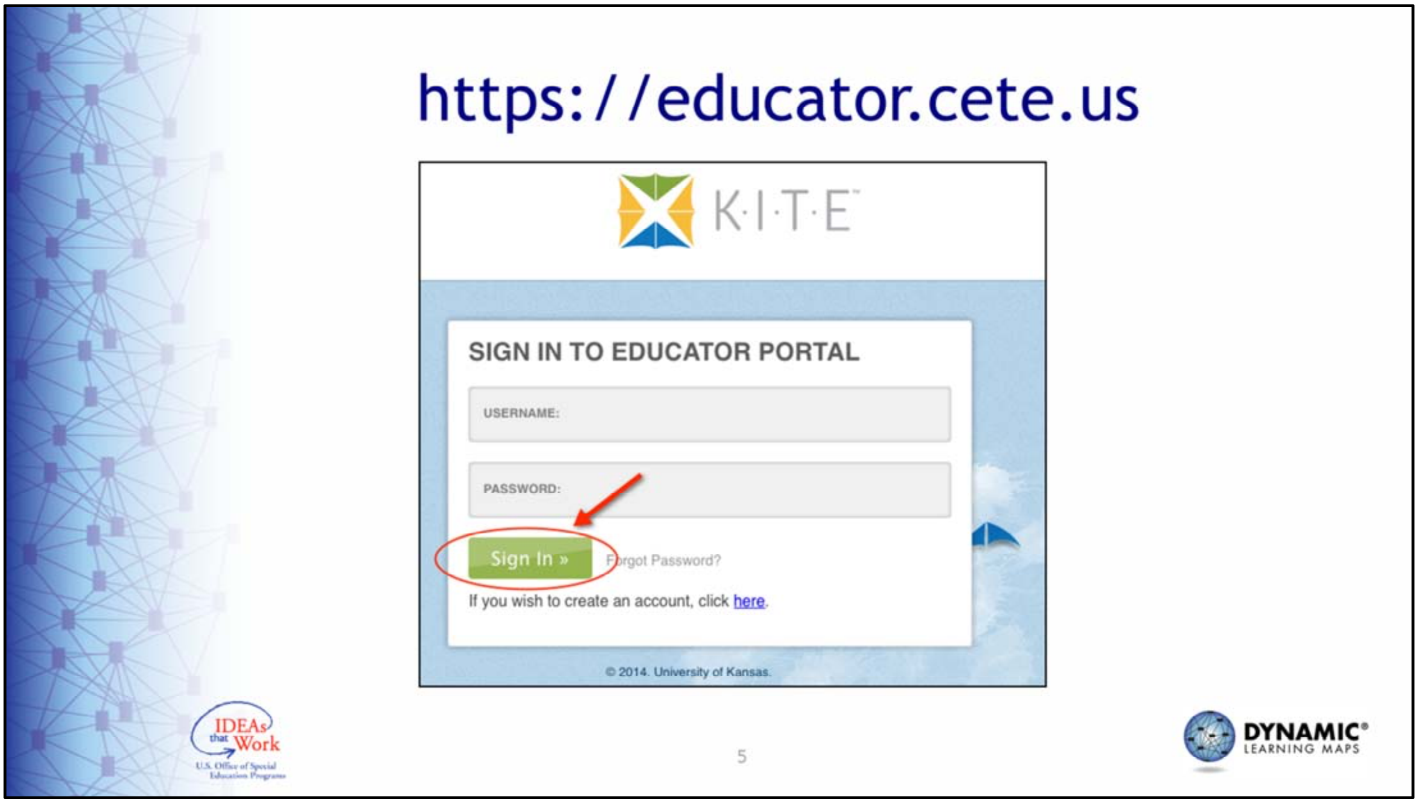


This module will provide educators with an overview of the tasks they must complete in Educator Portal so students will have access to KITE™. This module also walks educators through practice activities and released testlets that can help them and the students they teach learn the look and feel of the testlets as they are delivered in KITE. Finally, this module includes specific suggestions about planning for and scheduling assessment administration days and reviews considerations for test administration.

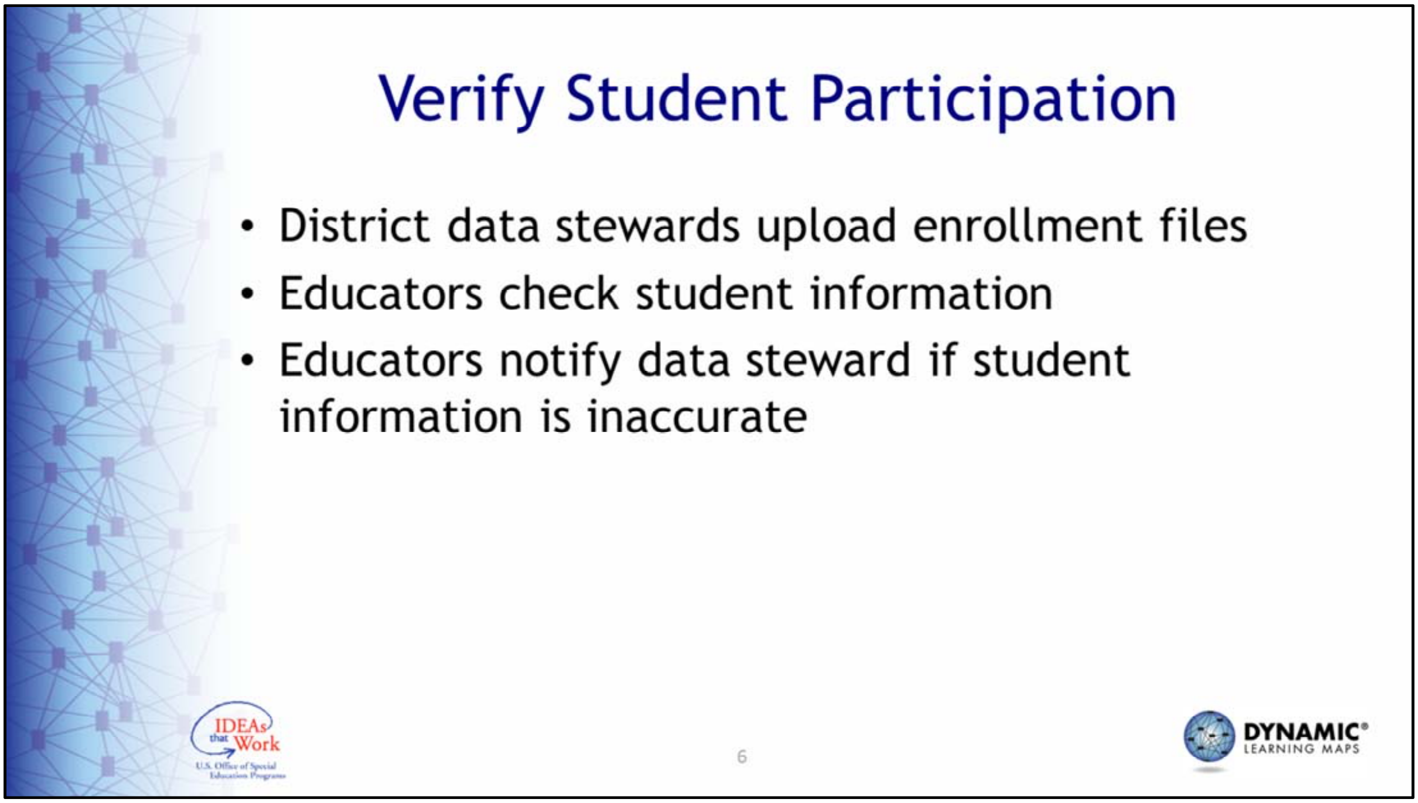


First, let's take a look into the information you will need to verify or provide in the DLM system prior to the assessment window.

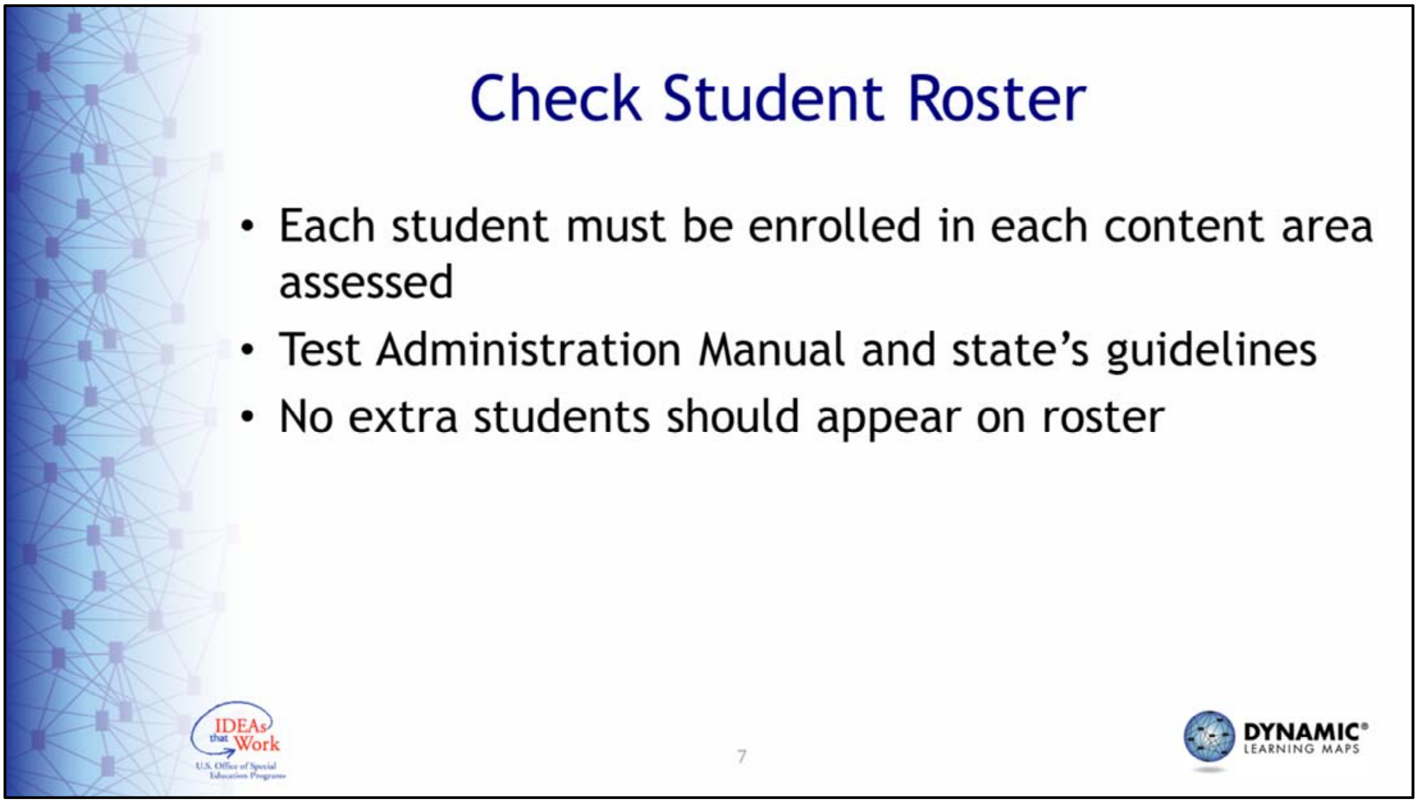
Test administrators will complete all data management in Educator Portal. Educators who did not have a user account in Educator Portal last year will receive an email asking them to activate their account after their state or district data steward has uploaded their user information. Full instructions on how to access Educator Portal and other Educator Portal information, including information about changing your password, is available in the TEST ADMINISTRATOR MANUAL. During this training, a few basic features and requirements related to Educator Portal will be reviewed.



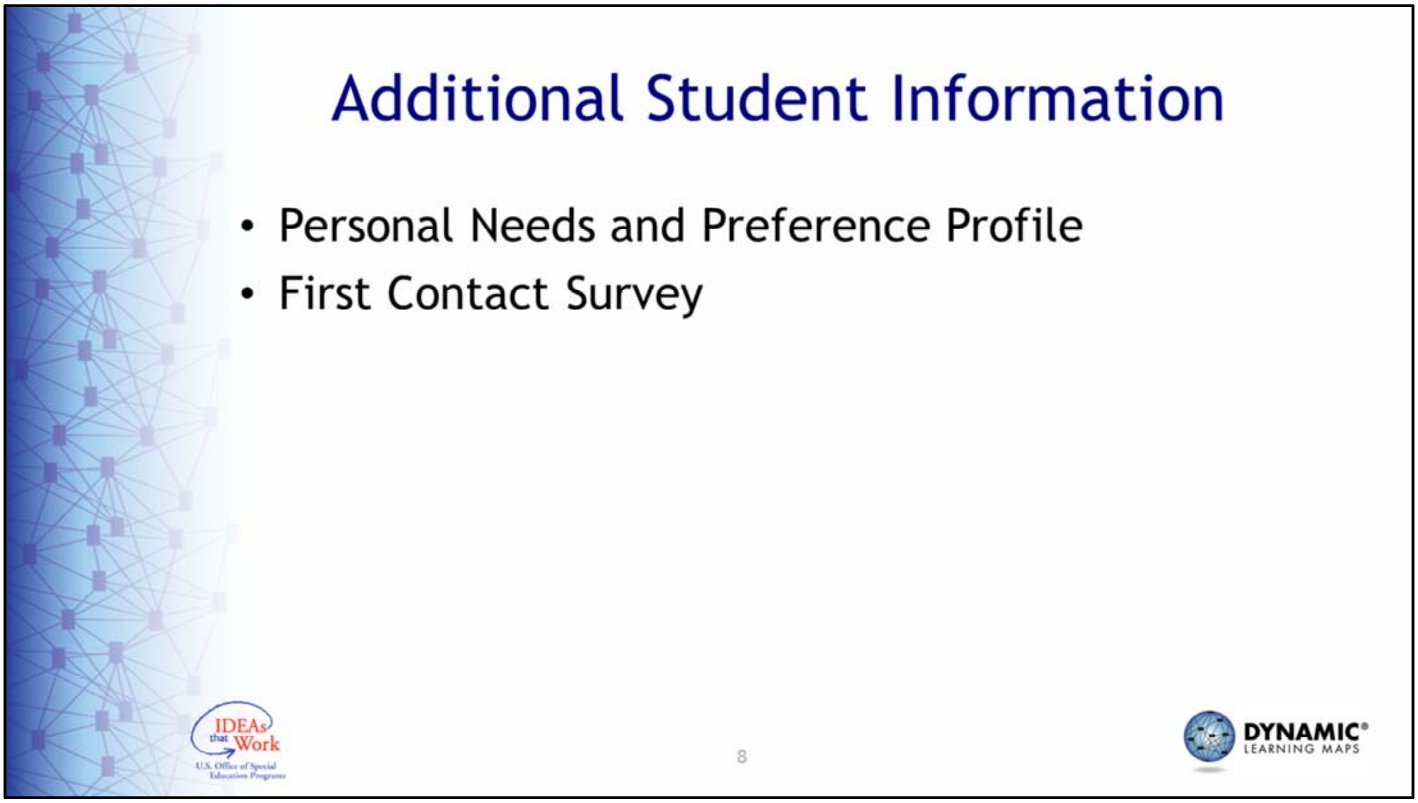
Educator Portal is accessed at http://educator.cete.us. It serves many purposes, but most importantly, it houses student data including the Personal Needs and Preferences Profile, the First Contact survey, and student usernames and passwords for testing.



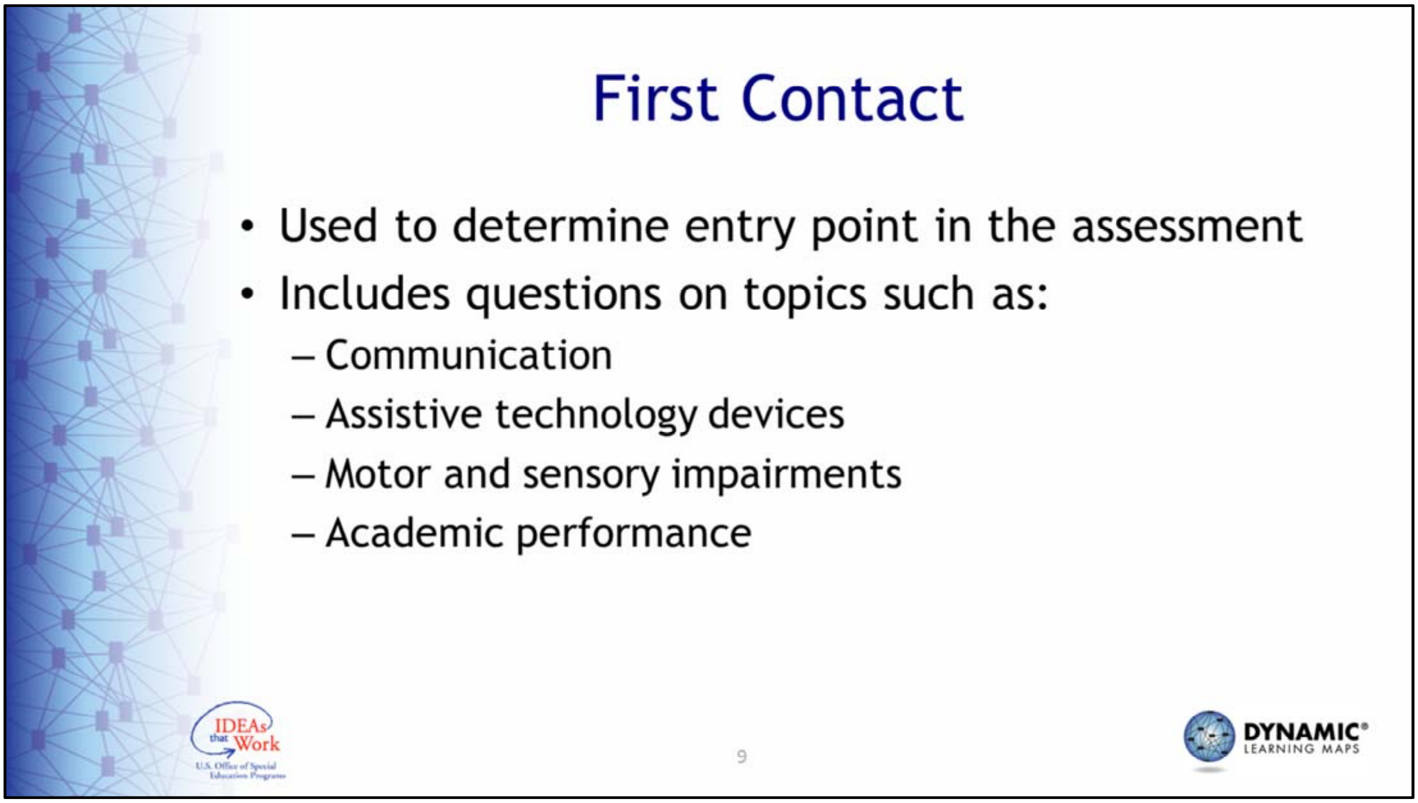
District data stewards upload enrollment files with student data in Educator Portal before educators can access student data. After the upload is complete, educators are responsible to ensure all student information is correct, including the state ID, the first name, last name, and grade for each student. Educators must notify their data steward if any student information needs to be corrected or edited.



Next, educators check the roster to make sure each student appears for each content area assessed. Educators should start by checking the TEST ADMINISTRATOR MANUAL and their state's guidelines to ensure that students are rostered in the appropriate assessments. Again, educators are responsible for confirming that students who appear on the roster are listed as appropriate for each assessment and that no extra students appear on their roster.



Lastly, educators need to update or complete each student's Personal Needs and Preferences Profile, which is called the Access Profile in Educator Portal, and the student's First Contact survey to ensure they are finished in a timely manner before the assessment window is open.

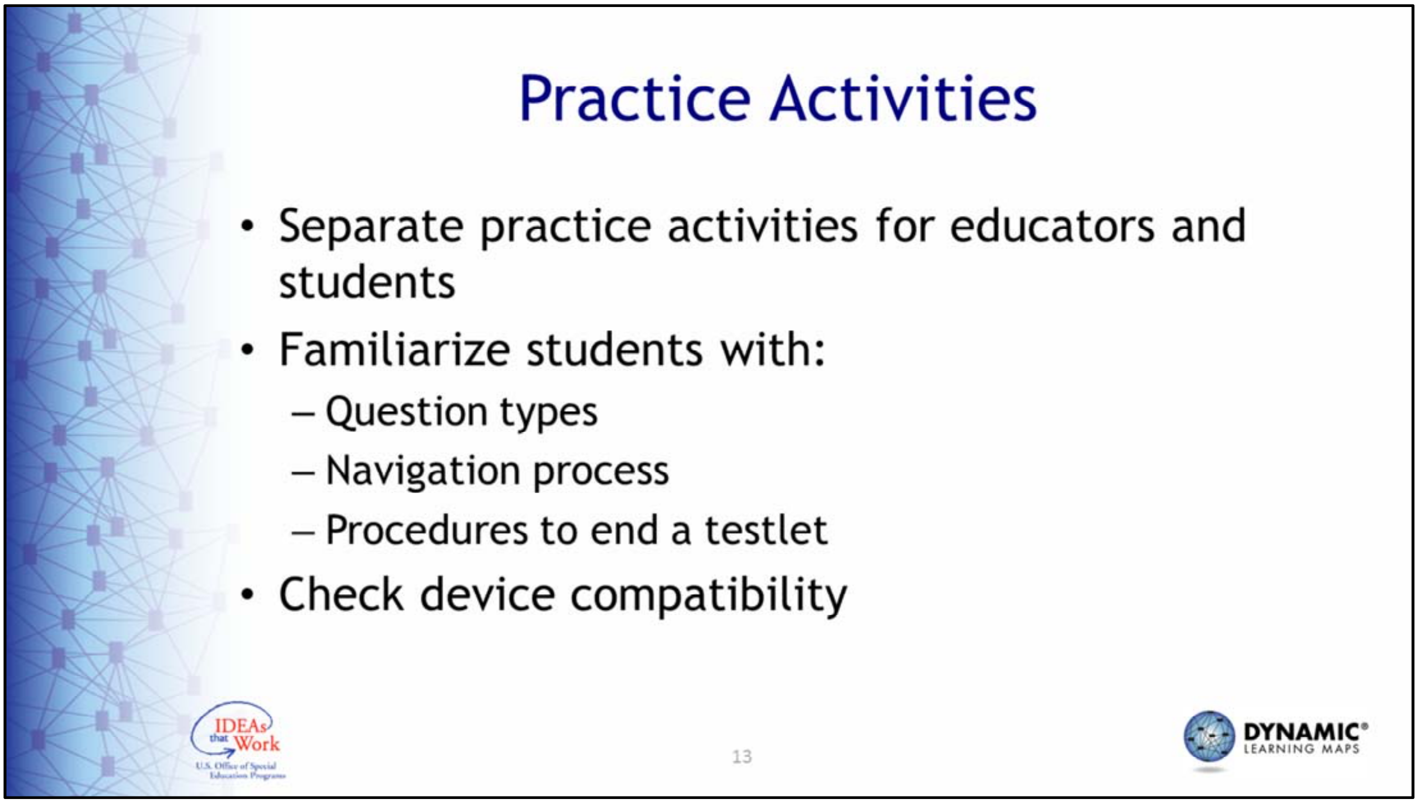


The First Contact survey is required and needs to be submitted before any testlets can be delivered in the KITE system. The First Contact survey is used by the KITE system to determine the linkage level of the first testlet that students complete when they begin to use the DLM Assessment. All questions that are marked as required must be completed in order for the KITE system to make accurate decisions about the first testlet. Step-by-step directions with screen shots for completing the First Contact Survey are available in the TEST ADMINISTRATOR MANUAL.

Pause for Activity

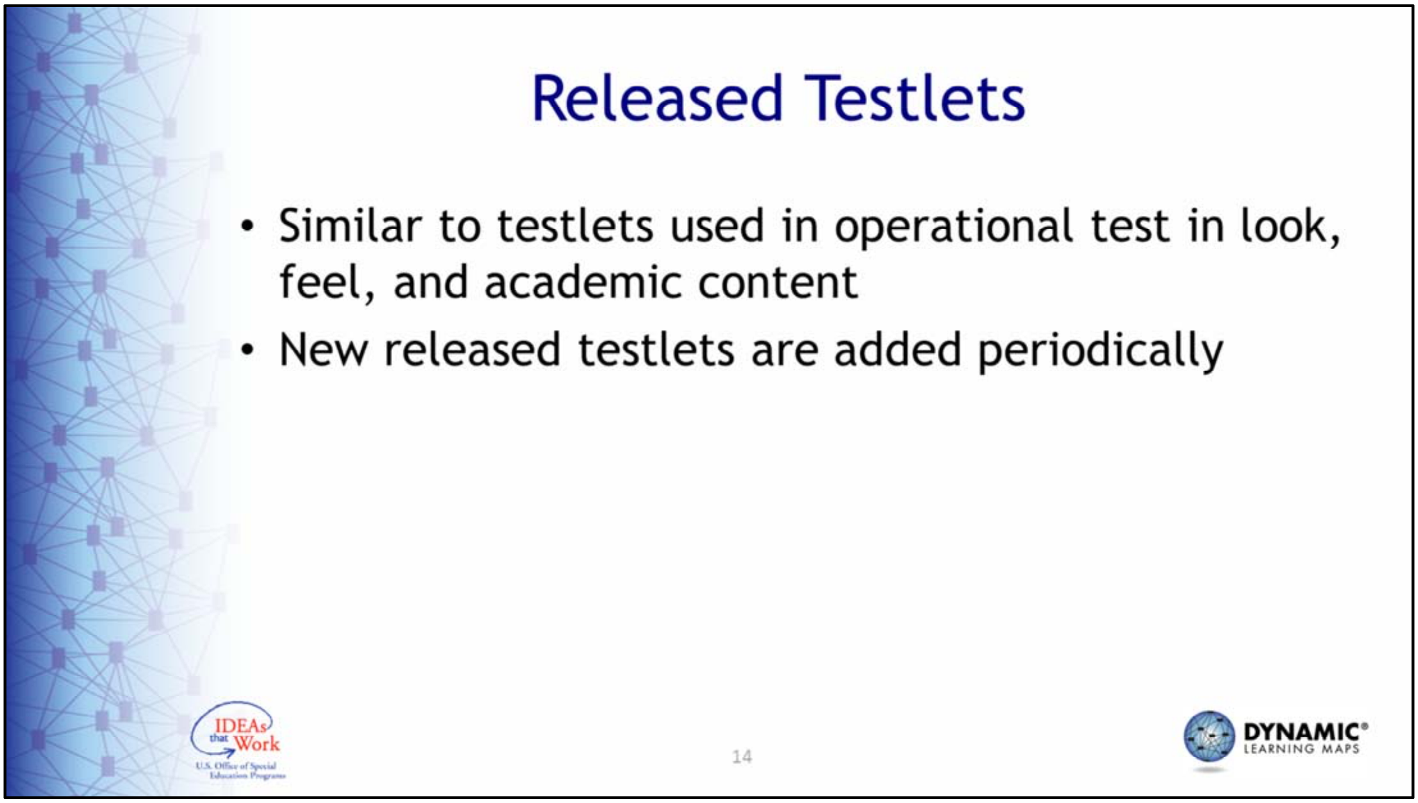
In addition to providing and updating information about students in Educator Portal, educators should prepare for administering the assessment by completing DLM practice activities and released testlets before beginning the operational DLM assessment.

