

Unit 3 - Understand Multiplication and Division

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

Unit Overview

Unit 3 connects with the theme of My World of Fun, which centers around activities such as festivals, games, camping, and other fun family events. Students learn the different aspects of multiplication and division, and how to use the properties and rules of these operations to solve abstract problems more easily.

Essential Questions

"How are multiplication and division related?"

Content

Relate Multiplication and Division

Relate Division and Subtraction

Multiplication as Comparison

Compare to Solve Problems

Multiplication Properties and Division Rules

The Associative Property of Multiplication

Factors and Multiples

Problem-Solving Investigation: Reasonable Answers

Skills

Understand how multiplication and division are related.

Relate division and subtraction.

Recognize the comparison of two groups as another strategy to use when multiplying.

Use comparison to solve problems.

Use multiplication properties and division rules.

Use the Associative Property of Multiplication to solve problems.

Find factors and multiples of whole numbers.

Check answers for reasonableness.

Assessments

Online Readiness Quiz

Vocabulary Check

Concept Check - Check My Progress

Chapter Test

Teacher Observation

Lessons/Learning Scenarios

MyMath Grade 4

Chapter 3: Lessons 1-8

Standards

CCSS.Math.Content.4.OA.A.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
CCSS.Math.Content.4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
CCSS.Math.Content.4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
CCSS.Math.Content.4.NBT.B.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
CCSS.Math.Content.4.NBT.B.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Resources

MyMath Grade 4: McGraw-Hill (2012)

- empty egg cartons
- beans
- counters
- crayons or colored pencils
- grid paper
- sticky notes
- number cube
- connecting cubes
- index cards
- 10 red, 7 blue, and 4 green card