Mini-Map for M.EE.4.OA.5

Subject: Mathematics
Operations and Algebraic Thinking (OA)
Grade: 4

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.4.OA.5 Use repeating patterns to make predictions.	**M.4.OA.5** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Recognize attributes or characteristics of an object such as color, height, or weight. Form a pair by putting together two objects (e.g., putting together a pencil and an eraser from two sets containing pencils and erasers).	Recognize patterns (or cycles) that exist in nature (e.g., seasons occur in a pattern, day and night occur in a pattern) or in everyday life (e.g., music, P.E., and art classes occur in a pattern in school).	Recognize the pattern that either repeats or grows when shown different patterns involving numbers, letters, symbols, pictures, or shapes (e.g., 1, 1, 2, 1, 1, 2, 1, 1, 2…, or 2, 4, 6, 8...).	Recognize the core unit in a repeating pattern by determining the smallest section of the pattern that is repeated over and over (e.g., the core unit in the pattern 1, 1, 2, 1, 1, 2, 1, 1, 2... is 1, 1, 2).	Communicate the next element in a repeating pattern by using the core unit. For example, the next term in the pattern 2, 4, 4, 2, 4, 4, 2, 4, 4... is 2 because the core unit is 2, 4, 4. The patterns should be limited to repeating patterns using numbers, letters, shapes, pictures, etc.

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to understand and work with patterns, students begin by learning to notice what is new. The educator draws the students' attention to new objects or stimuli, labels and describes them (e.g., “there are two cubes,” “this is a circle and then a square,” “this group has a short block, a long block, and a short block and this group has a short block, a long block, and a short block”), and the student observes, feels, or otherwise interacts with them. Educators encourage students to begin placing objects together to make their own pattern.

How is the Distal Precursor related to the Target?

As students develop their awareness of attributes and putting objects together, educators will draw the students' attention to patterns in words, symbols, numbers, images, routines, and the environment, and allow students to create their own patterns.

Instructional Resources

Released Testlets
See the Guide to Practice Activities and Released Testlets.
Using Untested (UN) Nodes
See the document Using Mini-Maps to Plan Instruction.

Link to Text-Only Map

M.EE.4.OA.5 Use repeating patterns to make predictions.