Practice activities and released testlets are accessed through KITE in the practice section. The practice username and passwords must be used to access the practice activities and released testlets. Both types of activities can be completed as many times as desired.

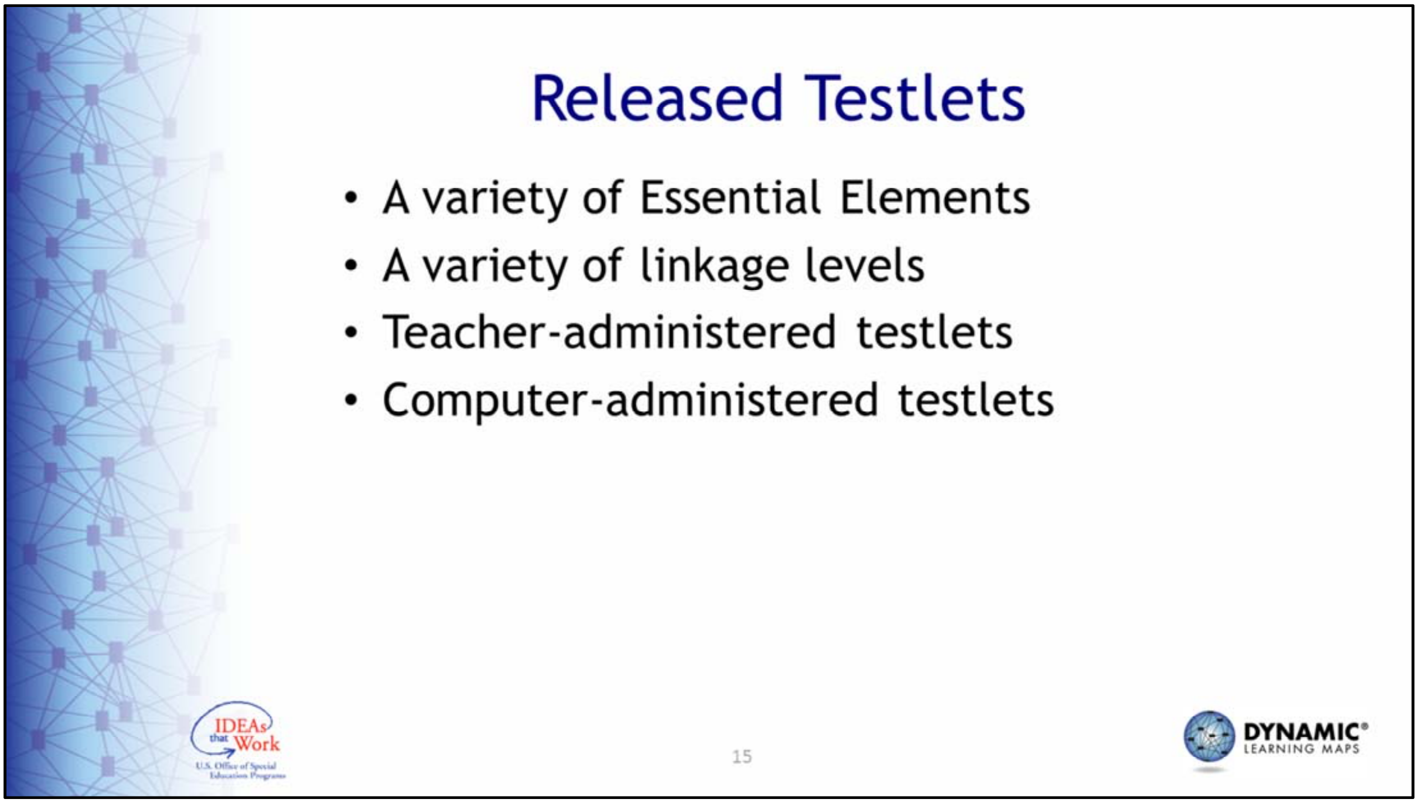


There are many reasons to utilize the practice activities. Practice activities and released testlets are very valuable in helping prepare both the educator and the students. Educator practice activities are tutorials about testlets that are administered directly by the educator. Student practice activities are tutorials about testlets that are administered directly to the student via the computer.

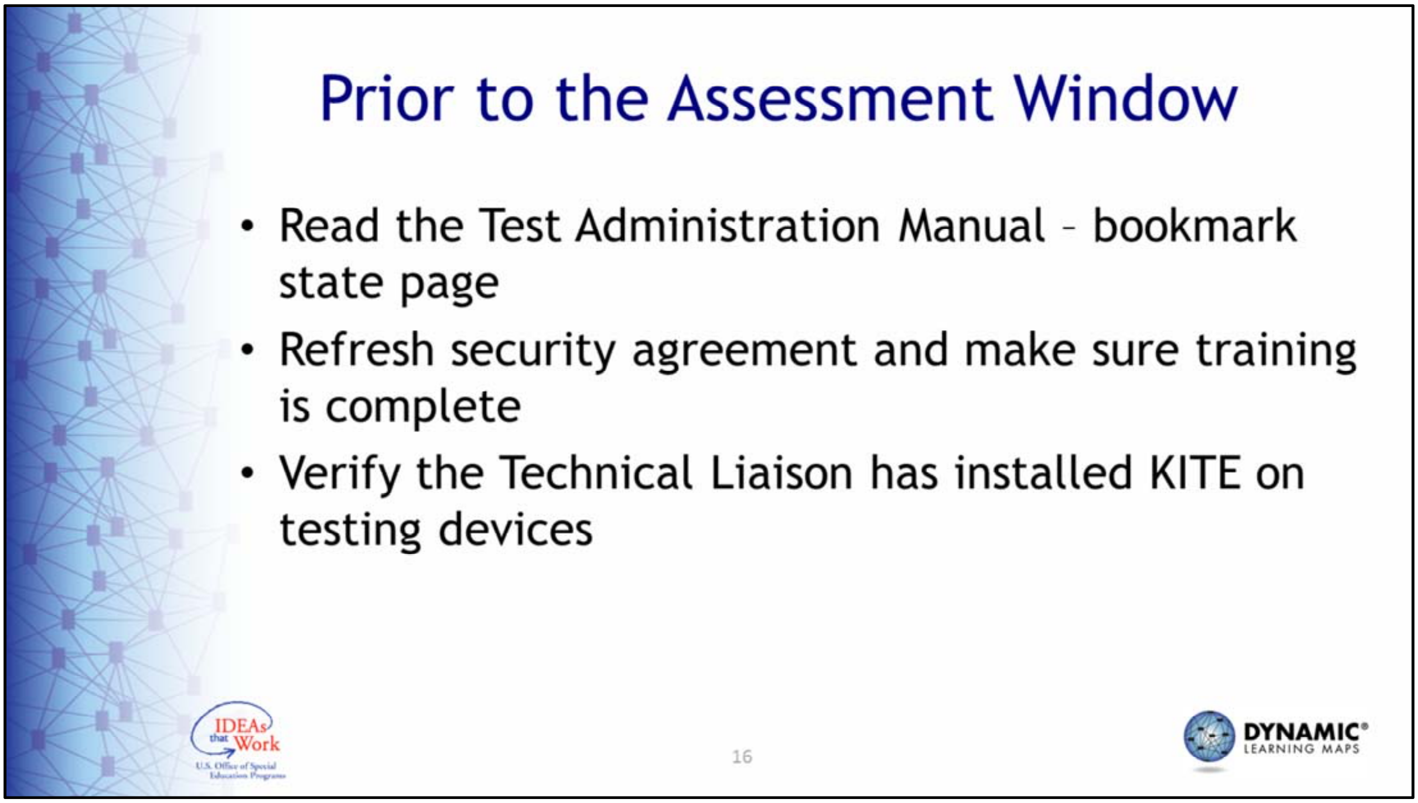
Both types of practice activities are designed to familiarize you and your student with the question types, navigation processes, and procedures to end a testlet. Several different sample student profiles have been set up. Each sample student has been given different accessibility supports in the Personal Needs and Preferences Profile. Taking practice activities while logged in as a different sample student allows the educator to see how different accessibility features impact a student’s experience in KITE. Lastly, the practice activities are a good way to check device compatibility prior to the operational test for students who may require the use of assistive technology to interact with the computer.



Several released testlets are also available. The released testlets are similar to the testlets used in the operational test in the look, feel, and academic content. This allows students and test administrators to familiarize themselves with the testlets and the KITE system. New released testlets are also added periodically. The released testlets may be completed as many times as needed to help students get comfortable with the KITE system.

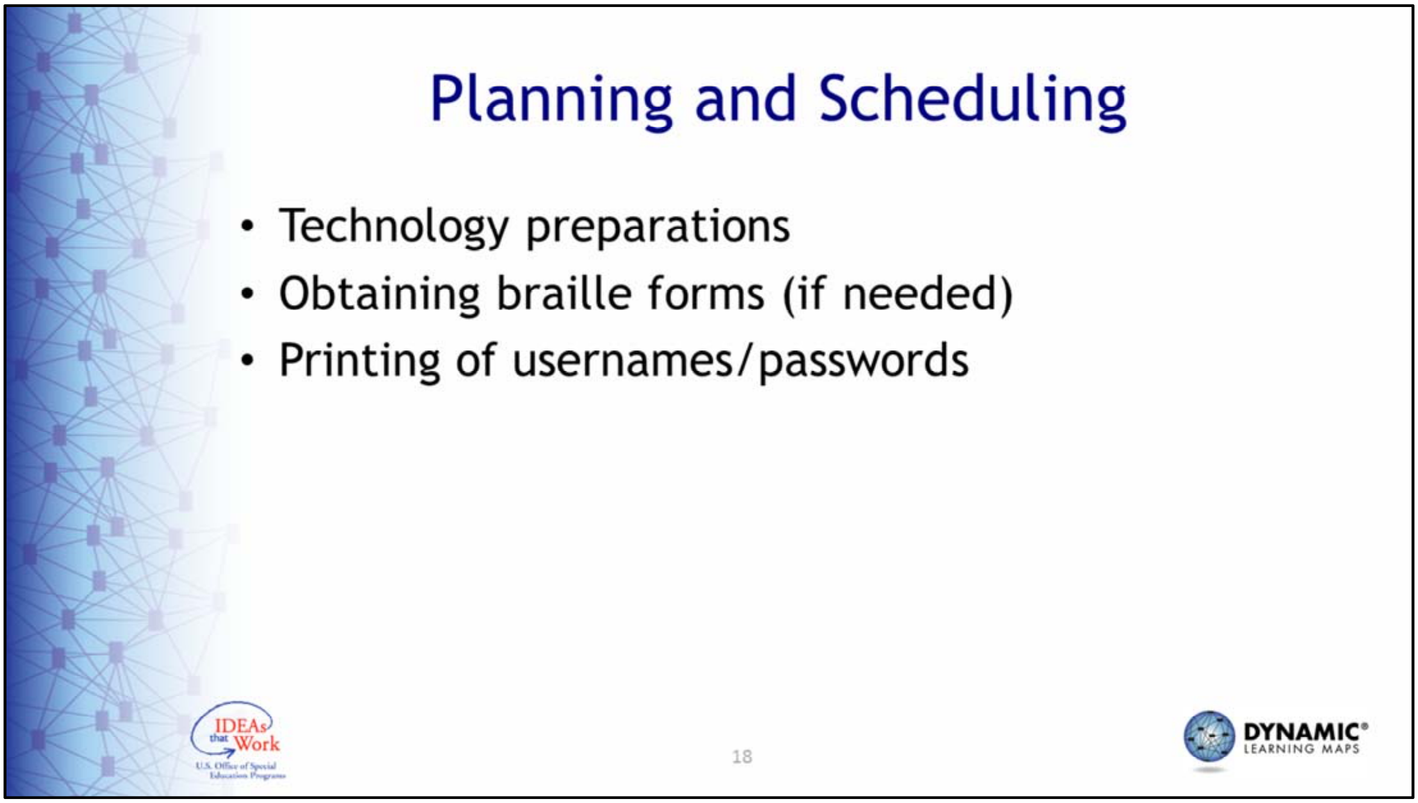


Released testlets are selected from a variety of Essential Elements and linkage levels from third grade through high school. Testlets contain items that align to the five linkage levels: Initial Precursor, Distal Precursor, Proximal Precursor, Target, and Successor. Testlets at the Initial Precursor linkage level are typically teacher-administered testlets, while computer-administered testlets designed for students to take directly are typically used at the other four linkage levels. The easiest testlets are at the Initial Precursor level and marked with IP, and the most difficult testlets linked to any Essential Element are marked with an S for Successor linkage level.



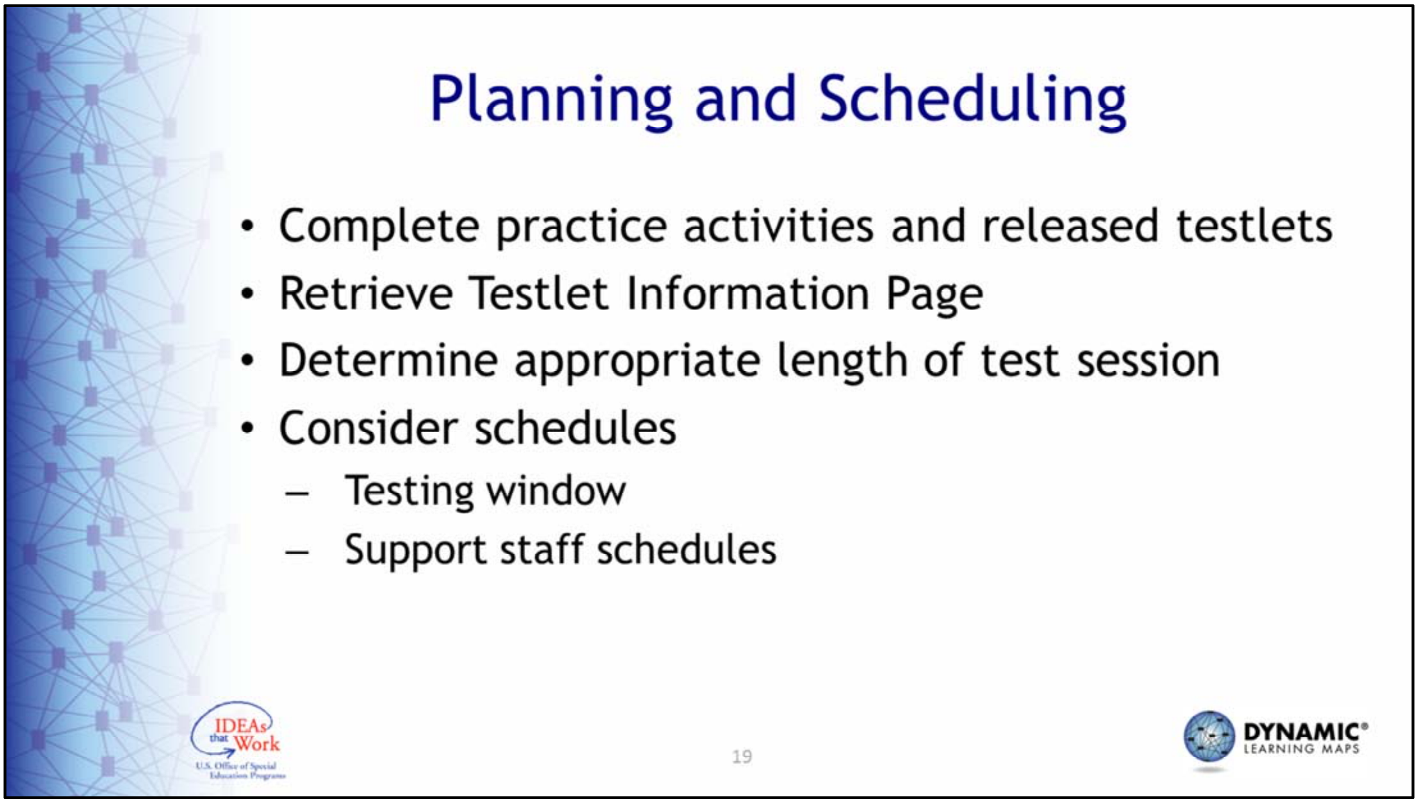
Prior to the start of a testing window, test administrators should read the DLM TEST ADMINISTRATION MANUAL, bookmark the appropriate state and Educator Resource webpages for more information, and review the full procedures for testing. If not already completed at the beginning of the school year, test administrators should also complete their security agreement and make sure all the required training modules are completed. Last, test administrators must verify that the Technical Liaison for the school or district has installed the KITE system on all testing devices planned for use.

After test administrators have completed the First Contact survey in Educator Portal, it is time to start planning and scheduling the test administration days. Test administrators should verify all student information and provide ample time to coordinate testing sessions prior to the state-specific testing window.



Test administrators will need to make any technological preparations before the assessment. For example, assistive devices should be checked to make sure they are compatible with the KITE test delivery system. Technology preparations could also include reserving computer labs for testing days.

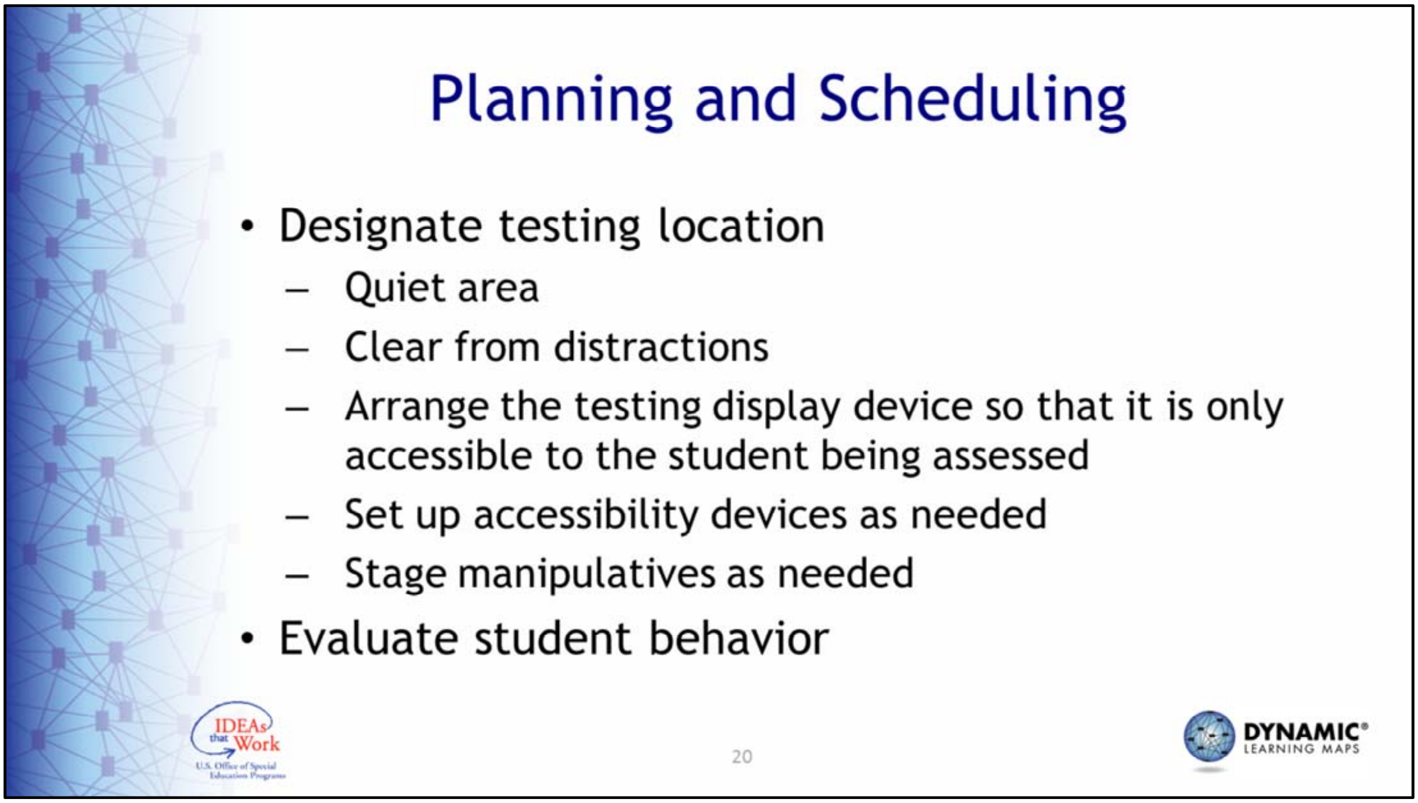
If students will be taking the braille version of the assessment, extra steps must be taken in addition to indicating braille on the Personal Needs and Preferences Profile. Braille will not automatically come for a student without these extra steps. Please contact the District Test Coordinator in advance of the testing window to ensure the student receives the braille testlets. Test administrators may also find it helpful to print the usernames and passwords for students to support logging in to KITE. Again, details and step-by-step guides for completing each of these processes are provided in the TEST ADMINISTRATION MANUAL.



When scheduling a test session, test administrators must prepare for the administration of testlets. They will need to view the Testlet Information Page to determine any objects or manipulatives that may be needed for test administration. This will help educators to plan for students who may use a special device such as an alternate keyboard or specific manipulatives for a testlet or subject.

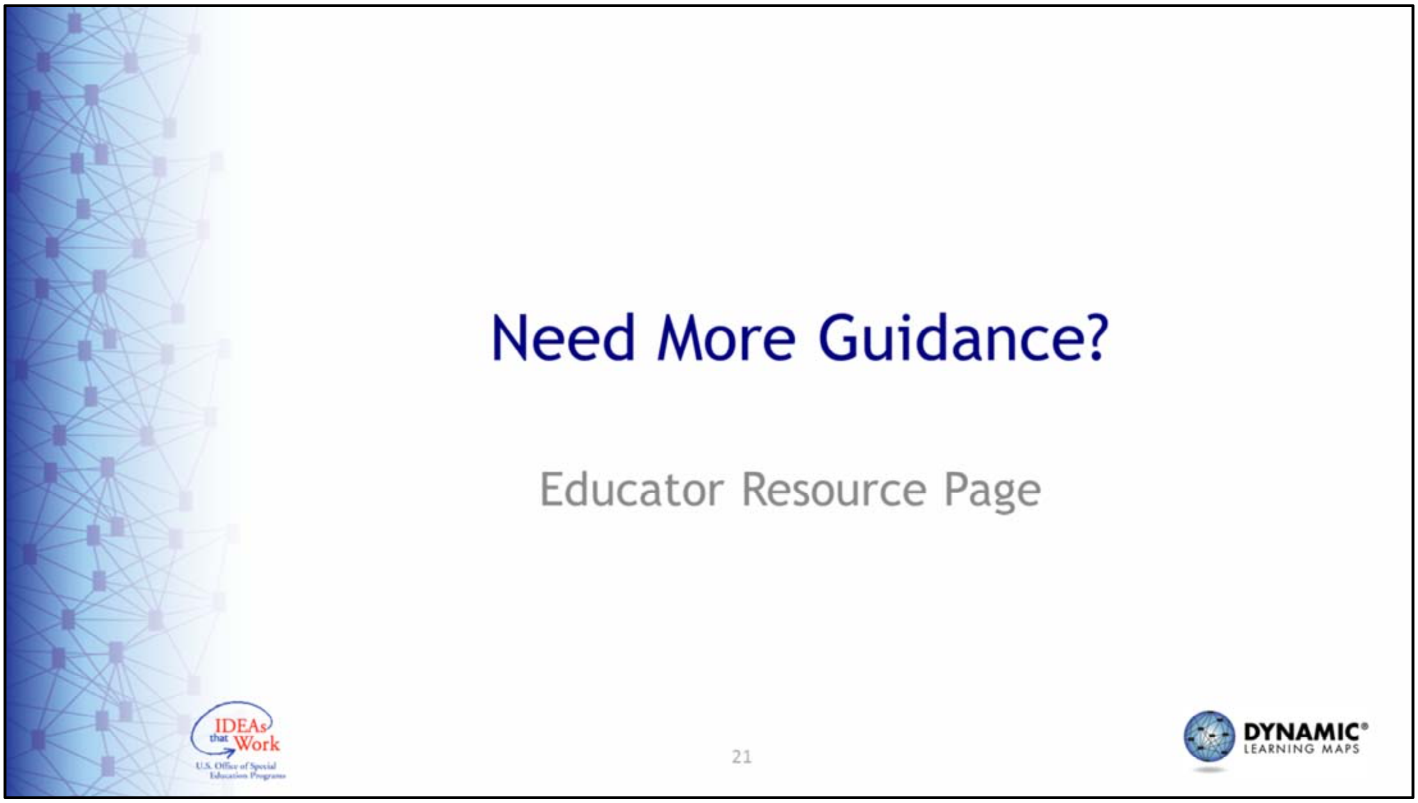
Test administrators can use the practice activities and released testlets to determine the approximate time it will take their students to complete one testlet. This way, they can better plan for the number of testlets to administer in one session without fatiguing the student.

