

EnVision Math Unit Lesson Plan			Common Core Standards: 4.OA.3; 4.OA.5	
Grade Level: Fourth Grade		Topic 2: Generate and Analyze Patterns		
Instructional Emphasis: Operations and Algebraic Thinking			Essential Questions: <ul style="list-style-type: none">How can you continue a repeating pattern? (2-1)What is the pattern? (2-2)What pairs of numbers fit a pattern? (2-3)What is a math rule for the situation? (2-4)How can you describe black towers? (2-5)How can you solve problems by acting them out and using reasoning? (2-6)	
Big Ideas: <ul style="list-style-type: none">2-1: Some patterns consist of shapes or number arranged in a unit that repeats.2-2: Some numerical sequences have rules that tell how to generate more numbers in the sequence.2-3: Some real-world quantities have a mathematical relationship; the value of one quantity can be found if you know the value of the other quantity.2-4: Some real-world quantities have a mathematical relationship; the value of one quantity can be found if the value of the other quantity is known.2-5: Some sequences of geometric objects change in predictable ways that can be described using mathematical rules.2-6: Some problems can be solved by using objects to act out the information in the problem. Some problems can be solved by reasoning about the conditions in the problem.				
Lesson 1: Repeating Patterns	Lesson 2: Number Sequences	Lesson 3: Extending Tables	Lesson 4: Writing Rules for Situations	Lesson 5: Geometric Patterns
Vocabulary: repeating pattern Objective: Students will identify and extend repeating geometric or repeating number patterns. Materials: Pattern Blocks or Tangram Pieces (Teaching Tool 24) Content Reviewed: Division; Fractions; Subtraction; Fact Families; Multiplication Facts; Problem Solving Standard: 4.OA.5	Vocabulary: Objective: Students will identify and extend whole-number patterns involving addition and subtraction. Materials: Recording Sheet: Number Sequences (Teaching Tool 26) Content Reviewed: Identify Fractions; Addition; Addition Properties; Problem Solving; Number Patterns; Model Fractions; Division Standard: 4.OA.5	Vocabulary: Objective: Students will extend tables of ordered pairs for situations involving multiplication, addition, or subtraction. Materials: Two-Color Counters (Teaching Tool 12) Content Reviewed: Problem Solving; Multiplication Facts; Number Patterns; Multiplication; Subtraction; Identify Fractions; Number Patterns; Division Standard: 4.OA.5	Vocabulary: Objective: Students will find a rule and extend the table, given a table of number pairs. Materials: Recording Sheet: Writing Rules for Situations (Teaching Tool 27) Content Reviewed: Patterns in a Table; Number Patterns; Problem Solving; Compare Fractions; Multiplication Facts Standard: 4.OA.5	Vocabulary: Objective: Students will extend patterns of cubes or tiles. Materials: Cubes (40 per pair) Centimeter Grid Paper (Teaching Tool 4) Content Reviewed: Patterns; Estimation; Multiplication; Bar Graphs; Division Standard: 4.OA.5
Assessment	Assessment	Assessment	Assessment	Assessment
Topic 2 Introduction Daily Common Core Review	Daily Common Core Review Problem-Based Interactive	Daily Common Core Review Problem-Based Interactive	Daily Common Core Review Problem-Based Interactive	Daily Common Core Review Problem-Based Interactive

Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework
Lesson 6: Problem Solving: Act it Out and Use Reasoning				
Vocabulary: Objective: Students will use the strategies Act It Out and Use Reasoning to solve problems. Materials: Two-Color Counters (Teaching Tool 12) Content Reviewed: Geometric Patterns; Model Fractions; Measure Time; Compare Fractions; Problem Solving; Patterns in Tables; Multiplication Properties Standard: 4.OA.2; 4.OA.3				
Assessment				
Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and				

Enrichment Homework Topic 2 Assessment				
---	--	--	--	--