

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