Considering schedules is vital when dealing with testing windows that require all testlets to be administered in a prescribed time frame. Test administrators will need to think about their own schedules, their students' schedules, and often the schedules of support staff who will help with testing or monitoring other students in the classroom while one of the students is taking a testlet.

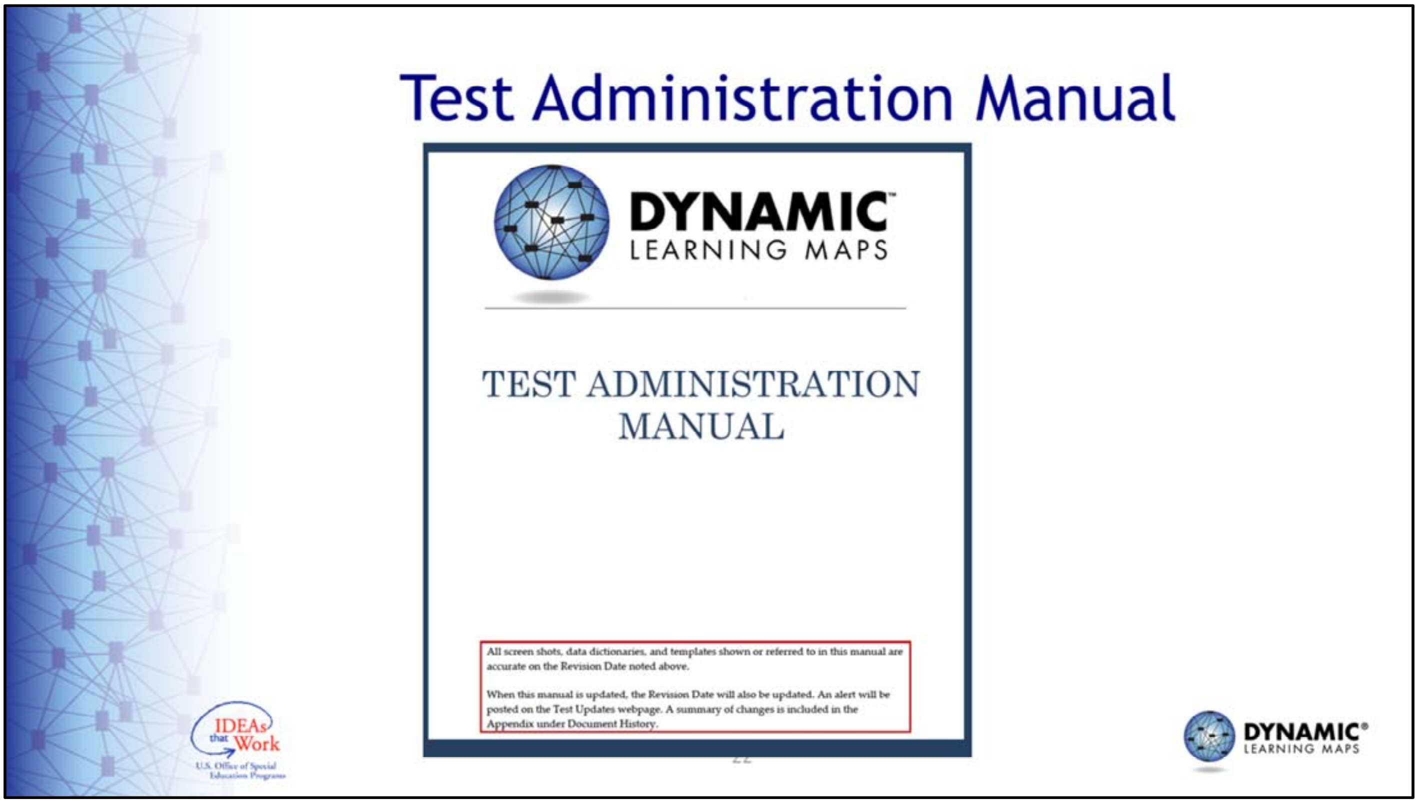


Designating a testing location is an essential part of planning. The testing location should be a quiet area that is clear of any possible distractions to the student. If a student must be tested in the classroom where other students are present, arrange the testing display, such as the computer monitor, so that it is only visible to the student being assessed. Educators may also need to set up an accessibility device or manipulatives that may be needed during the test before the test begins.

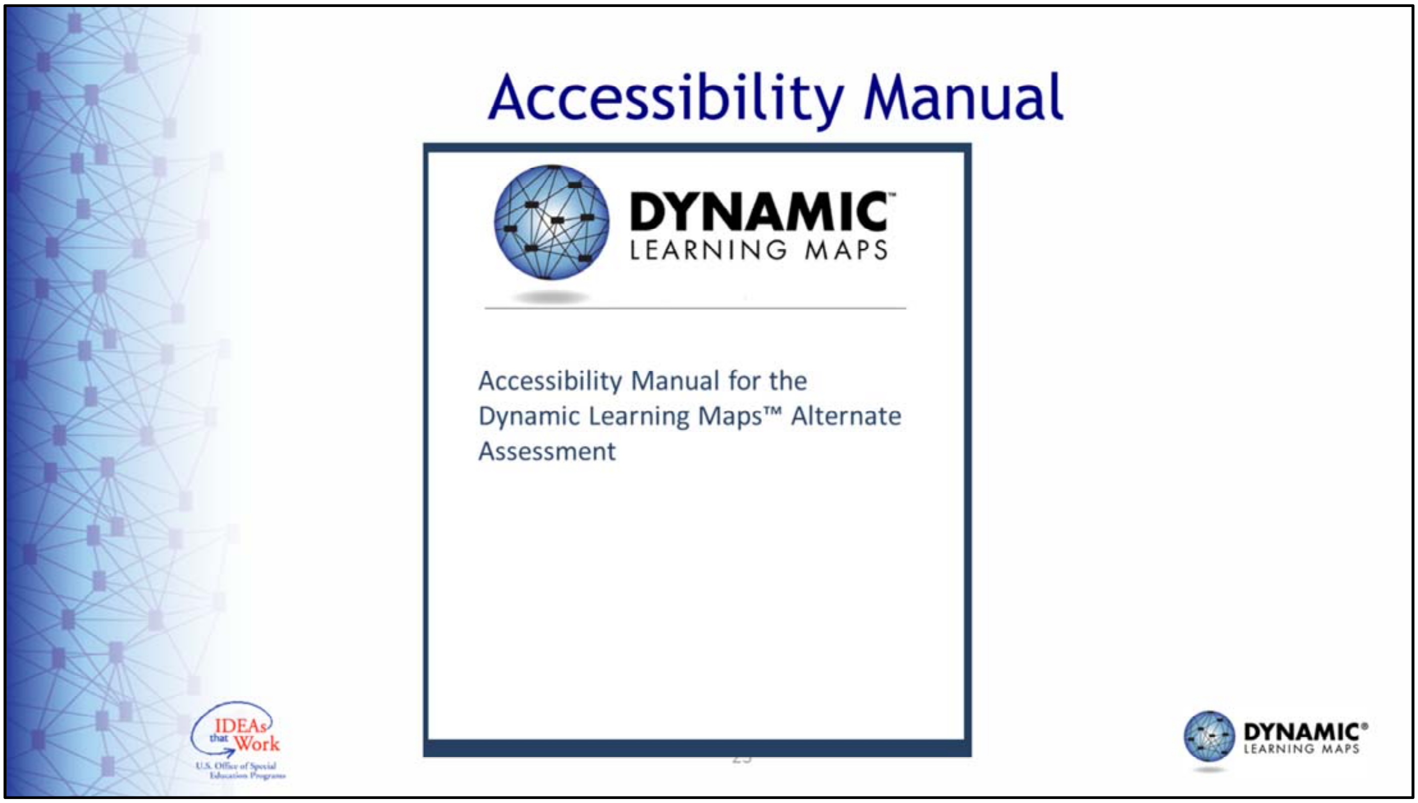
Evaluating a student's current behavior is very important when thinking about testing. We understand that not every day is a good day to assess. Therefore, test administrators should use professional judgment and reschedule testing for another time if a student is not having a good day on the intended testing day. If the student gets tired or distracted during a testlet sooner than expected, either allow the student to complete the testlet or use the Exit Does NOT Save button and return later if your state allows that option. However, the student's work in the current testlet will be deleted when selecting Exit Does Not Save.



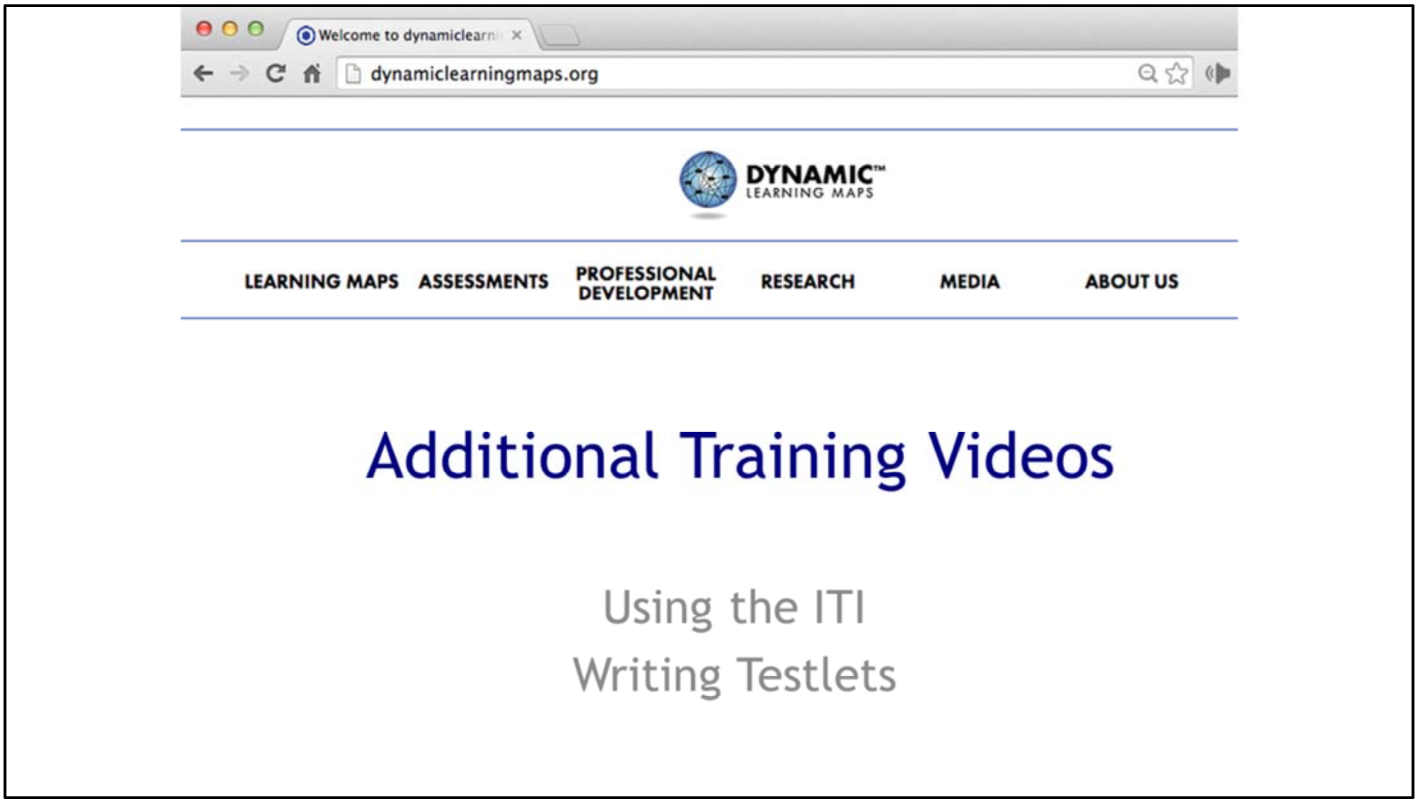
If you need more guidance on any of the aspects of the training you have completed, there are a number of places to go for additional information and guidance. Most of them are linked to the Educator Resource page for your state on the DLM website.



Begin with the TEST ADMINISTRATION MANUAL. Check to ensure you have the latest version by going to the Educator Resource page for your state on the DLM website.



You may also find the information you need in the ACCESSIBILITY MANUAL. This can also be found on the Educator Resource page for your state on the DLM website.



Additional training videos are available for those who need them. For example, there are videos on using the Instructional Tools Interface and administering Writing Testlets. These videos are linked to the Educator Resource page for your state on the DLM website.

DLM has provided numerous instructional professional development modules that focus on instruction for students with the most significant disabilities. These instructional modules provide valuable tips and strategies in ELA, math, communication, and access. These can be accessed on the professional development site at dlmpd.com.

This concludes required training for the DLM Alternate Assessment. You should have completed 4 modules and made note of many additional resources that will help you successfully administer the DLM Alternate Assessment to your students. You must successfully complete a quiz assessing your understanding of this module and all other modules before you can administer any DLM tests. Please complete the remaining quiz at this time.

DYNAMIC LEARNING MAPS

DLM REQUIRED TRAINING PART 4
ASSESSMENT

1. Test administrators complete all data management in Educator Portal.
   True False

   Feedback if FALSE is selected: Test administrators will complete all data management in Educator Portal. Full instructions on how to access Educator Portal and other Educator Portal information, including information about changing your password, is available in the TEST ADMINISTRATOR MANUAL.

2. Students are required to complete released testlets and practice activities prior to participating in the operation assessment.
   True **False**

   Feedback if TRUE is selected: Students are not required to complete released testlets or practice activities, but there are many reasons they should. For example, practice activities are designed to familiarize students with the question types, navigation processes, and procedures to end a testlet. Several different sample student profiles have been set up. Each sample student has been given different accessibility supports in the Personal Needs and Preferences Profile. Completing practice activities while logged in as a different sample student allows the student to try different accessibility features prior to the operational assessment. Practice activities also provide a way to check device compatibility prior to the operational test for students who may require the use of assistive technology to interact with the computer. Finally, released testlets allows students to familiarize themselves with testlets and the KITE system. Practice activities and released testlets may be completed as many times as needed to help students get comfortable with the KITE system.

3. Released testlets and practice activities can only be completed one time before beginning the operational assessment.
   True **False**

   Feedback if TRUE is selected: Practice activities and released testlets may be completed as many times as needed to help students get comfortable with the KITE system.

4. Which of the following are accessed through Educator Portal? (select all that apply)
   a. Practice activities and released testlets
   b. First Contact Survey
   c. Student usernames and passwords
   d. Personal Needs and Preferences Profile

Feedback if "a" is selected: Practice activities and released testlets are accessed through KITE using practice usernames and passwords that you can find in the TEST ADMINISTRATOR MANUAL.

5. Responses teachers provide on the First Contact Survey are used to determine the linkage level of the first testlet that students complete when they begin to use the DLM Assessment.

   True False

   Feedback if FALSE is selected: The first time a student interacts with an operational DLM assessment through KITE the linkage level of the testlet is determined based on information provided on the First Contact Survey. After the first interaction, the system adjusts the difficulty as appropriate for the student.

6. For each Essential Element, the testlet at the Initial Precursor linkage level is the easiest.

   True False

   Feedback if FALSE is selected: Testlets contain items that align to the five linkage levels: Initial Precursor, Distal Precursor, Proximal Precursor, Target, and Successor. Testlets at the Initial Precursor linkage level are typically teacher-administered testlets, while computer-administered testlets designed for students to take directly are typically used at the other four linkage levels. The easiest testlets are at the Initial Precursor level and marked with IP, and the most difficult testlets linked to any Essential Element are marked with an S for Successor linkage level.

7. The First Contact Survey remains with a student from year-to-year and does not need to be updated annually.

   True **False**

   Feedback if TRUE is selected: The First Contact Survey does remain with a student, but it should be updated at least annually. Educators may update information in First Contact Survey any time a student's status changes relative to any of the items on the survey.

8. Test administrators are required to do which of the following prior to administering the operational assessment? (select all that apply)
   a. **Complete security agreement**
   b. **Read the DLM® TEST ADMINISTRATOR MANUAL**
   c. **Confirm your state-specific testing window**
   d. **Review all procedures for testing**

e. **Complete the Personal Needs and Preferences Profile**
f. **Verify that KITE has been loaded on devices that will be used**

Feedback if any are not selected: Test administrators should use the TEST ADMINISTRATOR MANUAL as a guide to ensure they are completing all of the required steps. At a minimum, test administrators must complete the security agreement, read the TEST ADMINISTRATOR MANUAL, confirm their state's testing window and the assessments students are required to take, review all testing procedures, complete the Personal Needs and Preferences Profile as well as the First Contact Survey for each student, verify students in Educator Portal, and verify that KITE has been loaded on all devices that will be used for the operational assessment. The TEST ADMINISTRATOR MANUAL provides detailed information regarding each of these steps and others.

9. The Testlet Information Pages provide specific information regarding objects or manipulatives and should be accessed while administering the assessment.
   True **False**

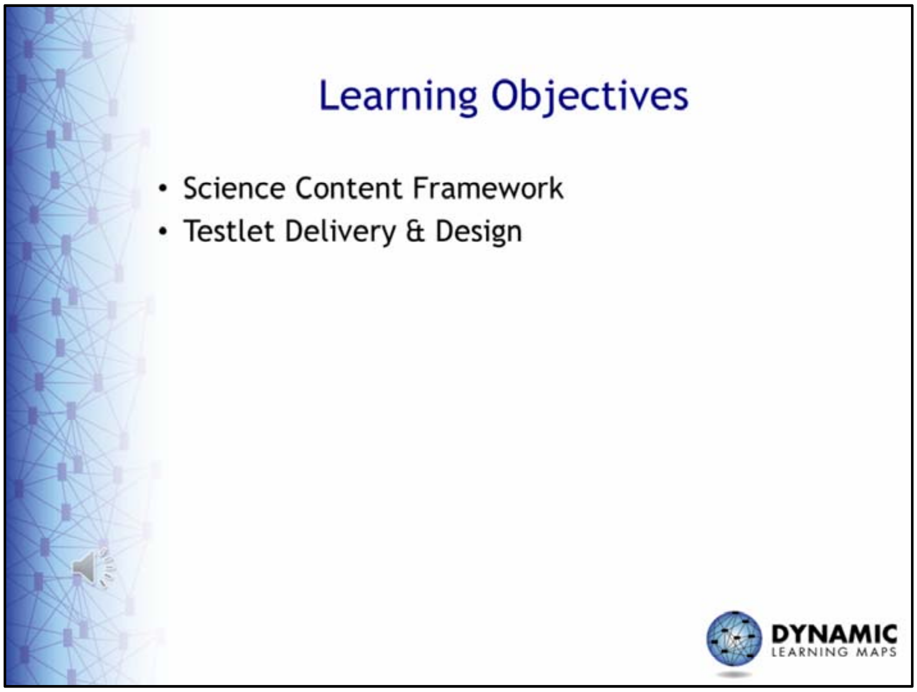
   Feedback if TRUE is selected: Test administrators must access the Test Information Page for a testlet prior to administering the assessment. The Testlet Information Page provides important information regarding objects or manipulatives that may be needed for test administration. It also helps test administrators plan for students who may use a special device such as an alternate keyboard or specific manipulatives for a testlet or subject.

10. Other students are allowed in the same room where a student is testing as long as the computer monitor is only visible to the student being assessed.
    True False

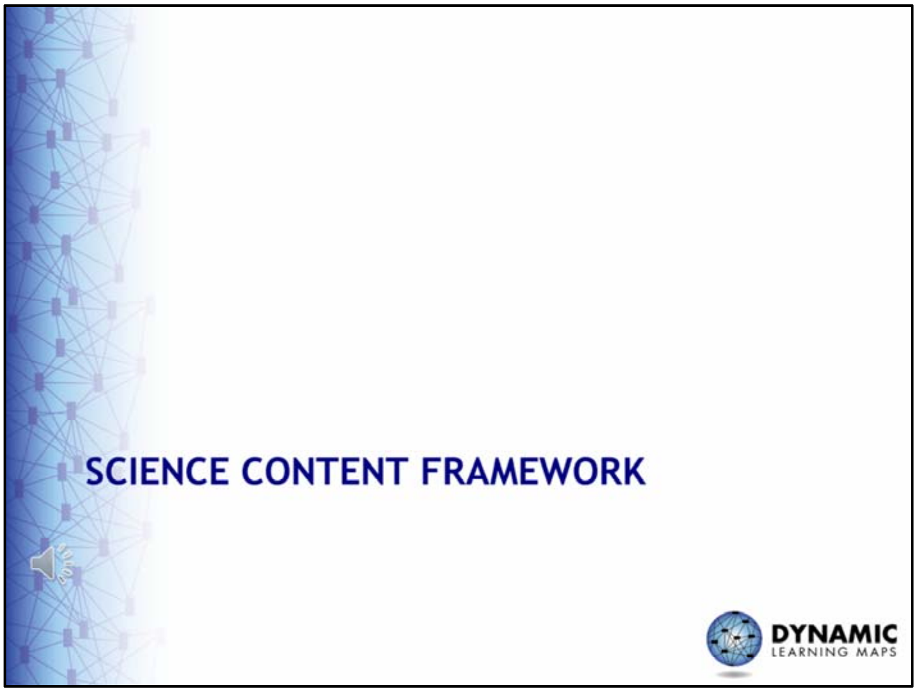
    Feedback if FALSE is selected: If a student must be tested in the classroom where other students are present, arrange the testing display, such as the computer monitor, so that it is only visible to the student being assessed.

The Dynamic Learning Maps Alternate Assessment System is a new assessment designed to more validly measure what students with significant cognitive disabilities know and can do.

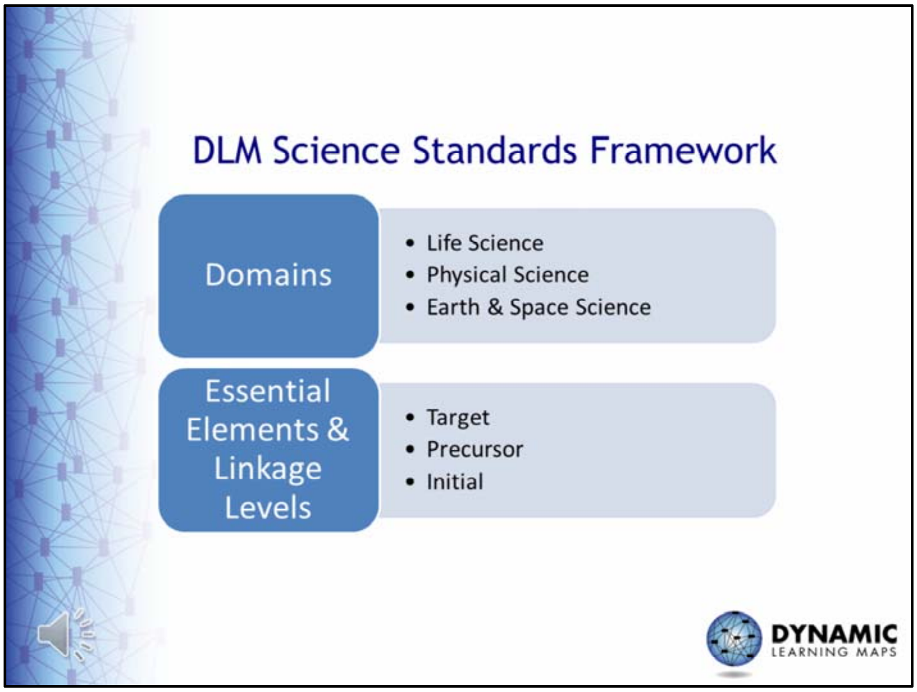
This training, *The DLM Science Alternate Assessment* is a supplemental module for educators who are responsible for delivering the Dynamic Learning Maps Science alternate assessment. This module supplements the series of required training modules for all educators who are responsible for delivering any of the Dynamic Learning Maps alternate assessments.



In this module, you will learn how the Science alternate assessment system is different from that of the ELA and Math systems in terms of content framework, testlet delivery, and design.

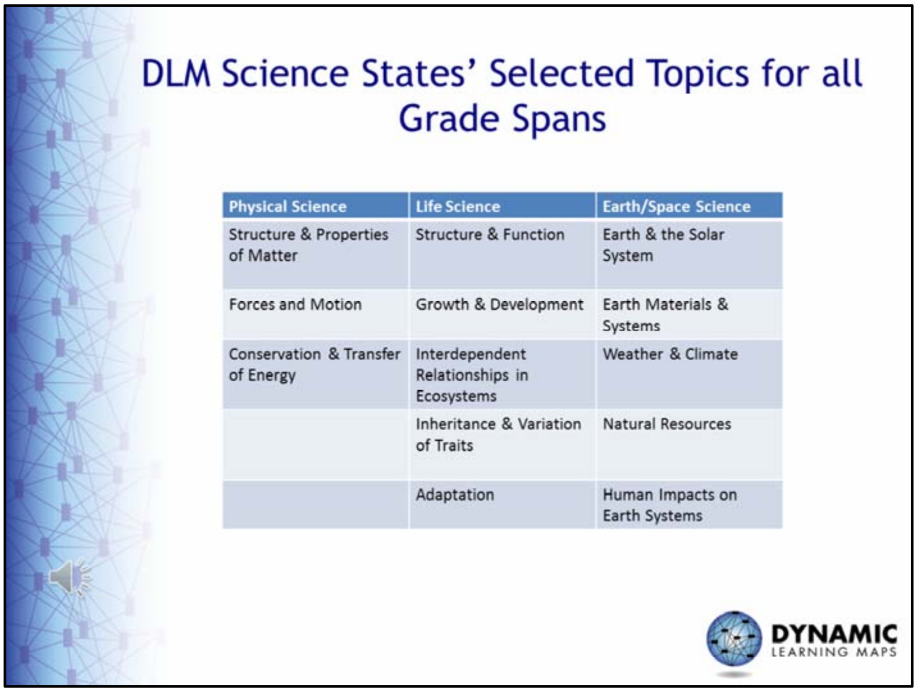


The current science content framework is different from that of ELA and Math. The science framework for 2015 - 16 is not based on a learning map.

