

Unit 6: Chapter 6 & 7: Division

Content Area: **Mathematics**
Course(s): **Math 3**
Time Period: **January**
Length: **8 weeks**
Status: **Published**

Unit Summary

Students will see how division is represented by problem contexts in which the total is known and either the number of groups or the number of objects in each group is unknown. Each meaning of division can be modeled with groups and arrays. Students learn to make sense of problems and persevere in solving problems.

Standards

MA.3.OA.A	Represent and solve problems involving multiplication and division.
MA.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
MA.3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
MA.3.OA.B	Understand properties of multiplication and the relationship between multiplication and division.
MA.3.OA.B.5	Apply properties of operations as strategies to multiply and divide.
MA.3.OA.C	Multiply and divide within 100.
MA.3.OA.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
MA.3.OA.D	Solve problems involving the four operations, and identify and explain patterns in arithmetic.
MA.3.OA.D.8	Solve two-step word problems using the four operations. 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.
MA.K-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.4	Model with mathematics.
TECH.8.1.5	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Student Learning Objectives

Students will learn to:

- solve division problems using the *act it out* strategy.
- model sharing division and measurement division.

- use repeated subtraction to solve division problems.
- use number lines, bar models and arrays to model division.
- relate multiplication and division; including the Identity Property of Multiplication.

Essential Questions

How can you use division to find how many in each group or how many equal groups?

What strategies can you use to divide?

Enduring Understandings

Students will understand that:

- understand division as the splitting of a quantity into equal groups.
- word problems tell what is known and what needs to be figured out.
- different kinds of real world problems can be represented and solved using division.
- patterns can help you when dividing.
- division involves separating objects into equal groups.
- when you apply strategies to multiply and divide you use the Commutative, Associative and Distributive properties.
- problem solving sometimes involves drawing conclusions to obtain information that is not given explicitly in the problem.

Application

Students will be able to independently use their learning to:

- determine how to use a related multiplication fact to divide.
- determine what types of problems can be solved by using division.

Skills

Students will be skilled at:

- using the Order of Operations.
- solving two-step problems.
- dividing by each of the single digit numbers.

