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

Math
November
4-5 Weeks
Obsolete

#### **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
			dividend divisor fact family factor	4.NBT.5 4.NBT.6
Lesson 1 pp. 135–140Understand howRelate Multiplication and Divisionultiplication and division are related.	1 pp. 135–140Understand how multiplication and division are related.• empty egg cartonsfact family factor product quotient	<ul> <li>empty egg cartons</li> <li>beans</li> <li>counters</li> </ul>		Major Cluster
			product quotient	MP 2, 3, 4, 6, 7, 8
Lesson 2 pp. 141–146	Relate division and	• counters	repeated	4.NBT.6

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

### Integration of Career Readiness, Life Literacies and Key Skills

WRK.9.2.5.CAP	Career Awareness and Planning
WRK.9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
WRK.9.2.5.CAP.2	Identify how you might like to earn an income.
WRK.9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
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.
TECH.9.4.5.CT	Critical Thinking and Problem-solving
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).
TECH.9.4.5.CT.3	Describe how digital tools and technology may be used to solve problems.
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.DC.4	Model safe, legal, and ethical behavior when using online or offline technology (e.g., 8.1.5.NI.2).
TECH.9.4.8.CT	Critical Thinking and Problem-solving
	An essential aspect of problem solving is being able to self-reflect on why possible solutions for solving problems were or were not successful.
	An individual's passions, aptitude and skills can affect his/her employment and earning potential.
	Multiple solutions often exist to solve a problem.

# **Technology and Design Integration**

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

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

# Interdisciplinary Connections Leveled readers "Class Project"

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.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.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

### 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.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.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.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.