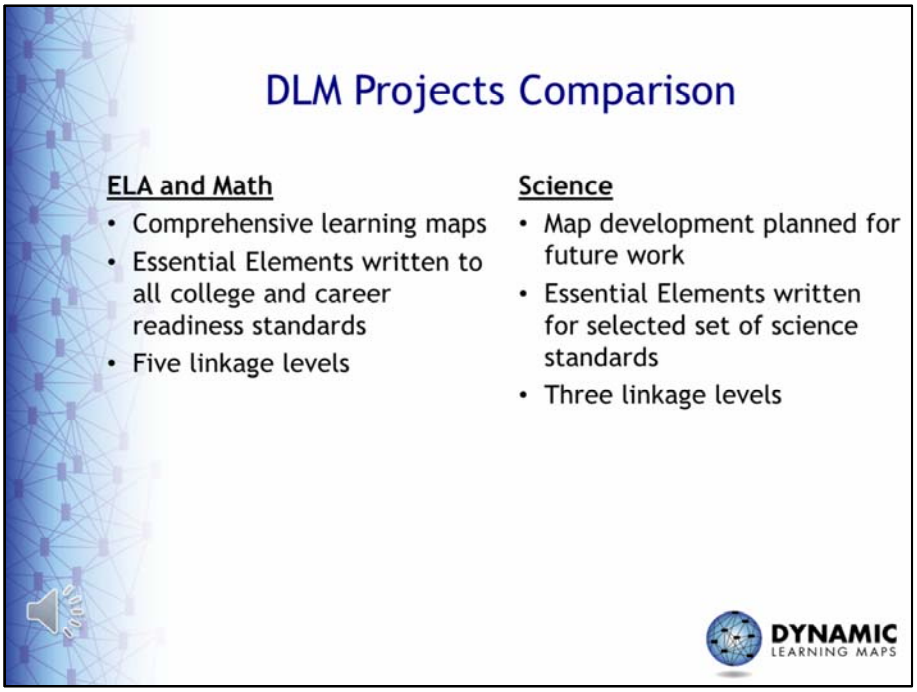


Understanding the DLM science framework involves understanding the relationship among all of the elements within the system. These elements include Domains, Essential Elements, and Linkage Levels. This framework was adapted from the National Research Council's Framework for K-12 Science Education. It embeds science and engineering practices within the science standards.

- The Domains are the major content areas in science.
- The Essential Elements are the science standards, or the learning targets, that describe the grade span performance expectations by the end of the elementary, middle school, and high school grades for students with significant cognitive disabilities. They are derived from the performance expectations in the general education science standards.
- The precursor and initial linkage levels are less complex versions of the target Essential Element.



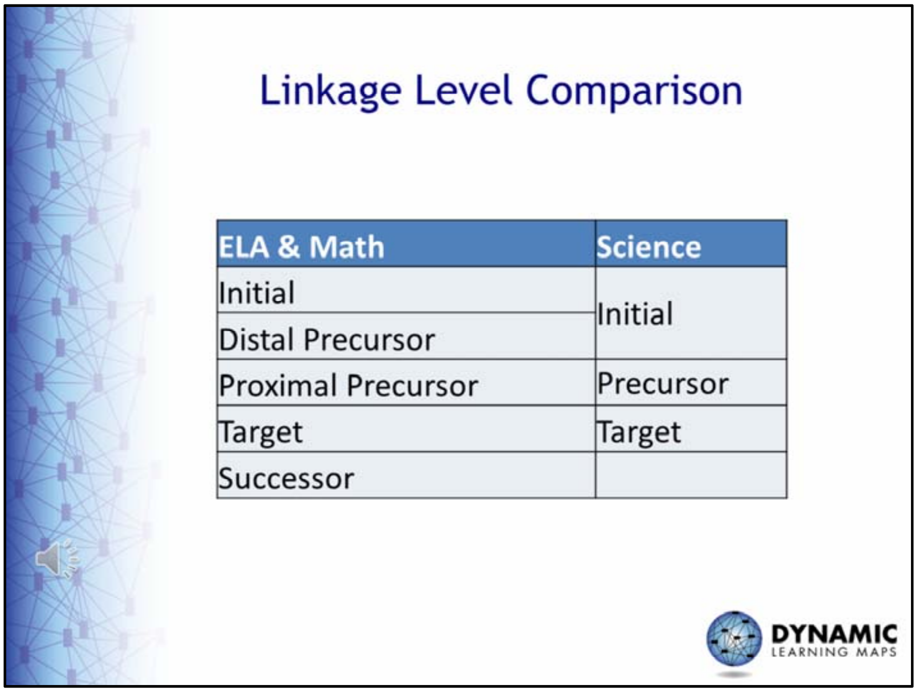
Each domain has topics. This table shows the topics that were frequently taught in DLM states, showing a breadth of content coverage across the core ideas. Within the framework, there are three topics in Physical Science, five topics in Life Science and five topics in Earth/Space Science.



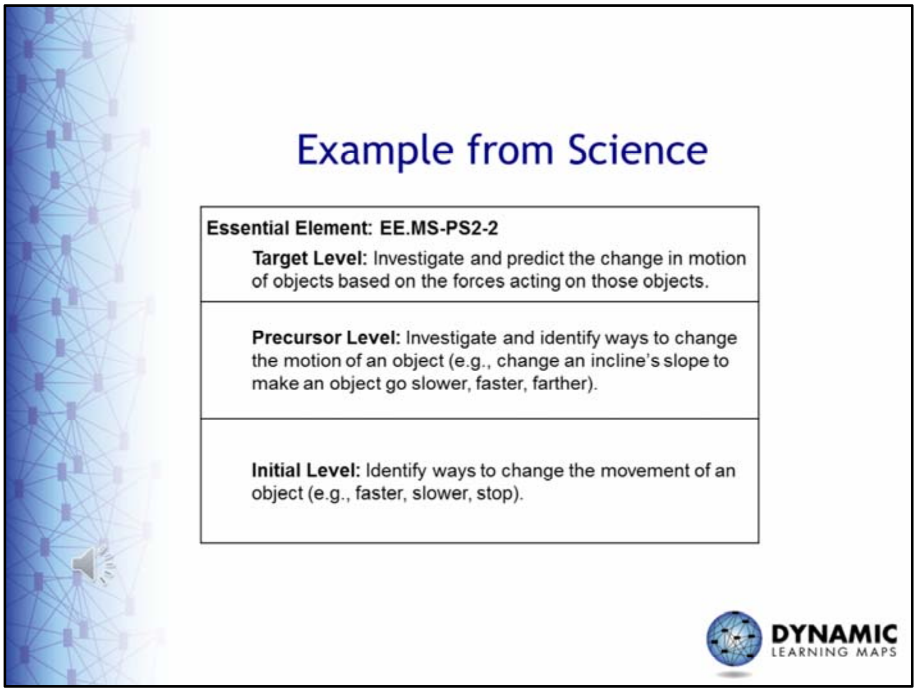
As mentioned, one of the main differences between the ELA and Math assessment system and Science is that the current Science assessment system is not based on a learning map. This development work is planned for the future.

There are other differences between the DLM projects in addition to the status of learning maps. The DLM science project began with a specifically selected set of science standards that are frequently assessed in the partner states. Additional Essential Elements will be developed in the future.

Furthermore, the science project identified three linkage levels for 2014 - 16, while ELA and mathematics use five levels. These linkage levels are outlined on the next slide.

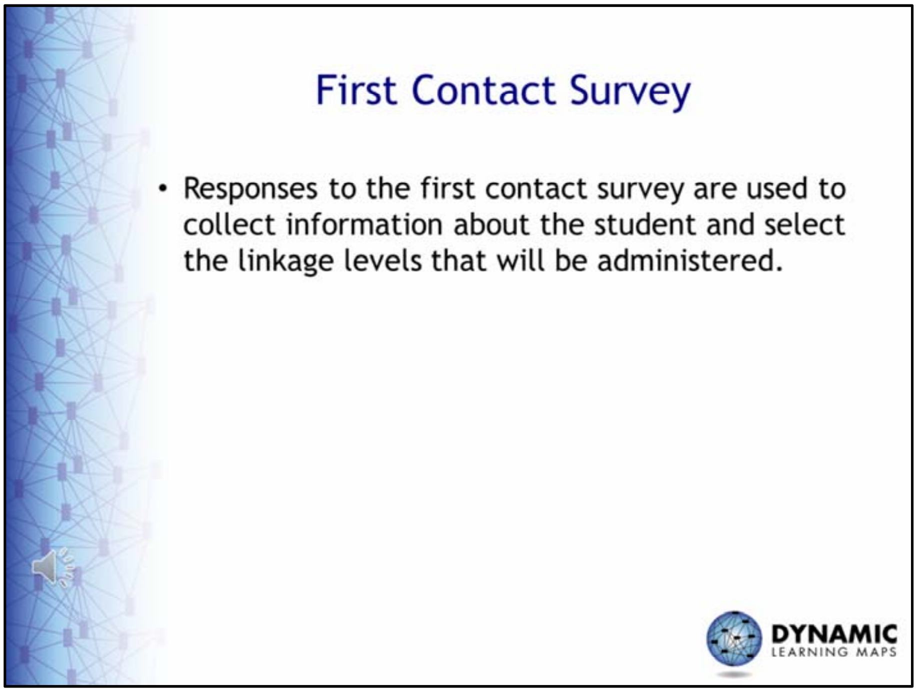


As mentioned, while there are five linkage levels in ELA and Math, there are only three linkage levels in Science. In Science, the initial level is akin to a combination of the initial and distal precursor levels in ELA and Math. The precursor and target levels in Science are similar to the proximal precursor and target levels in ELA and Math. Currently, the science assessment does not include a linkage level that is above the target level.

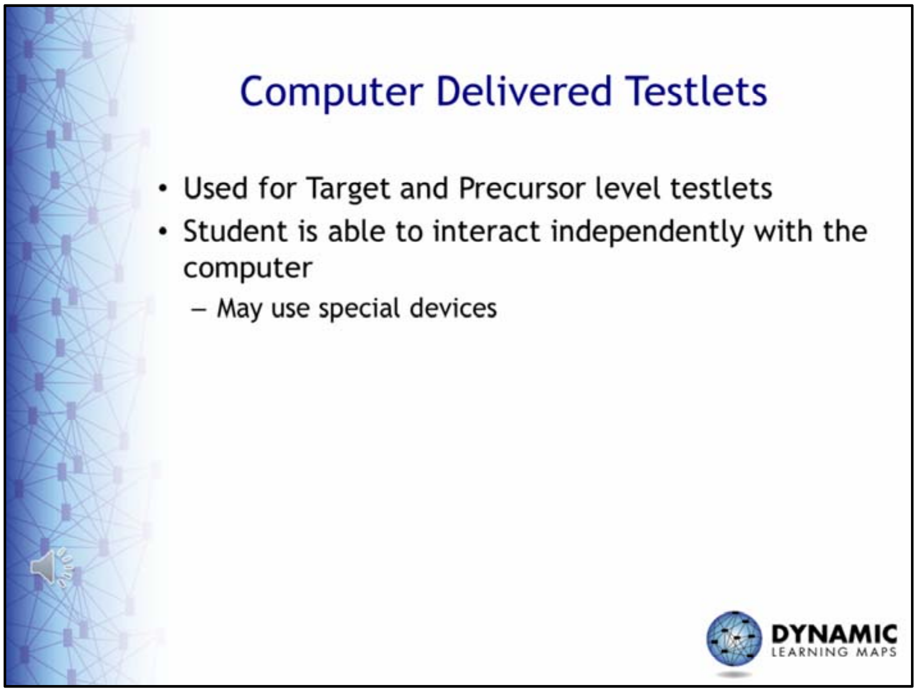


Here is an example of a Middle School Physical Science Essential Element with the corresponding Linkage Levels. Notice the reduced breadth, depth and complexity of the expectation from level to level as well as the embedded practice focusing on carrying out investigations.

There are several important features of the Science assessment that are different from the other DLM assessments.

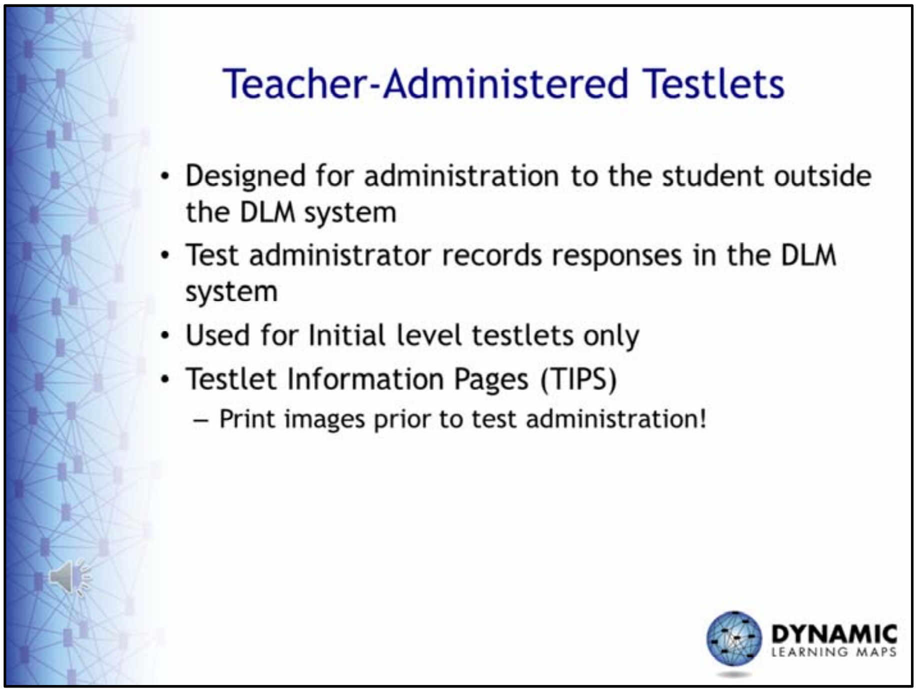


Responses to the first contact survey are used to collect information about the student and select the linkage levels that will be administered.



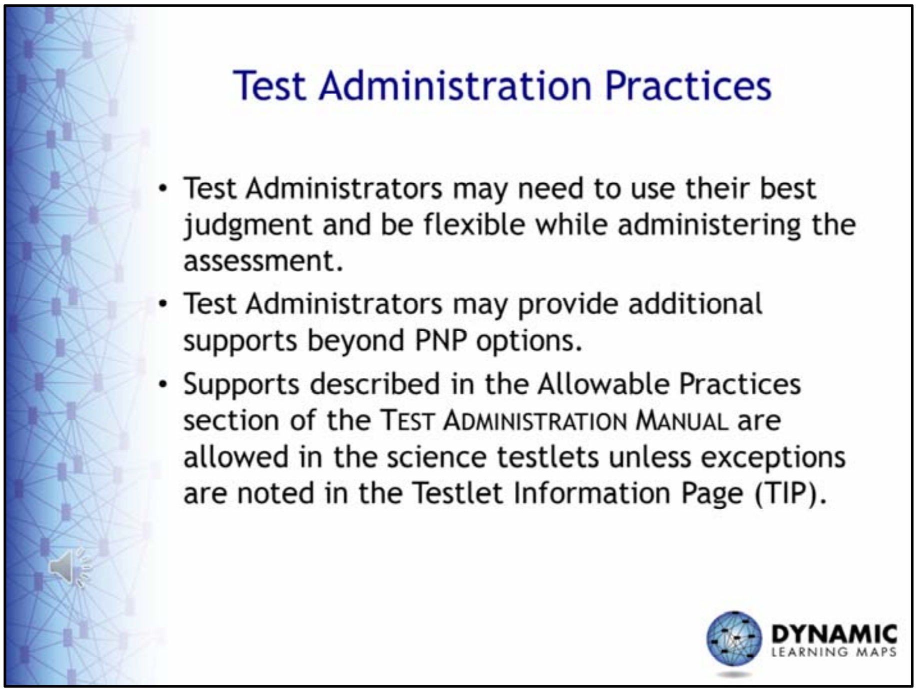
Tests delivered directly to students via computer are designed with the assumption that students can interact independently with the computer, using special devices, such as alternate keyboards, touch screens or switches as necessary. Computer-delivered testlets for Science are used at the Target and Precursor linkage levels, where the content being assessed is appropriate for delivery through the computer.

Results of First Contact surveys administered to nearly 50,000 students indicate that 80% to 90% of students eligible for DLM assessments are able to interact with computers independently, with or without devices. Some students may need practice to learn how to interact with the system. Others will need to experiment with PNP settings to find the right supports so they can interact with the system.



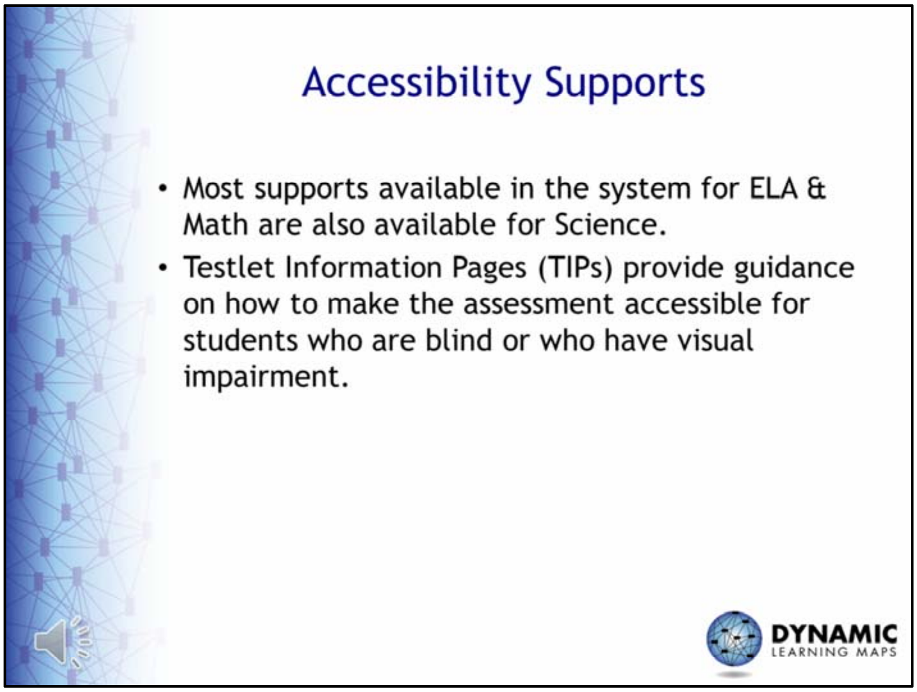
Teacher-administered testlets are designed for administration to the student outside the DLM system. The KITE system still delivers the test, but the test administrator is responsible for setting up the assessment, delivering it to the student, and recording the student's responses in the DLM system.

In Science, the teacher-administered testlets are for the initial linkage level testlets only. Science teacher-administered testlets frequently involve showing students printed images that correspond to item response options. These printed images are found in the Testlet Information Pages (also known as TIPS) and need to be printed prior to test administration.

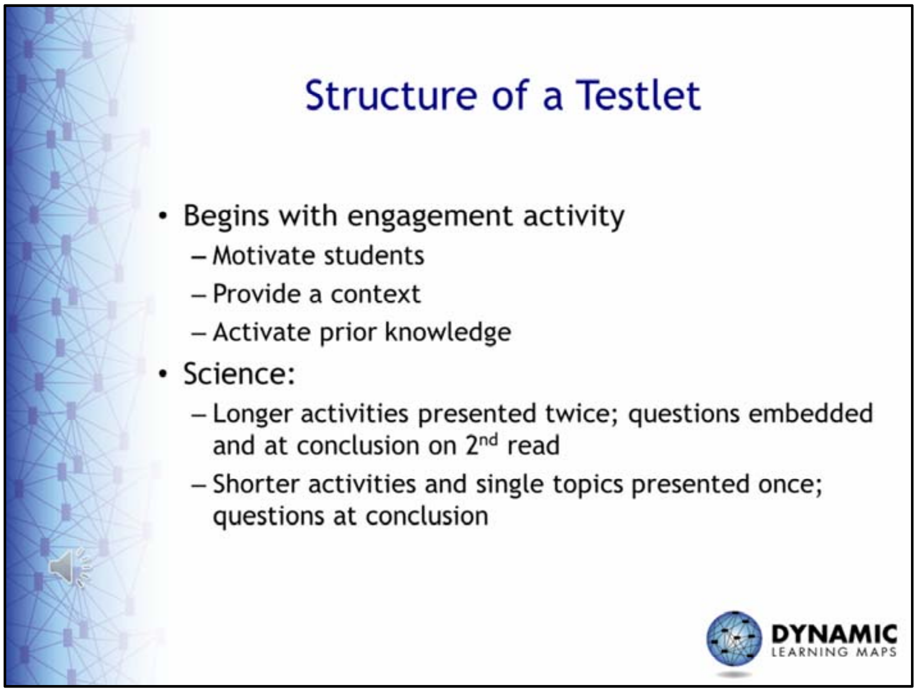


Items in science testlets are designed to assess student knowledge and skills. In order to do so, Test Administrators may need to use their best judgment and be flexible while administering the assessment. This means that Test Administrators may provide additional supports beyond PNP options.

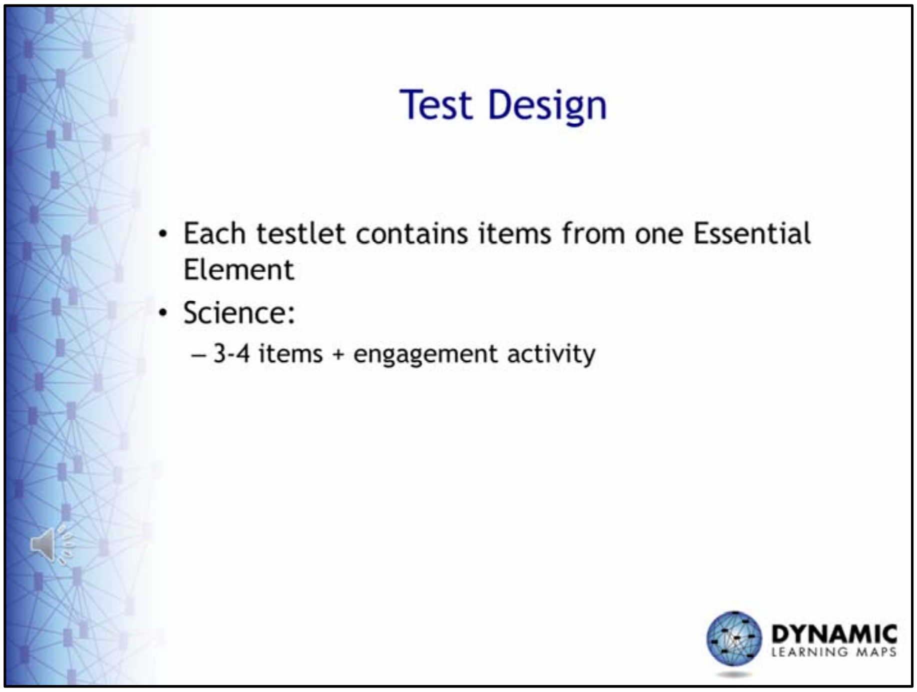
Supports described in the Allowable Practices section of the TEST ADMINISTRATION MANUAL are allowed in the science testlets unless exceptions are noted in the Testlet Information Page (TIP).



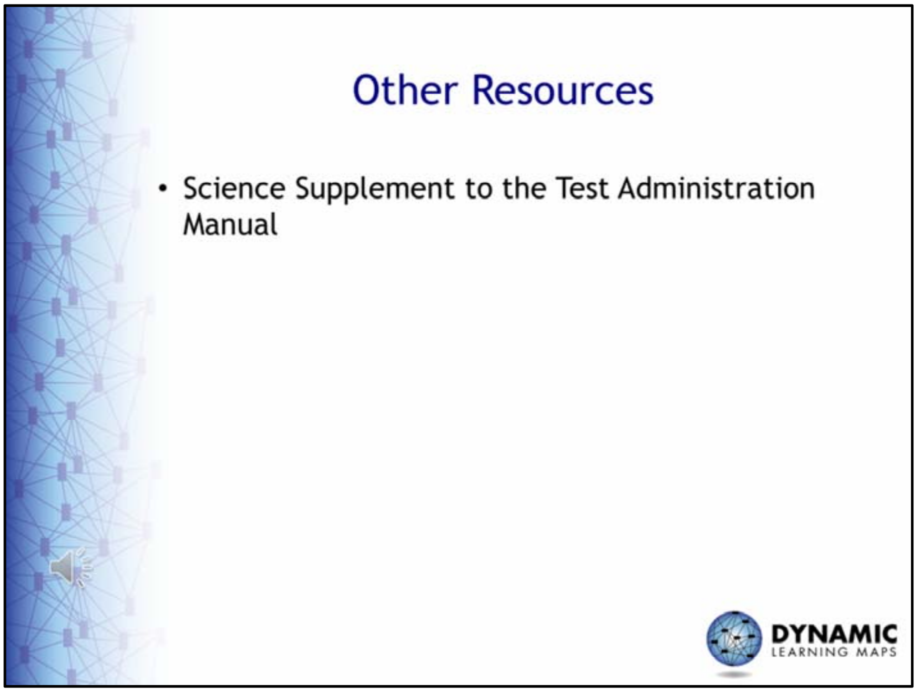
Most of the accessibility supports that are available for ELA and Math are also available for Science. Testlet Information Pages (TIPs) provide guidance on how to make the assessment accessible for students who are blind or who have visual impairment.



