

Unit 7 - Patterns and Sequences

Content Area: **Mathematics**
Course(s):
Time Period: **December**
Length: **3-4 weeks**
Status: **Published**

Unit Overview

Unit 7 connects with the theme of Patterns in Our World, which centers around nonnumeric and numeric patterns in real-world applications. Students will learn the different aspects of patterns and sequences, and that equations are often used to represent patterns and to solve problems arising in everyday life. Students will analyze the relationships found in patterns and use those relationships to draw conclusions.

Essential Questions

"How are patterns used in mathematics?"

Content

Nonnumeric Patterns

Numeric Patterns

Sequences

Problem-Solving Investigation: Look for a Pattern

Addition and Subtraction Rules

Multiplication and Division Rules

Order of Operations

Hands On: Equations with Two Operations

Equations with Multiple Operations

Skills

Describe nonnumeric growing and repeating patterns.

Identify, describe, and extend numeric patterns.

Extend patterns and write observations about the pattern.

Look for a pattern to solve problems.

Find and use rules to write addition and subtraction equations.

Find and use rules to write multiplication and division equations.

Use order of operations to solve problems.

Explore equations with two operations.

Use tables to recognize and write equations with two operations.

Assessments

Online Readiness Quiz

Vocabulary Check

Concept Check - Check My Progress

Chapter Test

Teacher Observation

Lessons/Learning Scenarios

MyMath Grade 4

Chapter 7: Lessons 1-9

Standards

CCSS.Math.Content.4.OA.A.3

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

CCSS.Math.Content.4.OA.C.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.

Resources

MyMath Grade 4: McGraw-Hill (2012)

- connecting cubes
- classroom objects
- counters
- construction paper
- function machine
- index cards