

# Jan.Gr.3 Unit 6:Multiplication and Division Patterns

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

## Unit Overview

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Students will understand important patterns in multiplication and Division including arrays, inverse operations, equal groups and skip counting.

## Enduring Understandings

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We can multiply using arrays, bar diagrams and drawings.

Inverse operations can help us solve division problems.

## Essential Questions

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What is the importance of patterns in learning multiplication and division?

## Instructional Strategies & Learning Activities

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- **Pacing Guide**  
**Suggested Pacing**

Instruction	11 days
Review/Assessment	2 days
Total*	<b>13 days</b>

- \*Includes additional time for remediation and differentiation.
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Lesson	Objective	Material & Manipulatives	Vocabulary	Standard
Lesson 1 <i>pp. 295-300</i> <b>Patterns in the Multiplication Table</b>	Identify and explain patterns in the multiplication table.	<ul style="list-style-type: none"><li>• Work Mats 2 and 7</li><li>• number lines</li><li>• counters</li></ul>		<b>3.OA.5</b> <b>3.OA.9</b>  <b>Major Cluster</b>  <b>MP 4, 6, 7</b>

Lesson 2 *pp. 301-306*  
**Multiply by 2**

Use arrays and drawings, such as  
bar diagrams, to multiply by 2.

- counters
- number lines or Work Mat 2

**3.OA.1**  
**3.OA.3**  
**3.OA.4**  
**3.OA.5**  
**3.OA.7**  
**3.OA.9**

**Major  
Cluster**

**MP 1, 2, 4, 5,  
6**

Lesson 3 *pp. 307-312*  
**Divide by 2**

Use models and related  
multiplication facts to divide by 2.

- counters
- number lines or Work Mat 2

**3.OA.2**  
**3.OA.3**  
**3.OA.4**  
**3.OA.6**  
**3.OA.7**  
**3.OA.9**

**Major  
Cluster**

**MP 1, 2, 3, 4,  
5, 6**

Lesson 4 *pp. 313-318*  
**Multiply by 5**

Use different strategies, including  
patterns, to multiply by 5.

- nickels

**3.OA.1**  
**3.OA.3**  
**3.OA.4**  
**3.OA.5**  
**3.OA.7**  
**3.OA.9**

**Major  
Cluster**

**MP 1, 2, 3, 4,  
6, 7**

Lesson 5 *pp. 319-324*  
**Divide by 5**

Use different strategies, including  
related multiplication facts, to  
divide by 5.

- play money (pennies and nickels)
- counters

**3.OA.2**  
**3.OA.3**  
**3.OA.4**  
**3.OA.6**  
**3.OA.7**

**Major  
Cluster**

**MP 1, 2, 3, 4,  
5, 6**

**Check My Progress**  
Lesson 6 *pp. 327-332*  
**Problem-Solving  
Investigation: Look for a  
pattern**

Solve problems by looking for a  
pattern.

**3.OA.9**

**Major  
Cluster**

Lesson 7 <i>pp. 333-338</i> <b>Multiply by 10</b>	Use different strategies, including • play money patterns, to multiply by 10. (nickels and dimes)		<b>MP 1, 5, 7, 8</b> <b>3.OA.1</b> <b>3.OA.3</b> <b>3.OA.4</b> <b>3.OA.5</b> <b>3.OA.7</b> <b>3.OA.9</b>  <b>Major Cluster</b>
Lesson 8 <i>pp. 339-344</i> <b>Multiples of 10</b>	Use basic facts and patterns to multiply a number by a multiple of 10. • base-ten blocks	<b>multiple</b>	<b>MP 2, 4, 5, 6, 8</b> <b>3.OA.1</b> <b>3.OA.3</b> <b>3.OA.4</b> <b>3.OA.5</b> <b>3.OA.7</b> <b>3.OA.9</b> <b>3.NBT.3</b>  <b>Additional Cluster</b>
Lesson 9 <i>pp. 345-350</i> <b>Divide by 10</b>	Use different strategies, including • base-ten blocks related multiplication facts, to divide by 10.		<b>MP 1, 2, 3, 4, 6, 7, 8</b> <b>3.OA.2</b> <b>3.OA.3</b> <b>3.OA.4</b> <b>3.OA.6</b> <b>3.OA.7</b>  <b>MP 1, 2, 4, 5, 6, 7</b>
<b>Fluency Practice</b> <b>My Review and Reflect</b>			

## 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.
TECH.9.4.8.CT	Critical Thinking and Problem-solving
TECH.9.4.8.IML.3	Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping (e.g., 6.SP.B.4, 7.SP.B.8b).
TECH.9.4.8.IML.4	Ask insightful questions to organize different types of data and create meaningful

visualizations.

An essential aspect of problem solving is being able to self-reflect on why possible solutions for solving problems were or were not successful.

Digital tools make it possible to analyze and interpret data, including text, images, and sound. These tools allow for broad concepts and data to be more effectively communicated.

## **Technology and Design Integration**

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Students will interact with Smartboard, Chromebooks and document camera.

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.  Individuals can select, organize, and transform data into different visual representations and communicate insights gained from the data.

## **Interdisciplinary Connections**

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Leveled math readers, "Craft Store Supplies"

LA.RI.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
LA.RI.3.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
LA.RI.3.5	Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.
LA.RI.3.7	Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
LA.RI.3.10	By the end of the year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.

## **Differentiation**

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Each My Math unit throughout the series offers "approaching level", "on level" and "Beyond level" differentiated instructional hands-on choices, as well as ELL differentiated support. Please refer to the teacher edition for the activities.

## **Modifications & Accommodations**

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IEP and 504 accommodations will be followed.

## **Benchmark Assessments**

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Aimsweb Assessment, Chapter Pretests, Dreambox

## **Formative Assessments**

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Teacher observation

Student conferences

Discussion

Activities

games

homework

## **Summative Assessments**

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My Math chapter assessments

## **Instructional Materials**

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See materials listed above

## **Standards**

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MA.3.OA.A.1

Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in

5 groups of 7 objects each.

MA.3.OA.A.2	Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.
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.5	Apply properties of operations as strategies to multiply and divide.
MA.3.OA.B.6	Understand division as an unknown-factor problem.
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.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.
MA.3.NBT.A.3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of operations.