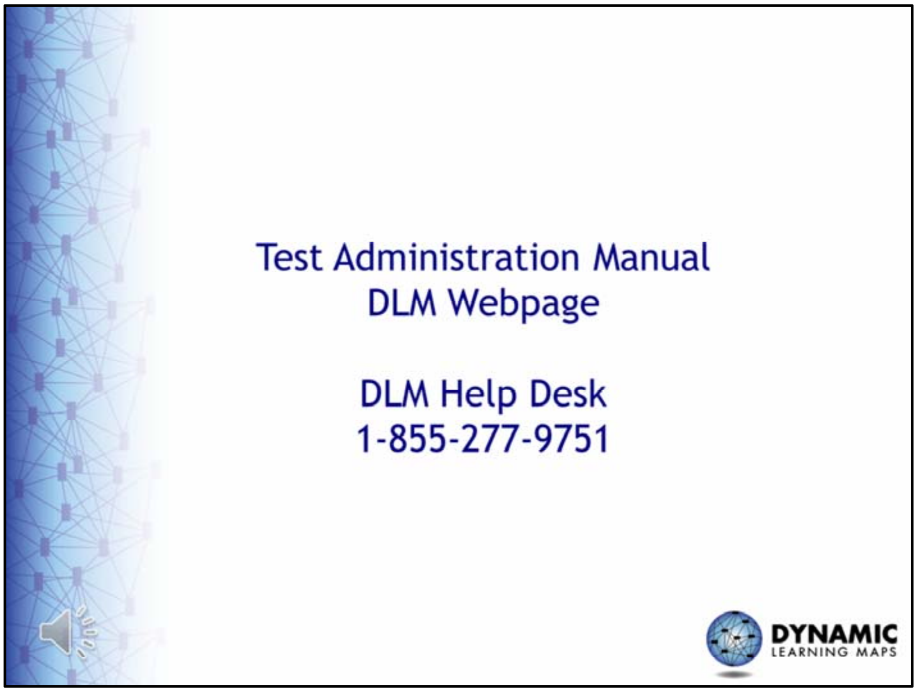
While the general purposes of the engagement activity are the same as ELA and Math, the delivery of Science testlets incorporates features of testlets from both ELA and Math. Testlets in Science may be designed around a science activity that is presented twice with test questions embedded within and/or placed at the conclusion of the second presentation. Science testlets may also involve a shorter science activity or simply provide a context for the test questions. Such testlets place all of the questions at the end conclusion of the engagement activity.



In Science, each testlet includes items from only one Essential Element in the blueprint. Testlets contain an engagement activity and 3 or 4 items.

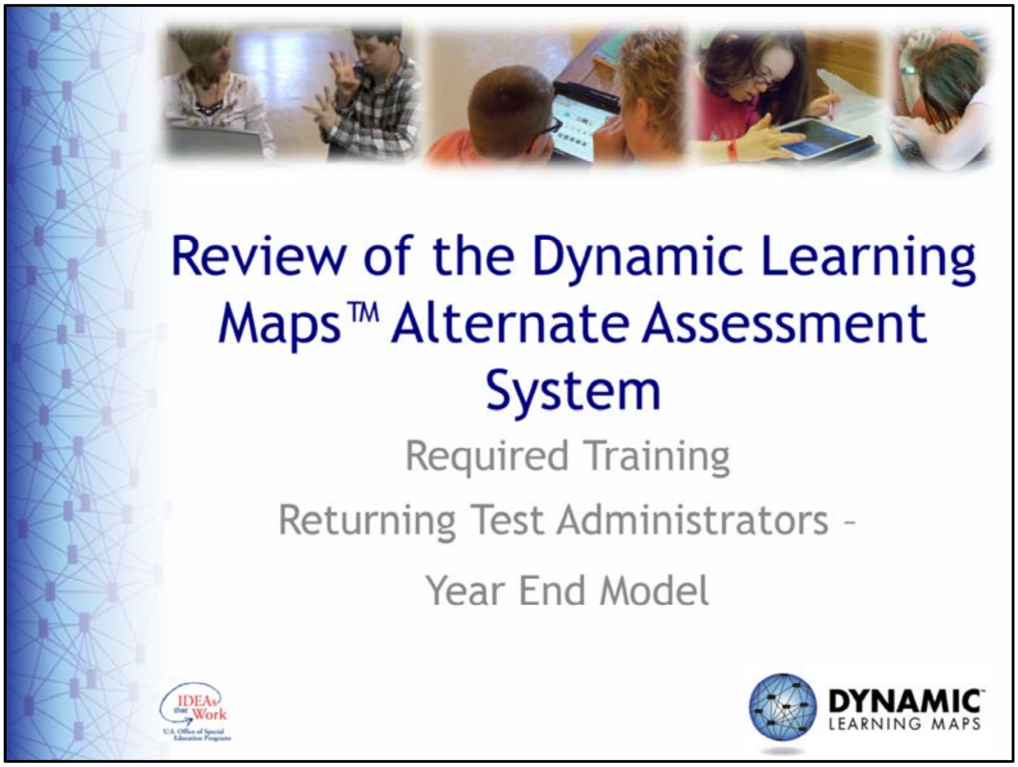


Please see the Science supplement to the test administration manual for additional information regarding the science assessment and rostering procedures.

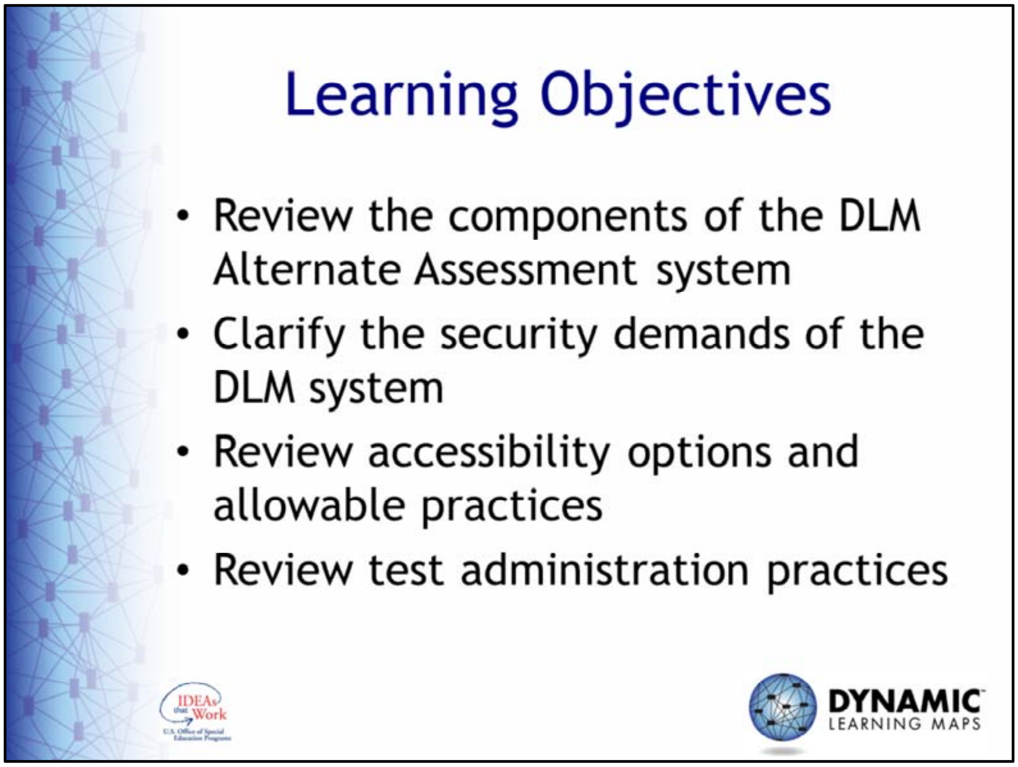


To learn more about allowable supports, check the Test Administration Manual on the DLM webpage for your state. If educators still have questions whether a support is allowable, they may contact the Help Desk at 1-855-277-9751. If the test administrator provides supports outside of those that DLM has listed, your state may require you to describe those supports through a state reporting system. These supports should always be approved before they are used in order to avoid invalidating the student's assessment.

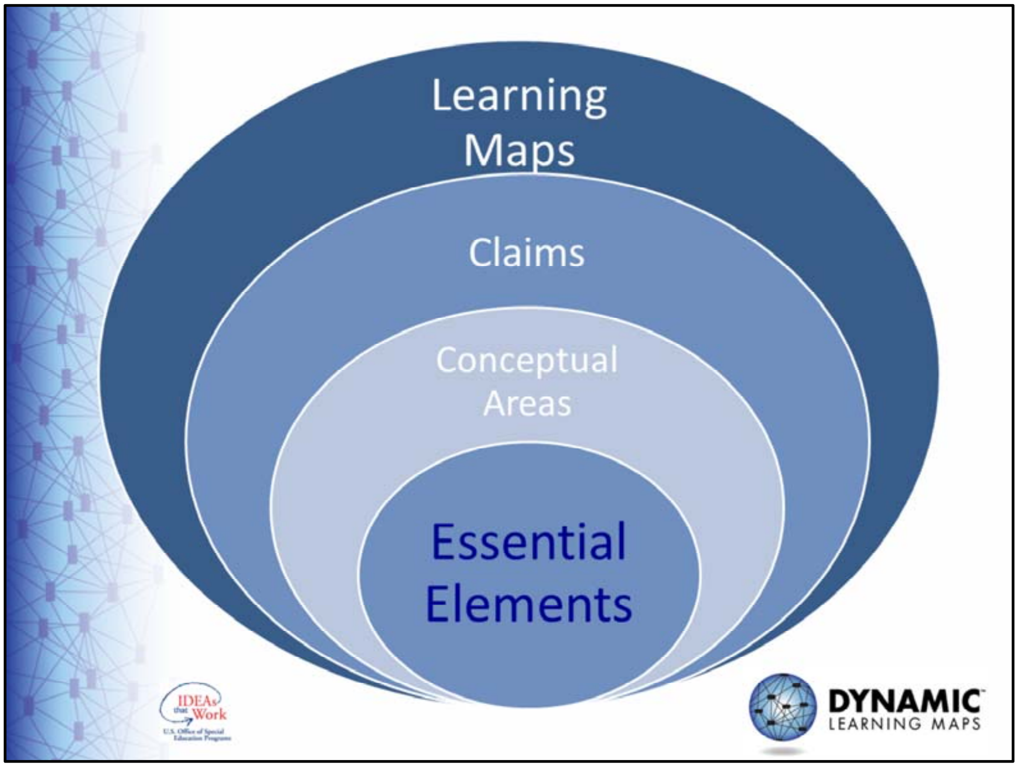

DYNAMIC
LEARNING MAPS
http://dynamiclearningmaps.org



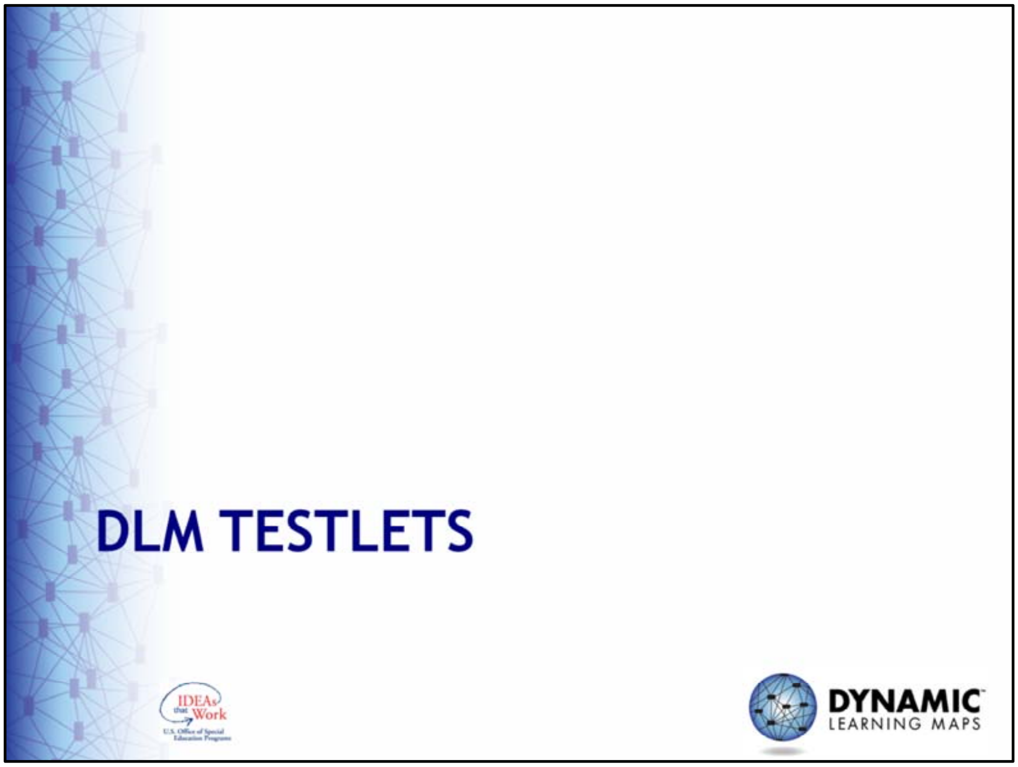
The Dynamic Learning Maps™ Alternate Assessment system is a new assessment designed to more validly measure what students with significant cognitive disabilities know and can do. In order to ensure standardized delivery of the DLM® Alternate Assessment, all returning test administrators are required to complete this review module.



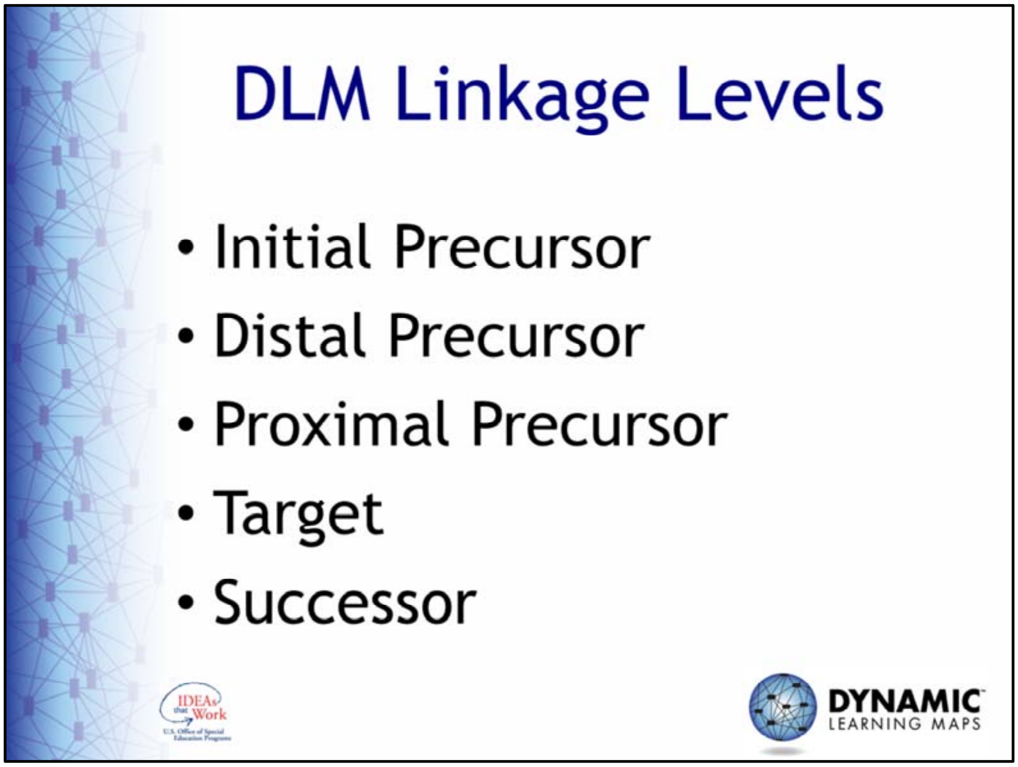
The purpose of this module is to review the components of the DLM Alternate Assessment system; clarify the security demands of the DLM system; review accessibility options and allowable practices; and review test administration practice. Upon completion of this module, you will be required to complete an assessment of your knowledge of DLM assessment administration. If you pass, you will then be able to administer the DLM assessment right away. If you do not pass, you will be directed to additional required training.



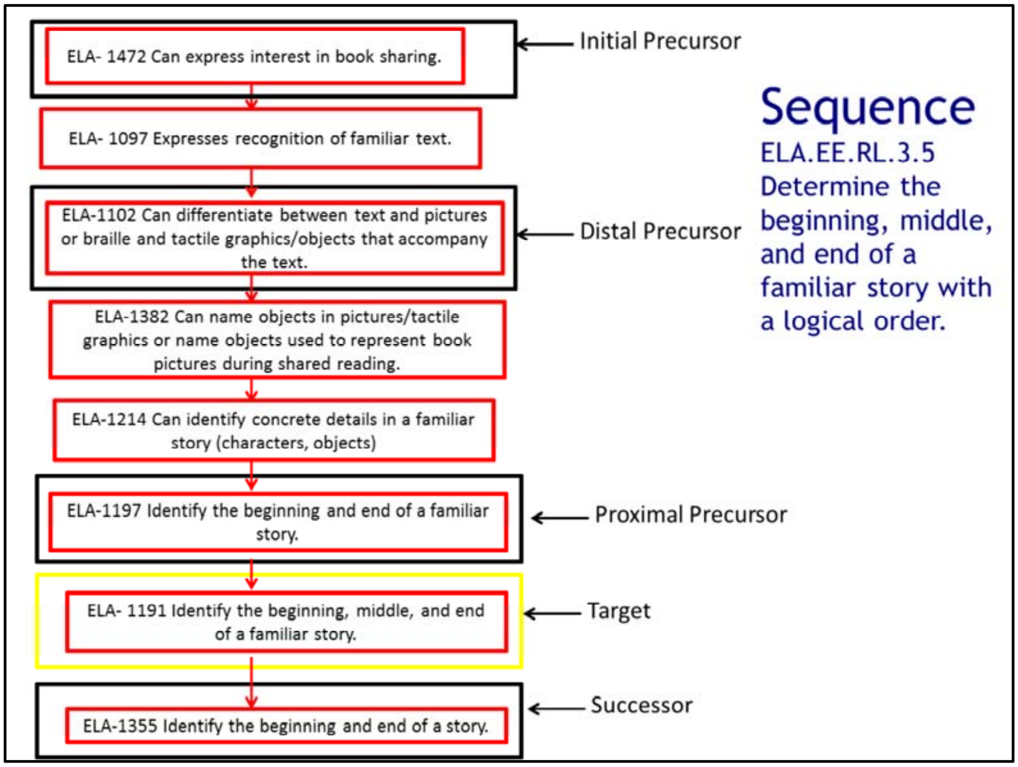
Let’s begin with a review of the components in DLM. At the base there are learning maps that represent specific skills and understandings and the multiple pathways students might follow as they develop those skills and understandings. The skills and understandings are called nodes. Nodes on the learning map are organized into claims, which are statements about what students are expected to learn and be able to demonstrate.. The claims are divided into conceptual areas, and within the conceptual areas are Essential Elements that are linked to the nodes. The Essential Elements are grade-level targets for students with the most significant cognitive disabilities. More information is available about each of these components in the Test Administration Manual.



Recall that DLM breaks down the assessments into testlets. Students complete multiple testlets in math and ELA. Each testlet generally has at least 3 and as many as 8 items that assess one or more Essential Elements.



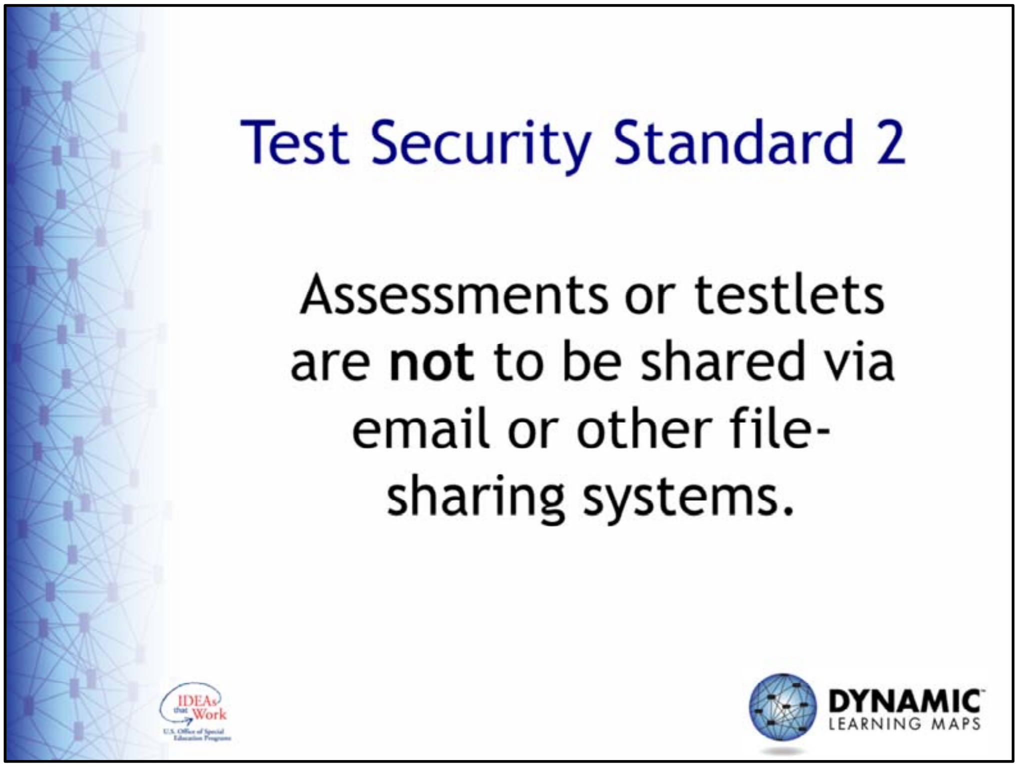
For each of the Essential Elements tested in the DLM system, testlets are developed at five linkage levels. The linkage levels are the Initial Precursor, Distal Precursor, Proximal Precursor, Target that aligns directly with the Essential Element, and the Successor that extends upward toward the grade-level standard.



DLM mini-maps show the nodes from the learning maps that are assessed at each linkage level. In this example, one node is assessed at each linkage level for this third grade Essential Element about determining the beginning, middle, and end of a familiar story.

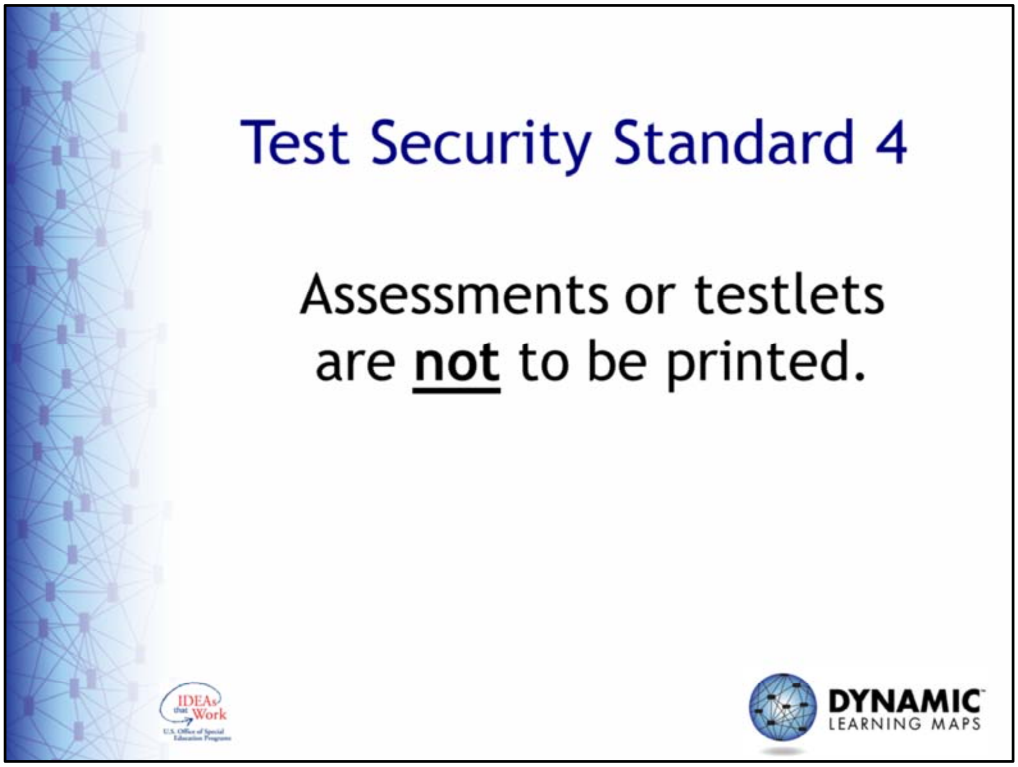
Test administrators and other staff who support DLM implementation are responsible for following four DLM test security standards. Each year test administrators must sign a security agreement indicating their willingness to follow these standards. The four test security standards are described on the following slides.

One: testlets are not to be stored or saved on computers or personal storage devices.



