Nov. Gr 4 My Math Unit 3: Understanding Mult. & Div.

Content Area: **Math**
Course(s):
Time Period: **November**
Length: **4-5 Weeks**
Status: **Published**

Unit Overview

Students will understand that knowing and being able to use the properties and rules of multiplication and division will help them solve abstract problems more easily.

Enduring Understandings

We can use rectangular arrays to write multiplication and division sentences.

We can use subtraction to solve division problems.

We can solve comparison problems by drawing a diagram and writing an equation.

We can use properties of multiplication to solve problems.

We can find factor pairs and multiples of whole numbers.

Essential Questions

How are multiplication and division related?

Instructional Strategies & Learning Activities

Lesson	Objective	Material & Manipulatives	Vocabulary	Standard
Lesson 1 *pp. 135–140* **Relate Multiplication and Division**	Understand how multiplication and division are related.	• empty egg cartons • beans • counters	**dividend** **divisor** **fact family** **factor** **product** **quotient**	4.NBT.5 4.NBT.6 **Major Cluster** **MP 2, 3, 4, 6, 7, 8**

				4.NBT.6
Lesson 2 *pp. 141–146* **Relate Division and Subtraction**	Relate division and subtraction.	• counters • crayons or colored pencils • grid paper	**repeated subtraction**	**Major Cluster** **MP 2, 3, 4, 5, 6, 8** 4.OA.1 4.OA.2
Lesson 3 *pp. 147–152* **Multiplication as Comparison**	Recognize the comparison of two groups as another strategy to use when multiplying.	• sticky notes • counters		**Major Cluster** **MP 1, 2, 3, 4, 5, 8** 4.OA.2
Lesson 4 *pp. 153–158* **Compare to Solve Problems**	Use comparison to solve problems.	• number cube • connecting cubes • index cards		**Major Cluster** **MP 1, 2, 3, 4, 6, 7**
	Check My Progress			
				4.NBT.5
Lesson 5 *pp. 161–166* **Multiplication Properties and Division Rule**s	Use multiplication properties and division rules.	• 10 red, 7 blue, and 4 green cards	**Commutative Property** **Identity Property** **Zero Property**	**Major Cluster** **MP 1, 2, 3, 5, 6, 7**
				4.NBT.5
Lesson 6 *pp. 167–172* **The Associative Property of Multiplication**	Use the Associative Property of Multiplication to solve problems.	• counters	**Associative Property of Multiplication**	**Major Cluster** **MP 2, 3, 4, 5, 7** 4.OA.4
Lesson 7 *pp. 173–178* **Factors and Multiples**	Find factors and multiples of whole numbers.		**decompose** **multiple**	**Supportin g Cluster** **MP 1, 2, 3, 5, 7, 8**
Lesson 8 *pp. 179–184* **Problem-Solving Investigation:**	Check answers for reasonableness.			4.OA.2 **Major**

Reasonable Answers **Cluster**

MP
1, 2, 3, 4, 5

My Chapter Review

Integration of Career Readiness, Life Literacies and Key Skills

TECH.9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology (e.g., 8.1.5.NI.2).
TECH.9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).
TECH.9.4.5.CT.3	Describe how digital tools and technology may be used to solve problems.
TECH.9.4.5.CT	Critical Thinking and Problem-solving
WRK.9.2.5.CAP	Career Awareness and Planning
TECH.9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
	Multiple solutions often exist to solve a problem.
WRK.9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
TECH.9.4.8.CT	Critical Thinking and Problem-solving
WRK.9.2.5.CAP.2	Identify how you might like to earn an income.
	An individual's passions, aptitude and skills can affect his/her employment and earning potential.
WRK.9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
	An essential aspect of problem solving is being able to self-reflect on why possible solutions for solving problems were or were not successful.
WRK.9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.

Technology and Design Integration

- SMARTboard technology
- Google Applications (documents, forms, spreadsheets, presentation)
- Dreambox
- Online textbook

	Data can be organized, displayed, and presented to highlight relationships.
CS.3-5.8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
CS.3-5.DA	Data & Analysis
CS.3-5.8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from

different views of the data.

Interdisciplinary Connections

Leveled readers "Class Project"

LA.RI.4.4	Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
LA.RI.4.1	Refer to details and examples in a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
LA.SL.4.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

Differentiation

-Reteach Master

-Hands-On Activity

-Enrich Master

Modifications & Accommodations

IEP and 504 accommodations will be utilized.

Provide an outline of material to be covered

-Individualized assignments, e.g., length, number, due date, topic

-Allow student to use technology-online textbook

-Use of graphic organizers

-Use highlighter for key information

-Read directions, passages, and word problems aloud as needed-online presentation

-Use of calculator and matrix for multiplication and division

-Provide textbook in audio format

-Demonstrate directions and procedures/give examples

Benchmark Assessments

-AIMS Web

-Diagnostic and EOY Assessments

Formative Assessments

Check My Progress

-My Chapter Review

-Homework Practice

-Independent Practice

Summative Assessments

Chapter 3 assessment

Instructional Materials

See instructional materials above.

Standards

MA.4.OA.A.1	Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 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.
MA.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.
MA.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.
MA.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.