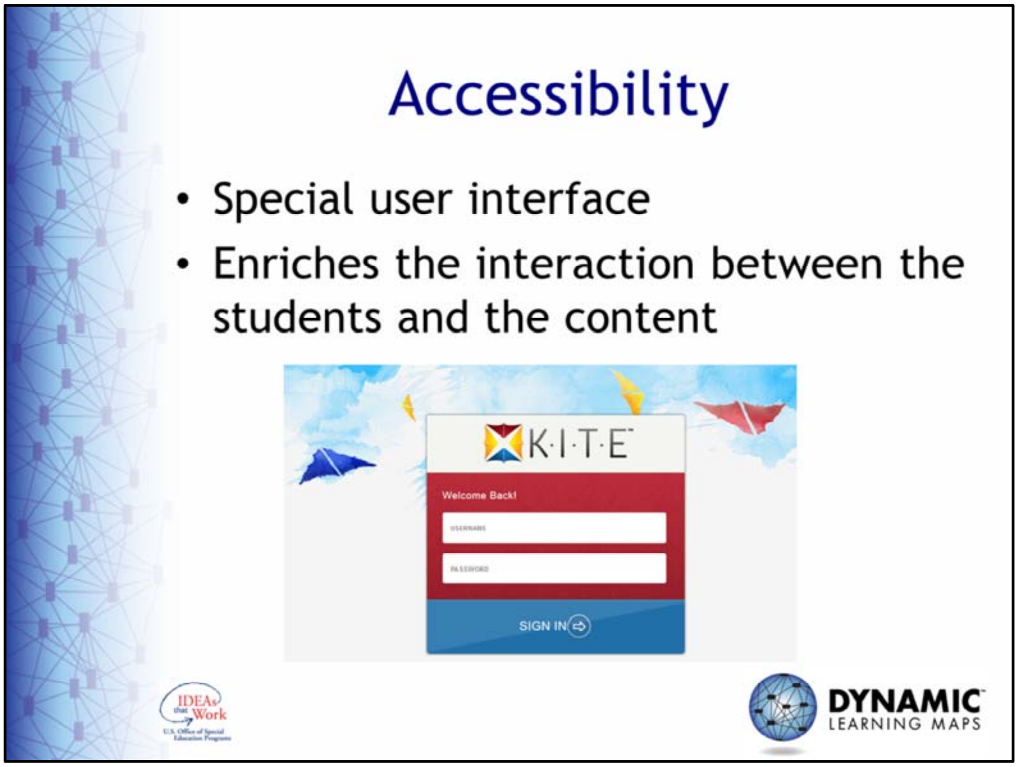
Two: testlets are not to be shared via email or other file-sharing systems. This includes posting content or student responses on any type of social media.

Three: testlets are not to be reproduced by any means, except where explicitly allowed as described in the Test Administration Manual. Taking screenshots of the testlets is also prohibited.

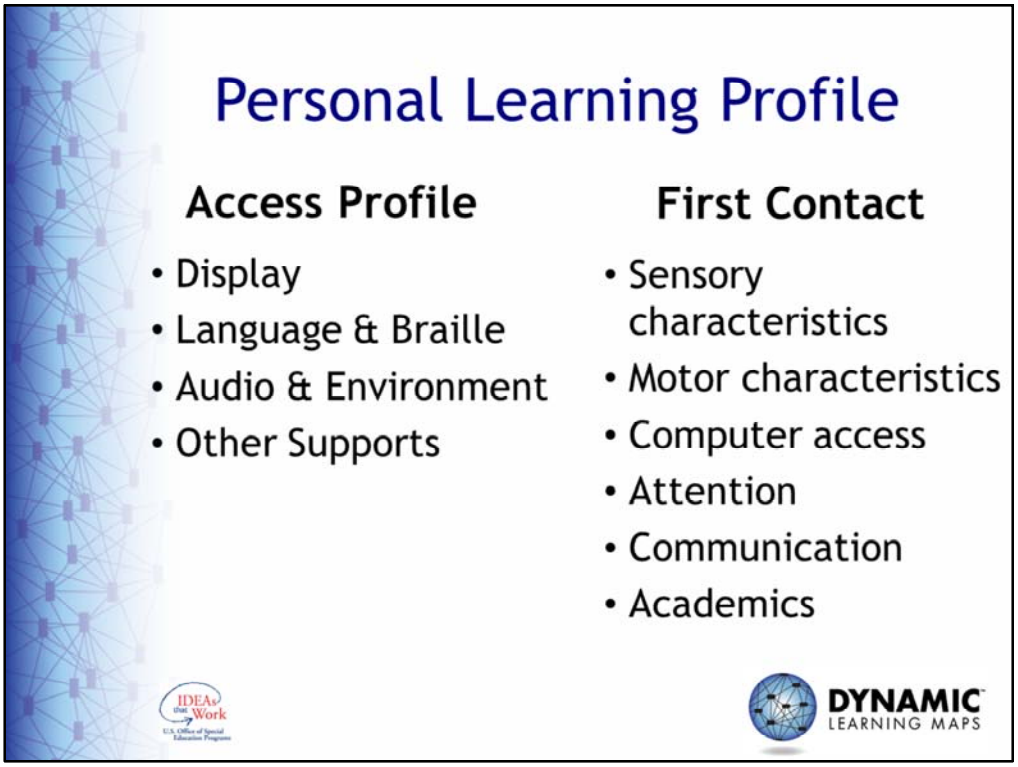


Finally, testlets themselves are not to be printed. However, printing the familiar English language arts texts is allowed, and you may print Testlet Information Pages (TIPs). However, TIPs must be securely destroyed after the testlet has been submitted.

As stated, security agreements must be renewed each year. The agreement appears automatically when you log in to Educator Portal the first time for the school year. If you do not agree to the terms in the security agreement, you will not have access to student logins, TIPs, and other tools you need to administer the assessment successfully.



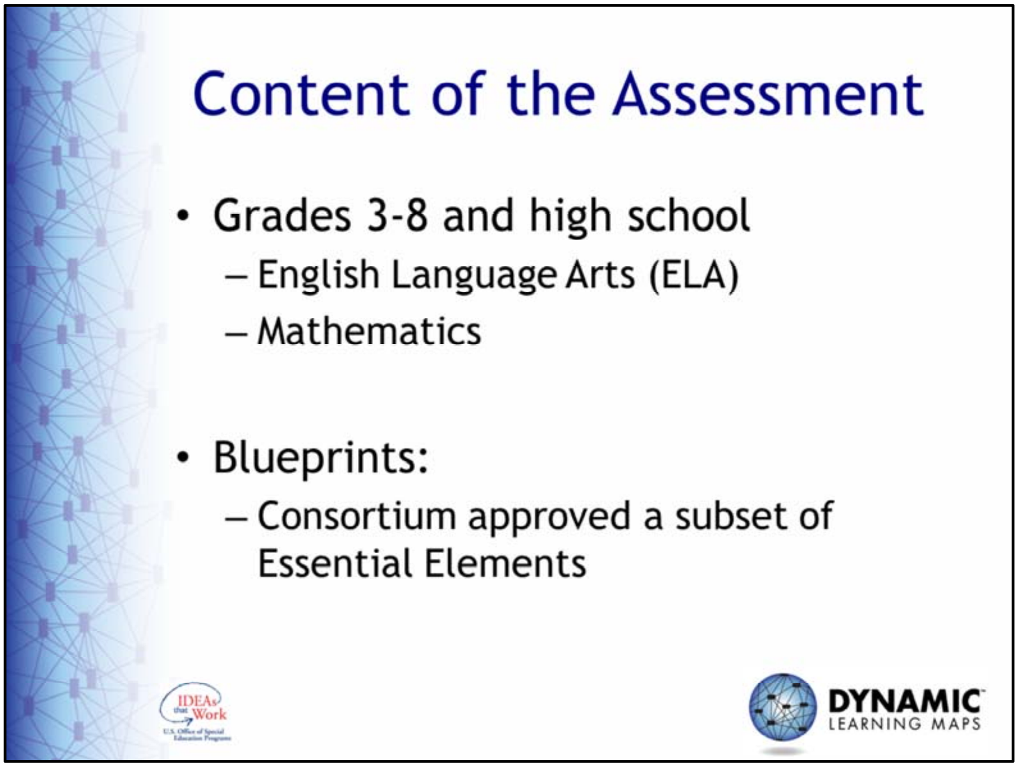
DLM uses the technology platform KITE™. It has embedded features to increase accessibility and enrich the interaction between students and the content.



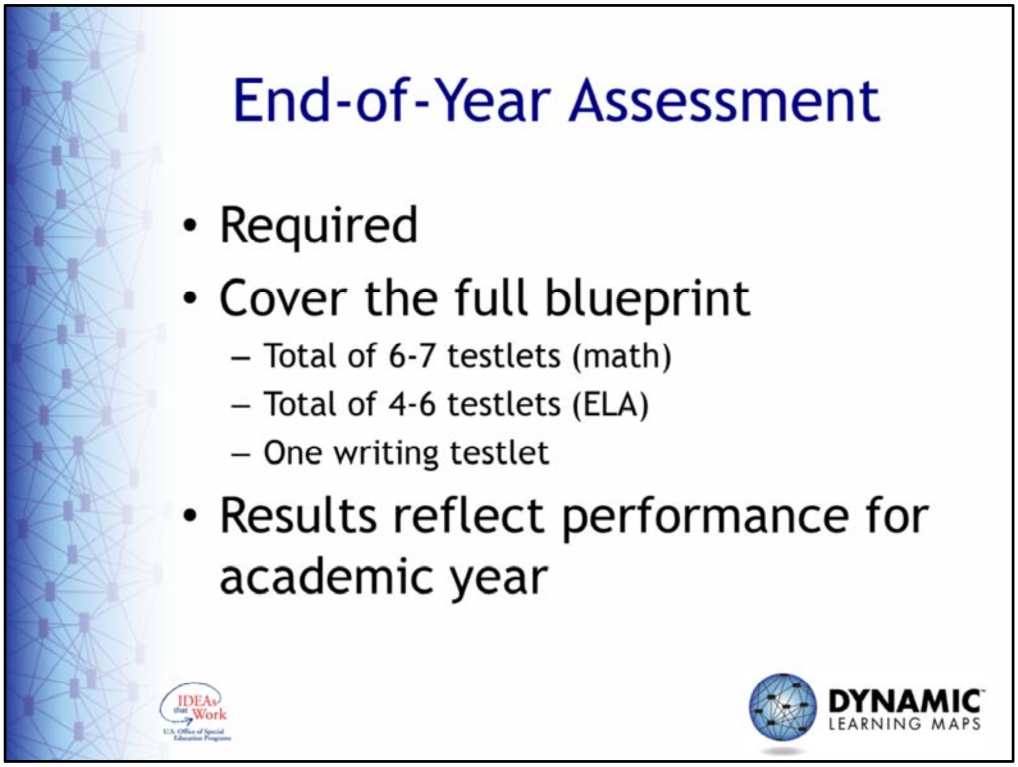
Educators identify required accessibility supports through the information they enter regarding the student's Personal Needs and Preferences in the Access Profile and the First Contact Survey. This information allows the system to customize the student's experience and determine which testlet to deliver even if the student completed the DLM assessment in previous years. The Access Profile defines features of the testlet display and also defines supports that must be provided outside the system such as braille, sign language interpretation and human read aloud. The Access Profile must be completed before testing begins, but it can be updated as needed.

The First Contact survey, which determines the best linkage level for the first time the student uses the system, must also completed or reviewed and updated prior to the assessment.

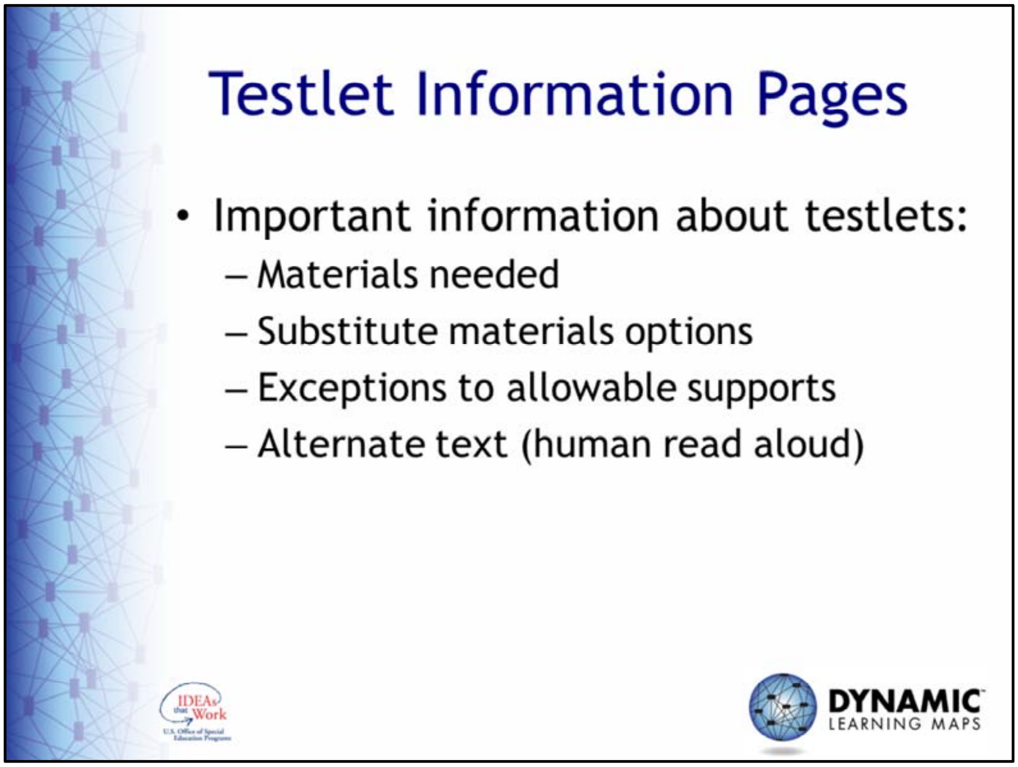
Detailed instructions on how to fill out the Personal Needs and Preference or Access Profile and the First Contact survey are located in the Test Administration Manual. A six-step process for customizing accessibility is described in the Accessibility Manual.



As you may recall, the DLM assessment in English language arts and mathematics is delivered each year in grades 3-8 and high school. Refer to your state's requirements to determine when your high school students are tested. As approved by the DLM Consortium, the test blueprint indicates which Essential Elements are assessed at each grade level.

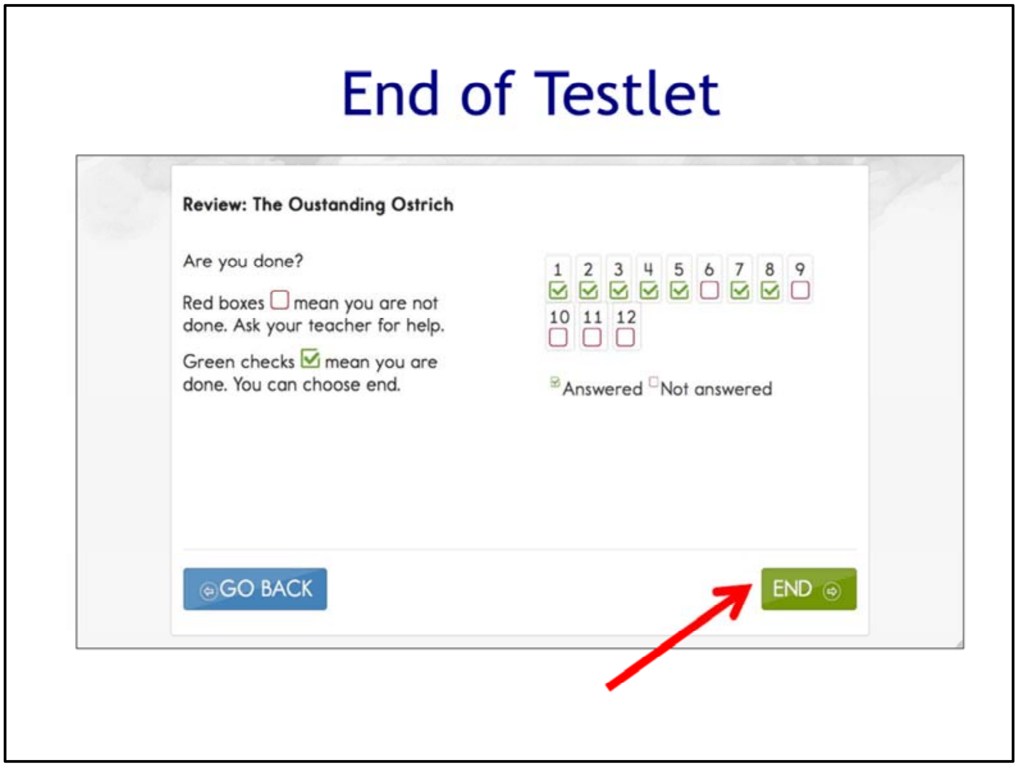


In your state, the End-of-Year assessment is required. Your state has chosen its own window within the consortium-wide window that runs mid-March through early June. In the end-of-year window, all students take testlets that cover the whole blueprint. That means 6-7 testlests in math and 4-6 testlets in ELA, including 3-5 reading and language testlets and a single writing testlet. Results reflect the student's performance that academic year.

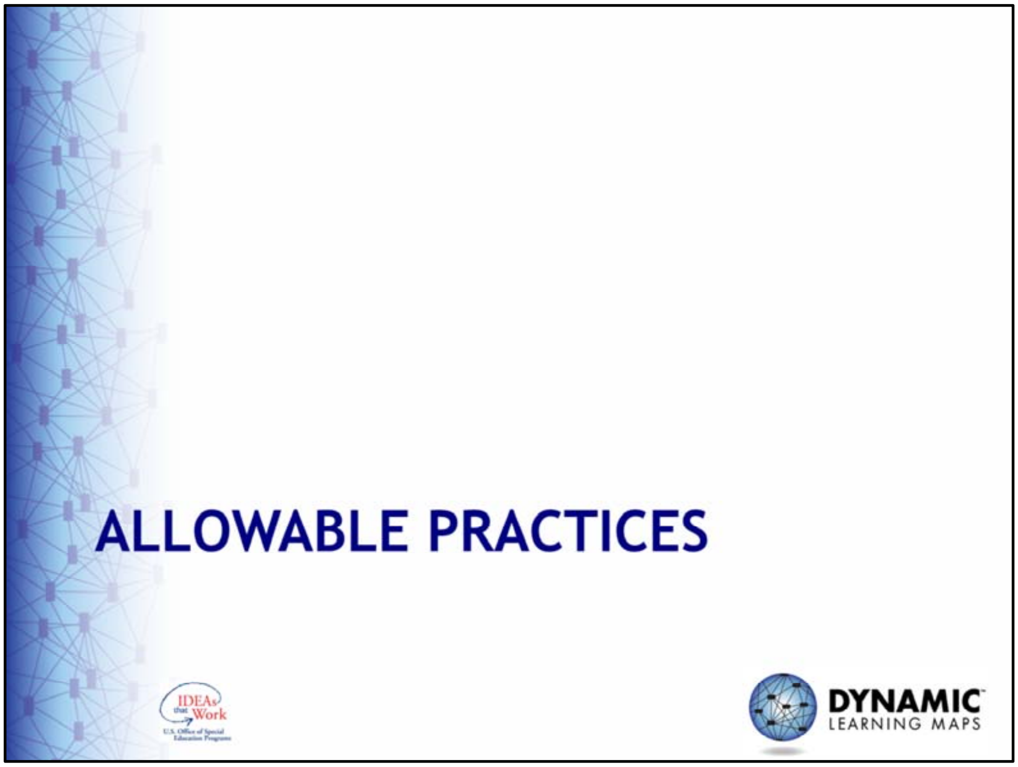


As the students move through the testlets in the End-of-Year assessment, Testlet Information Pages (TIPs) provide the test administrator with important information about the materials needed, whether or not substitute materials are allowable, and specific details regarding exceptions to typically allowable supports.

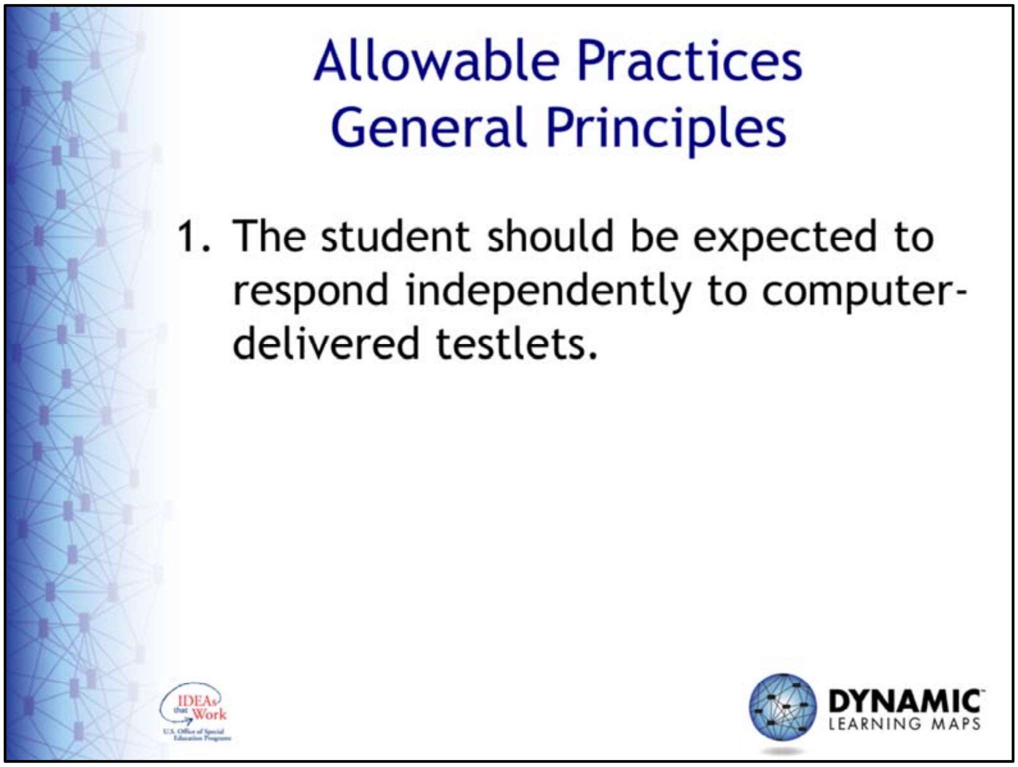
The actual administration of the testlet begins with KITE. Educators support students as necessary as they log in to KITE. Sometimes this means the adult logs in for the student. Once the student is logged in, the next step is to select **Take a Test**.



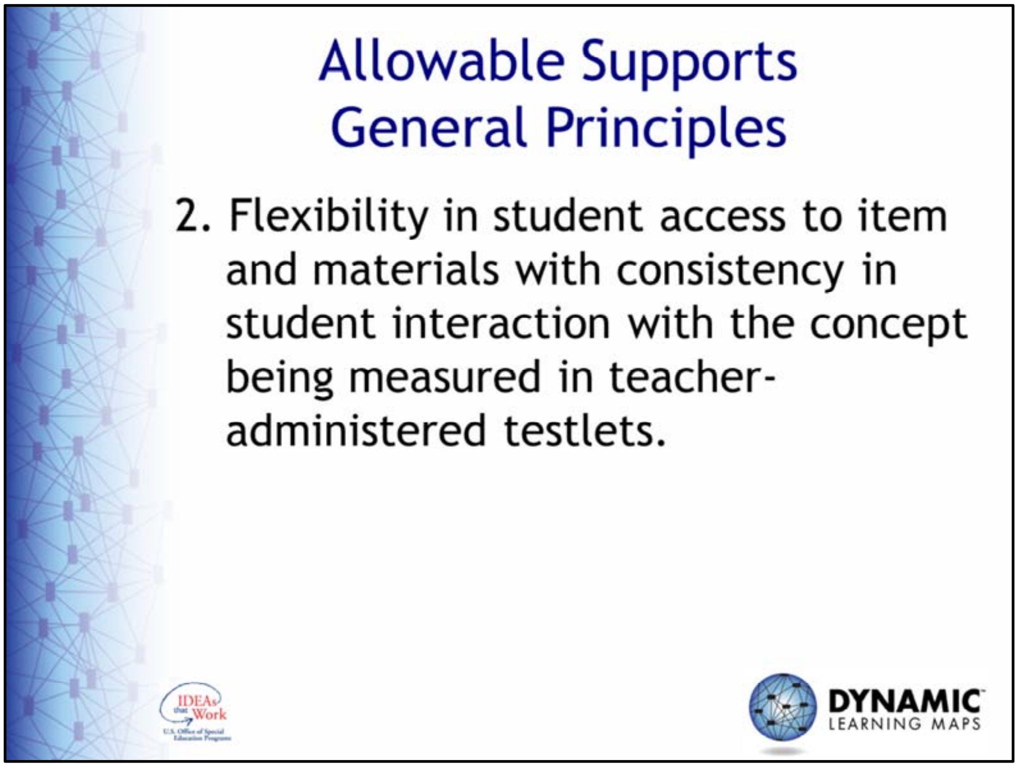
At the end of a testlet, test administrators and students can check to see that all items have been completed. Empty red boxes indicate items that have not been completed. . If the student has not answered all of the items, the student may choose an unanswered item icon to jump back to a specific item, or select the GO BACK button to find and answer all the incomplete items. . The **END** button should only be selected when a student has completed the testlet and it is ready to be submitted.



KITE has been specially designed for students with significant cognitive disabilities. However, students will need various levels of support to interact with the computer. In providing those supports, remember the allowable practices in DLM.

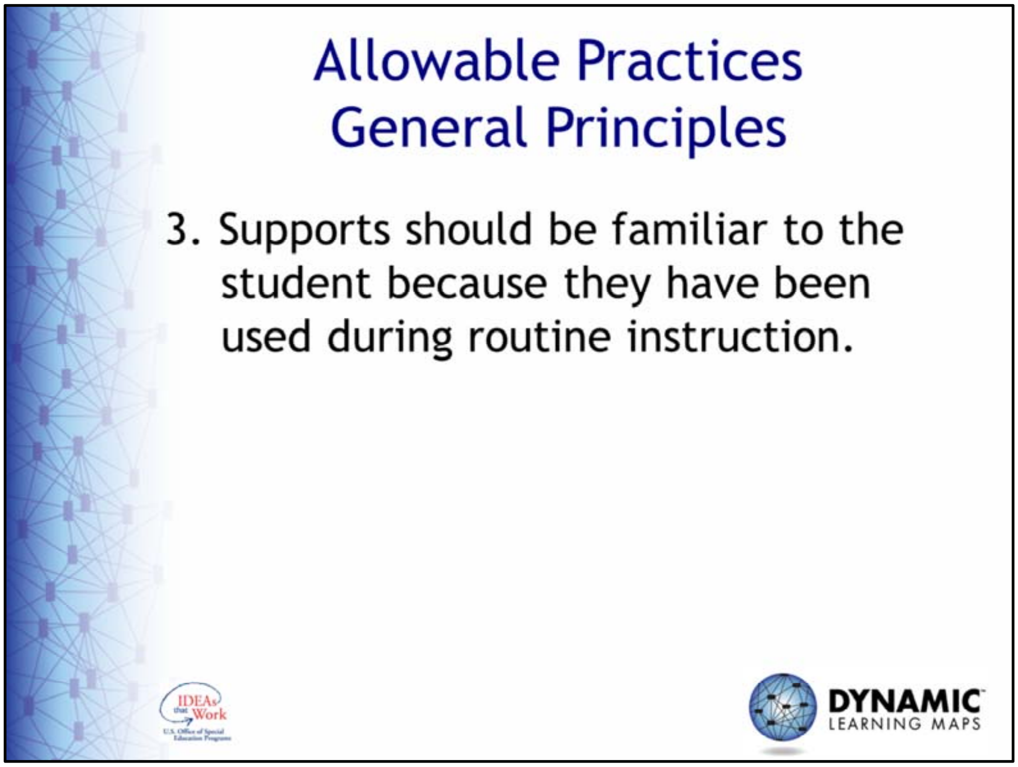


First, the student should be expected to respond independently. No matter what additional supports IEP teams and test administrators select in the Personal Needs and Preferences profile, the student should be expected to interact with the content and respond to the content independently.

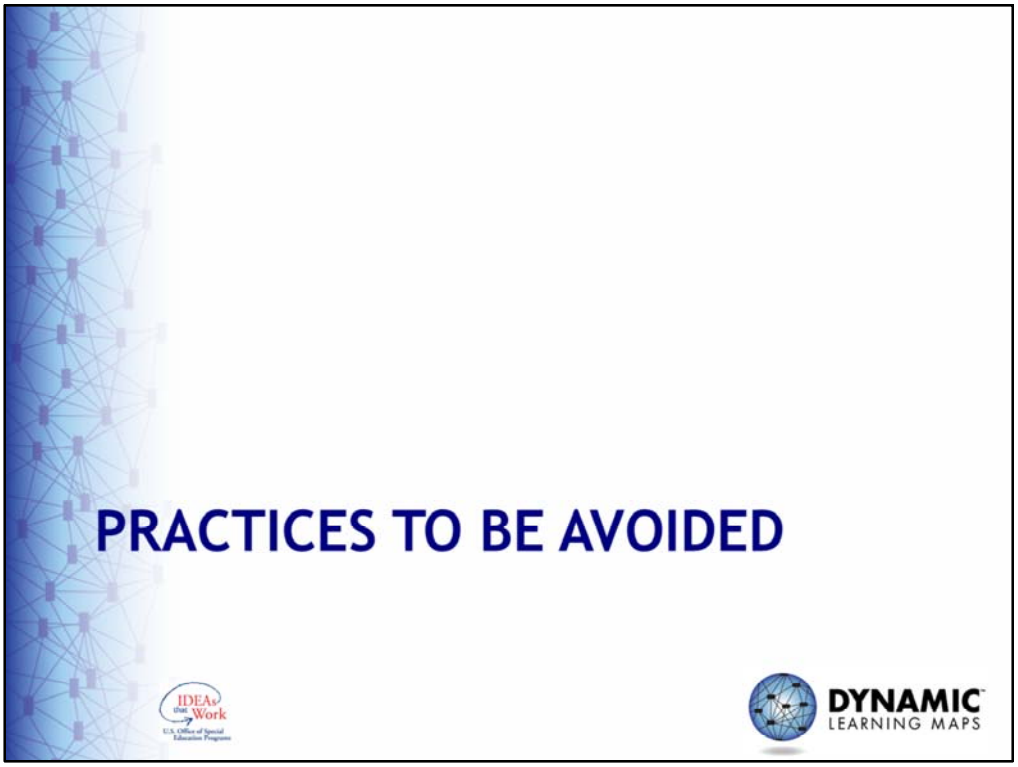


Second, in teacher-administered testlets, there should be flexibility in the ways that students access the items and materials. For example, the test administrator may read aloud any part of the assessment including passages in ELA. As another example, DLM standard administration procedures define typical arrangements for the test administrator, student, and computer. However, the test administrator may need to adapt the physical arrangement based on a student's needs and use of special equipment. Similarly, test administrators may present the answer options off the computer in a format that makes them more accessible, but test administrators cannot reduce the number of answer choices or add pictures to represent answer items that only have printed choices on the computer screen.

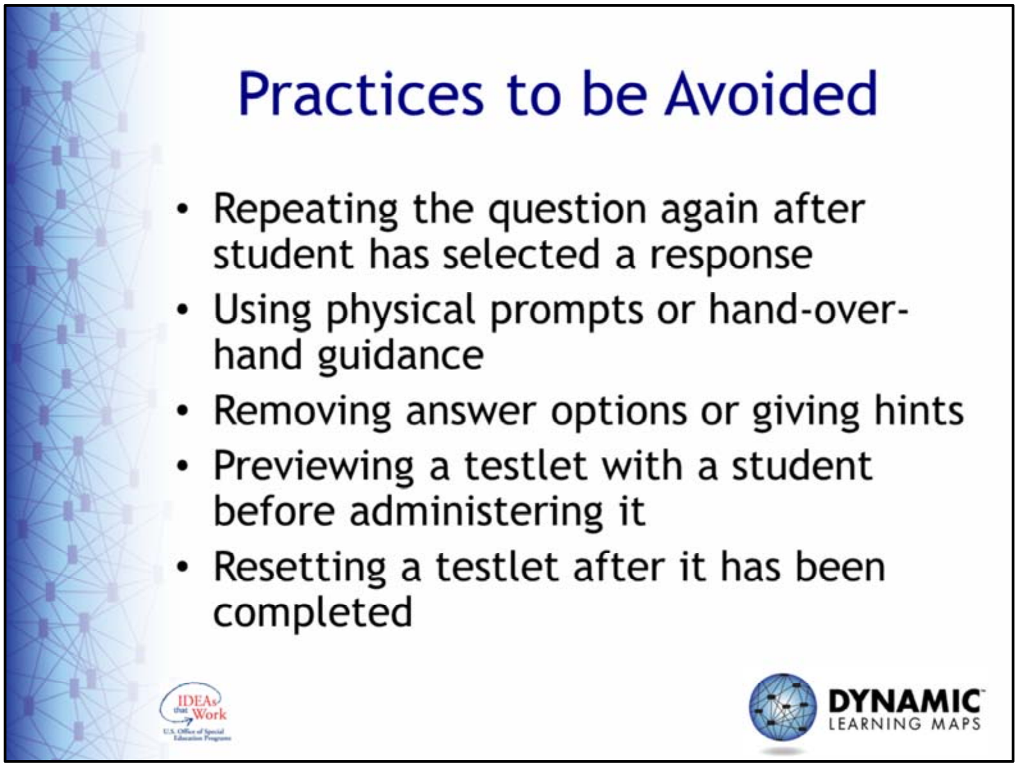
Other examples of this flexibility include the substitution of objects as needed. If the item calls for the use of an object that is inappropriate or unavailable, other objects may be substituted. While maintaining flexibility in access to the items and materials, it is also important to maintain consistency in the student's interaction with the concept being measured. This means that questions cannot be rephrased except to replace the name of objects when alternate objects are selected for a student.



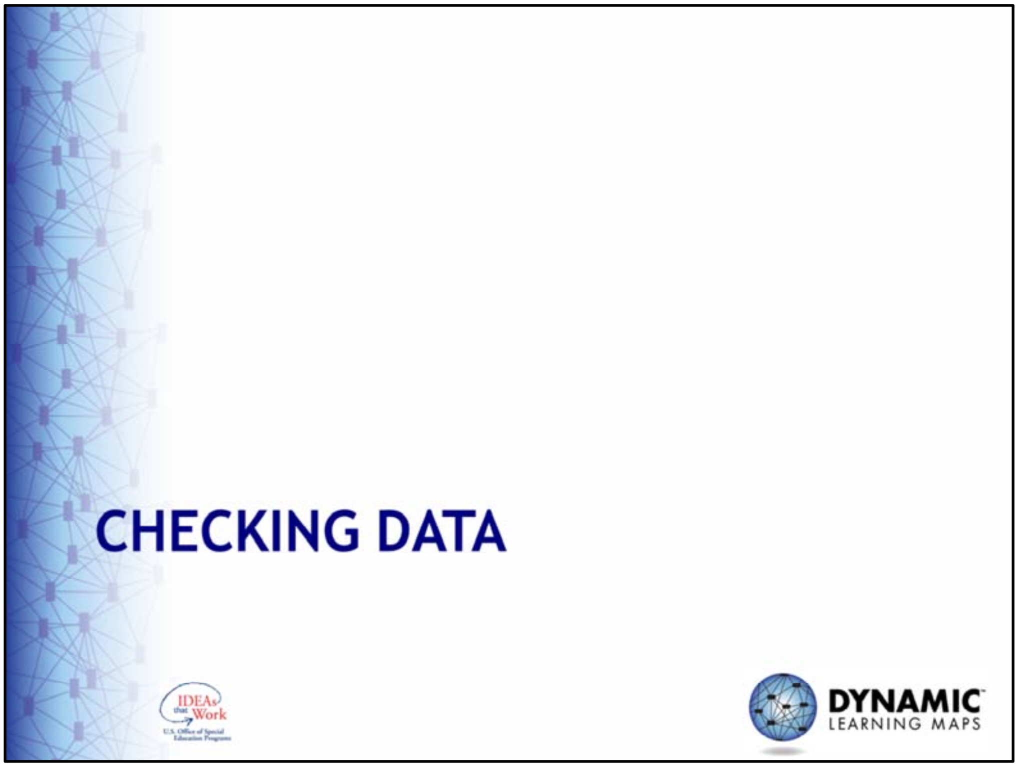
Third, supports that students use to complete testlets should be supports that are used consistently during routine instruction. Students who have never received a support prior to the testing day may not know how to make the best use of the support during the assessment.



While many supports and practices are allowable for test administration, some practices should be avoided.

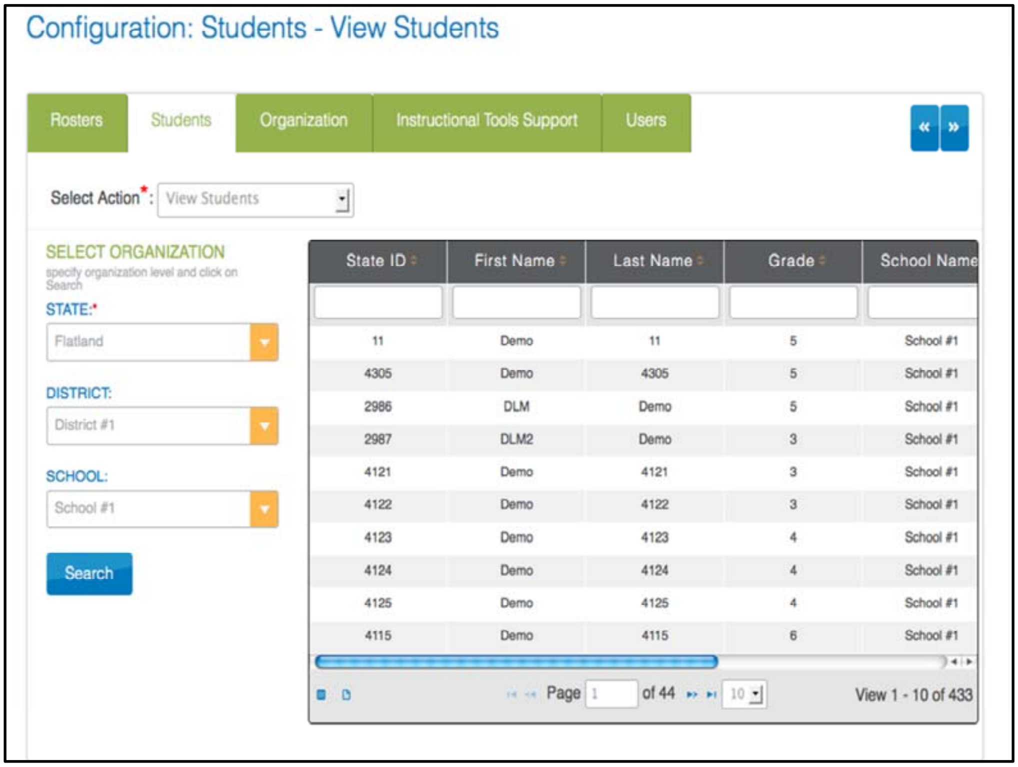


Avoid all practices that interfere with students' independent responses to the content of items. Do not repeat the question after the student has selected a response. Do not prompt the student to choose a different answer. Do not use any physical prompts or hand-over-hand guidance during the assessment. Do not reduce the number of answer options presented in a question. Do not give hints to students. Do not allow a student to preview a testlet. Finally, DLM's policy is that testlets cannot be reset after they have been completed.

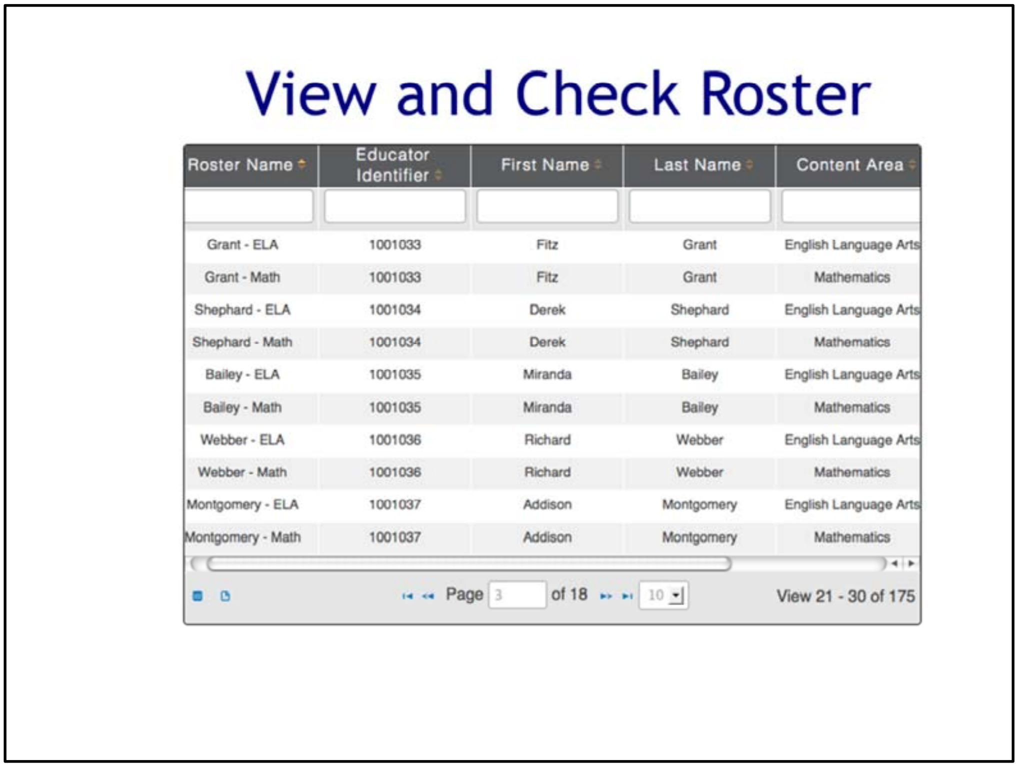


We've reviewed issues related to test security, accessibility, and structure. Now, let's review the steps you need to take to check student data before beginning the assessment.

Test administrators complete all data management in Educator Portal. You should already have an account in Educator Portal. For full instructions on how to access Educator Portal and other Educator Portal information, including information about changing your password, please see the TEST ADMINISTRATION MANUAL.

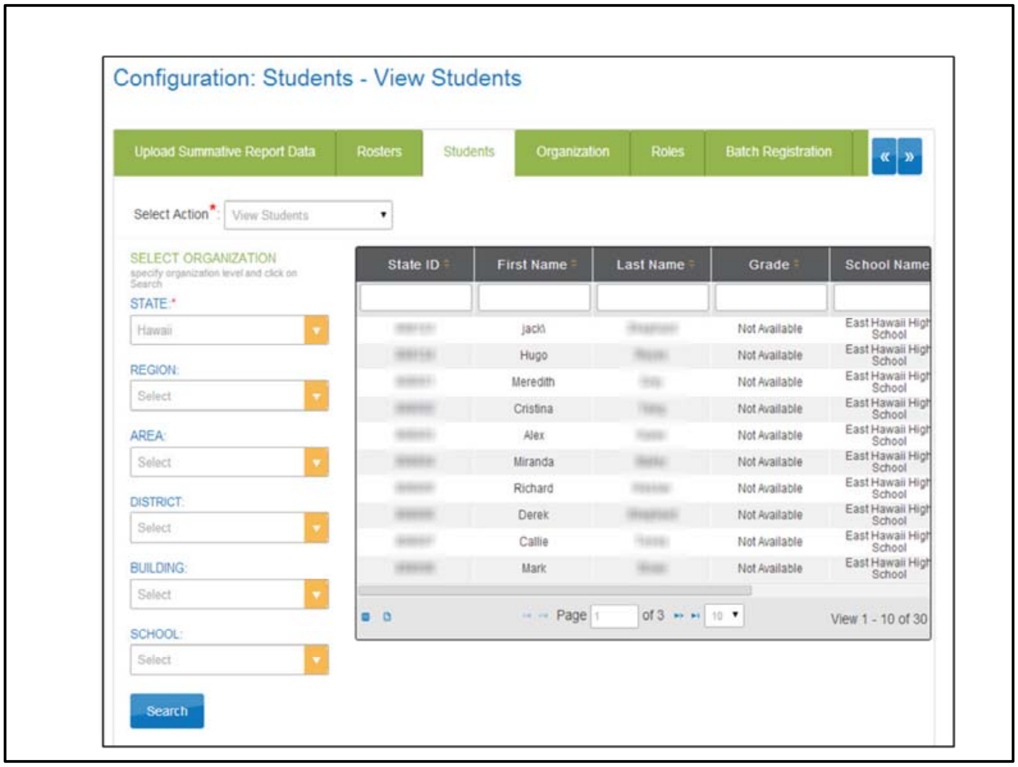


Your Data Steward uploaded an enrollment file with student data in Educator Portal. You will know that is done if you find the list of names matching the students you'll assess when you click on **Students** on the home page and then the **Students** tab. You may have to sort, filter or search in order to view all your students. Educators are responsible to ensure all student information is correct, including the state ID, the first name, last name, and grade for each student. Please notify your Data Steward if any student information needs to be edited because it is not accurate.



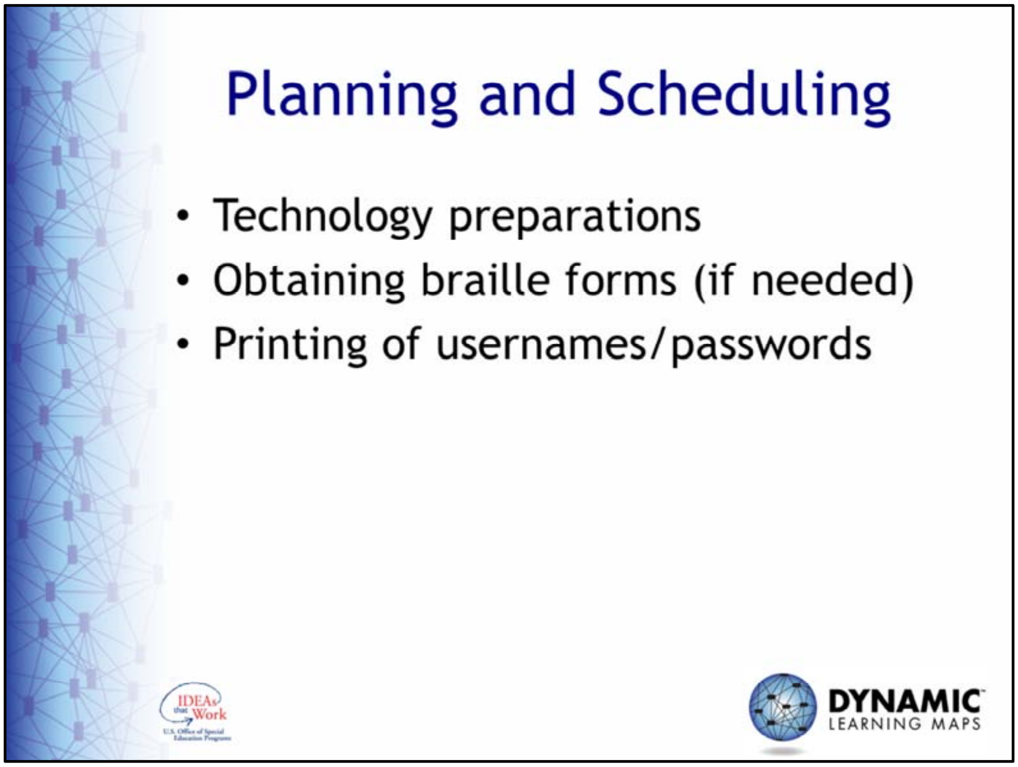
Roster Name	Educator Identifier	First Name	Last Name	Content Area
Grant - ELA	1001033	Fitz	Grant	English Language Arts
Grant - Math	1001033	Fitz	Grant	Mathematics
Shephard - ELA	1001034	Derek	Shephard	English Language Arts
Shephard - Math	1001034	Derek	Shephard	Mathematics
Bailey - ELA	1001035	Miranda	Bailey	English Language Arts
Bailey - Math	1001035	Miranda	Bailey	Mathematics
Webber - ELA	1001036	Richard	Webber	English Language Arts
Webber - Math	1001036	Richard	Webber	Mathematics
Montgomery - ELA	1001037	Addison	Montgomery	English Language Arts
Montgomery - Math	1001037	Addison	Montgomery	Mathematics

After you have checked to make sure each of your students is accurately listed under the students tab, you'll need to check the roster to make sure each student appears for each content area assessed. Be certain to check the Test Administration Manual and your state's guidelines to ensure that students are enrolled in the appropriate assessments for the correct subjects or courses. You are responsible for confirming that students who appear on your roster are eligible to participate and listed as appropriate for each assessment.



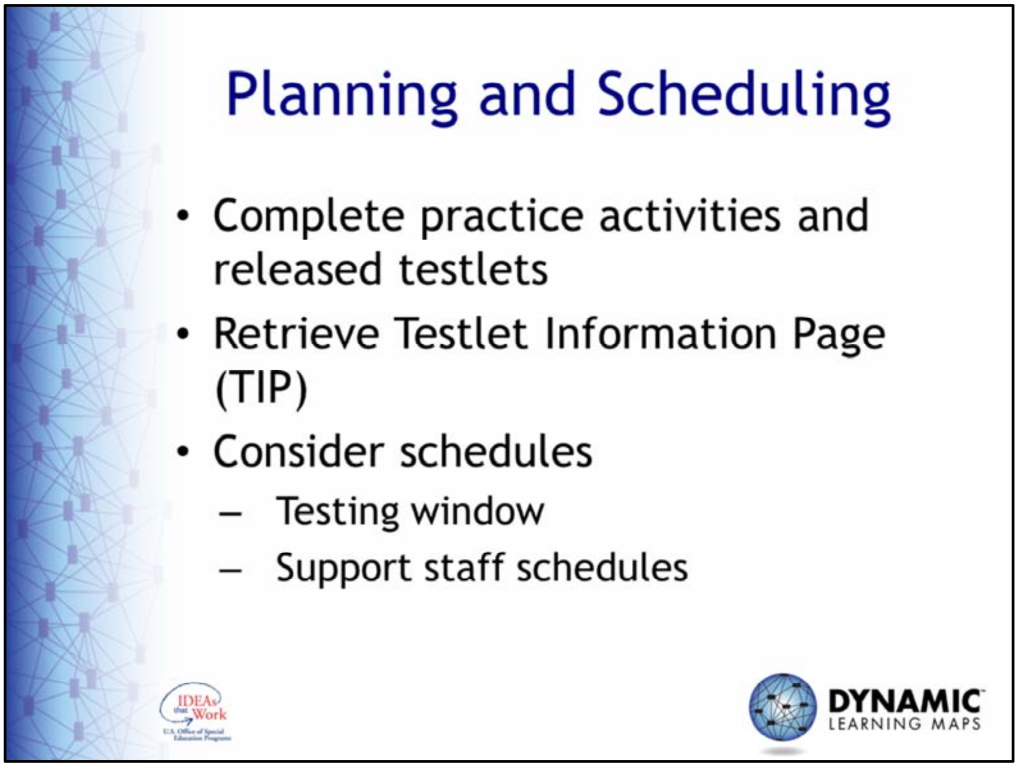
You must also check the First Contact Survey. The First Contact survey is used by the KITE system to determine the linkage level of the first testlet that students complete when they begin to use the DLM Assessment. All questions that are marked as required must be completed in order for the KITE system to make accurate decisions about the first testlet. Step-by-step directions with screen shots for completing the First Contact Survey are available in the TEST ADMINISTRATOR MANUAL.

In addition to verifying student data, be sure to use the practice activities and released testlets in the practice section of KITE. You may already feel comfortable with the structure of testlets, but you'll want to take the time to practice with your students each time you administer the assessment to help them feel comfortable. To access these practice activities and released testlets, follow the login procedures provided in the Test Administration Manual. Both types of activities can be completed as many times as desired, but they cannot be accessed if you log in using your own student's username and password.



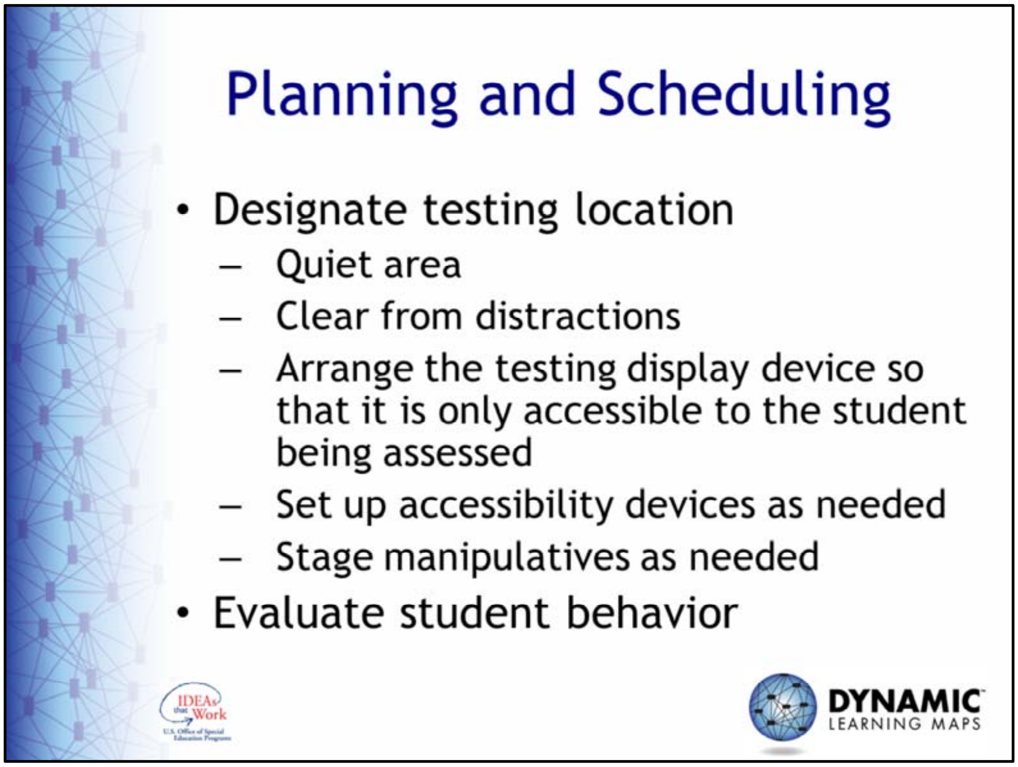
Test administrators will need to make any technological preparations before the assessment. For example, you may have students who use assistive devices that need to be checked to make sure they are compatible with KITE. Technology preparations could also include reserving computer labs for testing days.

If you have students who will be taking the braille version of the assessment, extra steps must be taken in addition to indicating braille on the Personal Needs and Preferences Profile. Braille will not automatically come for a student without these extra steps. Please contact your District Test Coordinator to ensure your student receives the braille testlets. Again, details and step-by-step guides for completing each of these processes are provided in the TEST ADMINISTRATION MANUAL.



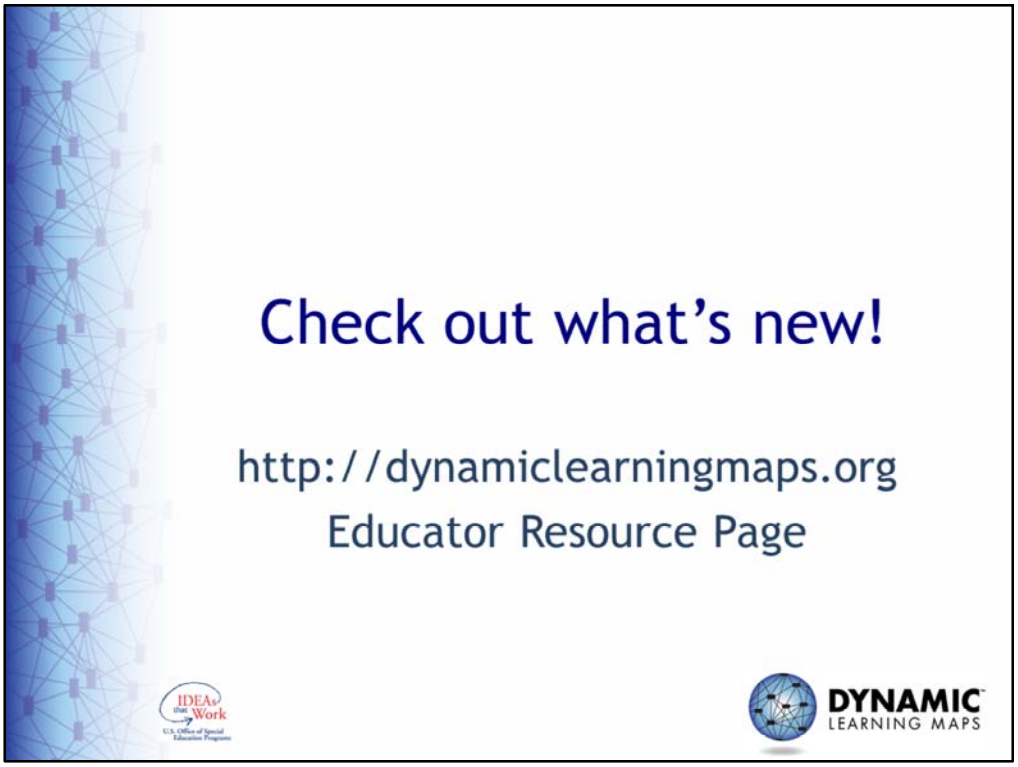
When scheduling a test session, test administrators must prepare for the testlets. They will need to view the Testlet Information Page to determine any objects or manipulatives that may be needed for test administration. This will help educators plan for students who may use a special device or specific manipulatives for a testlet.

Considering schedules is vital when dealing with testing windows that require all testlets to be administered in a prescribed timeframe. Test administrators will need to think about their own schedules, their students' schedules, and often the schedules of support staff who will help with testing or monitoring other students in the classroom while one of the students is taking a testlet.

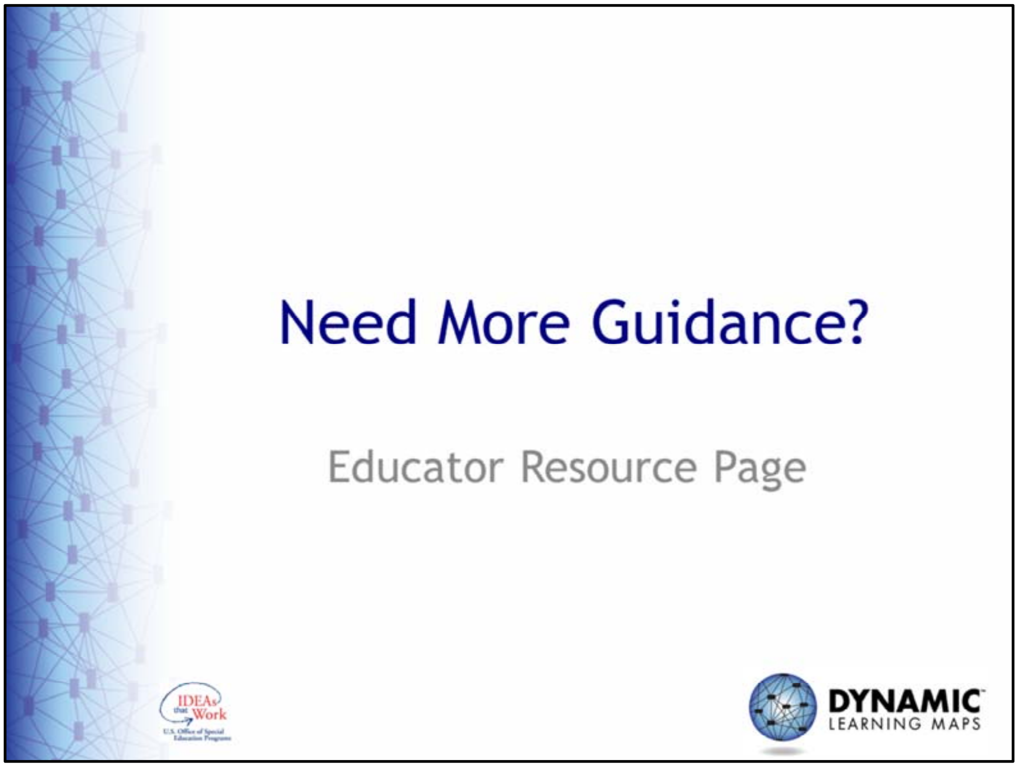


Designating a testing location is an essential part of planning. The testing location should be a quiet area that is clear of any possible distractions to the student. If a student must be tested in the classroom where other students are present, arrange the testing display, such as the computer monitor, so that it is only visible to the student being assessed. Educators may also need to set up an accessibility device or manipulatives needed before the test begins.

Evaluating your student’s current behavior is very important when thinking about testing. We understand that not every day is a good day to assess. Therefore, use your professional judgment and reschedule testing for another time if your student is not having a good day on the intended testing day. If the student gets tired or distracted during a testlet sooner than expected, either allow the student to complete and submit the testlet and then pause testing, or use the **Exit Does NOT Save** button and return later if your state allows that option. If you choose **Exit Does NOT Save**, the student's responses will not be saved.

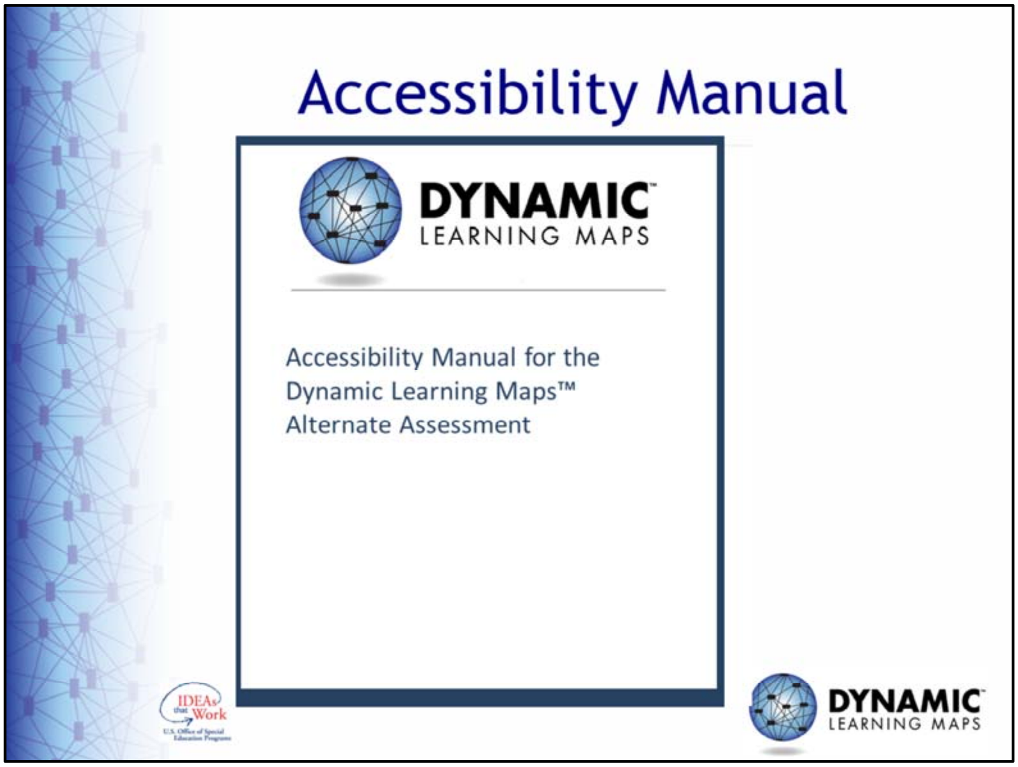


That is the end of the review. Be sure to check out what's new in the DLM Alternate Assessment system by looking on the Educator Resource Page for your state on the DLM website.

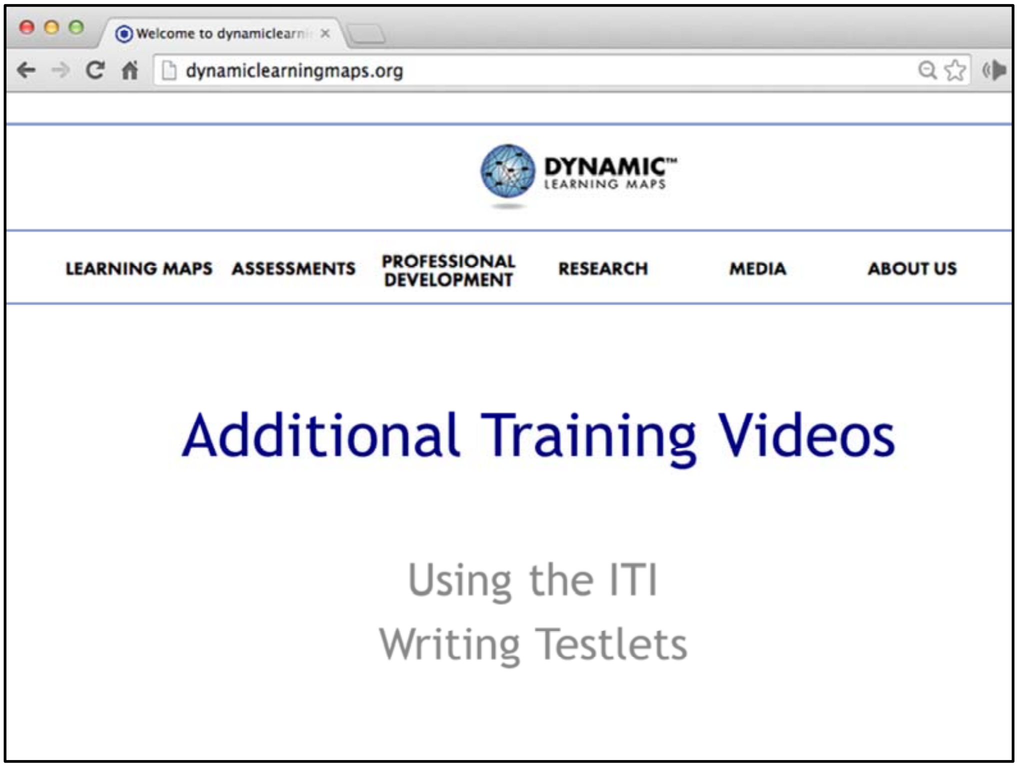


If you need more guidance on any of the aspects of the training you have completed, begin with the Educator Resource Page for your state on the DLM website.

On the Educator Resource Page, you'll find the Test Administration Manual. Always check to ensure you have the most recent version.



On the Educator Resource Page, you will also find the Accessibility Manual.



There are a number of additional training videos that are not required but are intended to provide guidance for those who need them. For example, there are videos on using the Instructional Tools Interface, writing testlets, and many others. These videos are linked to the Educator Resource Page for your state on the DLM website.

Finally, there are 50 instructional professional development modules intended to teach you more about the DLM system and how it influences instruction for students with significant disabilities. These can be accessed through the Professional Development tab on the DLM homepage or dlmpd.com.

This concludes required training for the return DLM test administrators. You must successfully complete a quiz assessing your understanding of this module and all other modules before you can administer any DLM tests. Please complete any remaining quizzes at this time. If you do not achieve a score of 80% or higher on the quiz, you will be directed to additional training.

DYNAMIC LEARNING MAPS

DLM REQUIRED TRAINING
RETURNING TEST ADMINISTRATORS
POST-TEST ASSESSMENT

Part 1

1. The DLM® Learning Maps represent specific skills and understandings as well as the multiple pathways that students might follow as they develop those skills and understandings in mathematics, English language arts, and important functional skills.
   True False

   Feedback if false is selected: The learning maps focus on academic skills in mathematics and English language arts. One day they'll include science, but the learning maps do not address functional skills. It is important for students with significant cognitive disabilities learn important functional skills, but they are not addressed in DLM.

2. Which of the following statements are true about the DLM Essential Elements? (select all that apply)

   a. The DLM Essential Elements align directly to nodes in the DLM learning maps.
   b. The DLM Essential Elements are the grade-level targets for the DLM Alternate Assessment.
   c. The DLM Essential Elements focus on academic skills and functional skills.
   d. The DLM Essential Elements are specific statements of knowledge and skills that are linked to the grade-level specific College and Career Readiness standards.

   Feedback if c is selected: The DLM Essential Elements address academic skills in mathematics and English language arts. In some states, there are also Essential Elements in science. However, no Essential Elements address functional skills. These skills may be taught and are often included in IEPs, but they are not a formal part of the standards or Essential Elements.

3. The DLM testlets written at which linkage level align directly with the DLM Essential Element?
   a. Initial Precursor
   b. Distal Precursor
   c. Proximal Precursor
   d. Target
   e. Successor

   Feedback if any wrong answer is selected: When developing testlets, the DLM team starts by identifying the nodes in the learning map that most closely reflect the Essential Element. This node or these nodes are then used to write Target Level testlets that align directly to the Essential Elements. Testlets at other linkage levels are developed using nodes from the learning maps that build up to and extend from the target node or nodes.

4. The DLM mini-maps specifically detail the nodes that are assessed at each linkage level.

True False

Feedback if false is selected: The mini-maps are made available to teachers so that they can see all of the nodes that are tested at each linkage level. The mini-maps allow teachers to see the relationship among the nodes and how they build upon one another. The mini-maps call out the nodes that are assessed directly, and often include additional nodes that fill learning gaps but are not directly assessed.

5. Which of the following are DLM Test Security standards? (select all that apply)
   a. Testlets and Testlet Information Pages (TIPs) are not to be printed.
   b. Testlets are not to be stored or saved on computers or personal storage devices.
   c. Testlets are not to be shared via email, social media, or other file-sharing systems.
   d. Testlets are not to be reproduced by any means, except where explicitly allowed as described in the Test Administration Manual (e.g.. braille forms of the testlets).

Feedback if "a" is selected: Educators are encouraged to print Testlet Information Pages (TIPs) to help them prepare to administer testlets; however, TIPs must be securely destroyed after the testlet has been administered. Do not post TIPs, share them via email or other social networks, and do not save them onto any local or portable drives.

Part 2

1. The technology platform designed to deliver the DLM assessment is called KITE.

True False

Feedback if False is Selected: The DLM technology platform is called KITE™. The KITE platform has embedded features to increase accessibility and enrich the interaction between students and the content.

2. Which of the following is true about the First Contact Survey? (select all that apply)
    a. The First Contact survey determines the best linkage level for the first time the student uses the system.
    b. The First Contact Survey only has to be completed one time for each student.
    c. The First Contact Survey includes questions about a student's sensory and motor characteristics, computer access, attention, communication and academic skills.
    d. The First Contact Survey is completed before testing begins.

    Feedback if "b" is Selected: The First Contact survey is completed prior to the assessment and updated as needed across the year and from one year to the next. It is important to keep the First Contact survey updated because it determines the best linkage level for the first time the student uses the system each year. Remember that the linkage levels reflect different levels of content complexity relative to the grade-level Essential Elements so the information entered must remain up-to-date. The information gathered through the First Contact survey includes a student's sensory and motor characteristics, computer access, attention, communication and academic skills.

3. Testlet Information Pages (TIPs) provide the test administrator with specific information about the materials needed prior to administering a testlet.

    True False

    Feedback if False is Selected: Testlet Information Pages (TIPs) provide the test administrator with important information about each testlet students complete. This includes specific information about the materials needed, whether or not substitute materials are allowable, and specific details regarding exceptions to typically allowable supports. For example, if the student is not allowed to use a calculator or the test administrator must refrain from providing definitions for words, those rules would be clearly states on the Testlet Information Page.

4. DLM uses a personal learning profile comprised of the Personal Needs and Preference Profile and the First Contact Survey to address their unique needs of individual students.

    True False

    Feedback if False is Selected: DLM uses a Personal Learning Profile for individual students to address their unique needs. Educators create the Personal Learning Profile based on their knowledge of student needs, and this information supports the access needs of individual students. The First Contact Survey helps to address the unique needs of individual students by providing information that KITE uses to deliver a testlet at the appropriate level of complexity the first time the student uses the system.

5. All states in the DLM Consortium have the same rules about how alternate assessment results are used in accountability systems.
   True **False**

   Feedback if True is Selected: Each state in the DLM Consortium has different rules about how alternate assessment results are used in accountability systems. For that reason, DLM also gives each state a data file with student results, including performance levels. States then use that information to make final accountability determinations for educators, schools, and districts.

Part 3

1. Which of the following is true regarding the teacher-administered testlets in DLM? (select all that apply)
   a. **They use the KITE platform.**
   b. **They direct teachers in administering the testlets to students.**
   c. The student interacts directly with KITE as much as possible.
   d. **The test administrator enters all student responses and observations of students in KITE.**

   Feedback if "c" is selected: The teacher-administered testlets use the KITE platform to direct teachers in administering the testlets to students. In these teacher-administered testlets, the test administrator enters all student responses and observations of students in KITE, but the student does not interact directly with the system. The teacher-administered testlets are used for students who cannot interact directly with the KITE system. Sometimes this is because students are still developing symbolic understandings. Other times the content cannot be assessed with information presented on the computer screen. Teacher-administered testlets provide step-by-step, scripted directions that guide the test administrator through the standardized testlet administration process. Items in teacher-administered testlets are written to the test administrator, who delivers each item and then enters responses based on observation of the student's behavior.

2. Students completing the DLM assessment are expected to interact with the content and respond to the content independently.
   True False
   Feedback if "False" is selected: All students should be expected to respond independently. No matter what additional supports IEP teams and test administrators select in the Personal Needs and Preferences profile, the student

should be expected to interact with the content and respond to the content independently.

3. Test administrators may read aloud any part of the DLM assessment except passages in ELA.

    True **False**

    Feedback if "True" is selected: Test administrator may read aloud any part of the DLM assessment including passages in ELA. However, when the team determines that Read Aloud is most appropriate for a student, it should be indicated on the Personal Needs and Preferences Profile.

4. Test administrators may not reduce the number of answer choices or add pictures to represent answer items that only have printed choices on the computer screen.

    True False

    Feedback if "False" is selected: Test administrators may not reduce the number of answer choices or add pictures to represent answer items that only have printed choices on the computer screen. Answer options may be presented off the computer in a format that makes them physically accessible to the students, but they may not represent answer options using pictures or reduce the number of answer options that are provided.

5. Test administrators must use the specific objects that are called out in the Testlet Information Pages and in the items as they appear in KITE.

    True **False**

    Feedback if "True" is selected: If the item calls for the use of an object that is inappropriate or unavailable, other objects may be substituted. While maintaining flexibility in access to the items and materials, it is also important to maintain consistency in the student's interaction with the concept being measured. This means that questions cannot be rephrased except to replace the name of objects when alternate objects are selected for a student.

Part 4

1. Test administrators complete all data management in Educator Portal.

    True False

    Feedback if FALSE is selected: Test administrators will complete all data management in Educator Portal. Full instructions on how to access Educator Portal and other Educator Portal information, including information about changing your password, is available in the TEST ADMINISTRATOR MANUAL.

2. The Testlet Information Pages provide specific information regarding objects or manipulatives and should be accessed while administering the assessment.
   True **False**

   Feedback if TRUE is selected: Test administrators must access the Test Information Page for a testlet prior to administering the assessment. The Testlet Information Page provides important information regarding objects or manipulatives that may be needed for test administration. It also helps test administrators plan for students who may use a special device such as an alternate keyboard or specific manipulatives for a testlet or subject.

3. Students are required to complete released testlets and practice activities prior to participating in the operation assessment.
   True **False**

   Feedback if TRUE is selected: Students are not required to complete released testlets or practice activities, but there are many reasons they should. For example, practice activities are designed to familiarize students with the question types, navigation processes, and procedures to end a testlet. Several different sample student profiles have been set up. Each sample student has been given different accessibility supports in the Personal Needs and Preferences Profile. Completing practice activities while logged in as a different sample student allows the student to try different accessibility features prior to the operational assessment. Practice activities also provide a way to check device compatibility prior to the operational test for students who may require the use of assistive technology to interact with the computer. Finally, released testlets allows students to familiarize themselves with testlets and the kid system. Practice activities and released testlets may be completed as many times as needed to help students get comfortable with the KITE system.

4. Other students are allowed in the same room where a student is testing as long as the computer monitor is only visible to the student being assessed.
   True False

   Feedback if FALSE is selected: If a student must be tested in the classroom where other students are present, arrange the testing display, such as the computer monitor, so that it is only visible to the student being assessed.

5. Test administrators will find detailed information regarding all of the information provided in this training in the DLM TEST ADMINISTRATION MANUAL, the DLM ACCESSIBILITY MANUAL, and on their state's Educator Resource page.

True False

Feedback if FALSE is selected: If you need more guidance on any of the aspects of the training you have completed, begin with the Educator Resource Page for your state on the DLM website. On the Educator Resource Page, you'll find the TEST ADMINISTRATION MANUAL. Always check to ensure you have the most recent version. On the Educator Resource Page, you will also find the ACCESSIBILITY MANUAL. Each of these resources provides important information and step-by-step guidance regarding the administration of the DLM alternate assessment.