

P.Cert.Gr.5 My Math unit 2: Multiplying whole numbers

Content Area: **Math**
Course(s):
Time Period: **September**
Length: **2-3 weeks**
Status: **Published**

Unit Overview

This unit teaches students strategies to multiply whole numbers.

Enduring Understandings

There are specific strategies to apply when multiplying whole numbers.

Essential Questions

Essential Question: What strategies can be used to multiply whole numbers?

Instructional Strategies & Learning Activities

Chapter 2

Chapter at a Glance

Pacing Guide

Suggested Pacing

Instruction	10 days
Review/Assessment	2 days
Total*	12 days

*Includes additional time for remediation and differentiation.

Lesson	Objective	Material & Manipulatives	Voc
Lesson 1 <i>pp. 81-86</i> Prime Factorization	Find the prime factorization of numbers.		prime factoriz

Lesson 2 *pp. 87-92*
Hands On: Prime Factorization Patterns

Explore patterns in prime factorization.

- connecting cubes
- hole punch
- construction paper

Lesson 3 *pp. 93-98*
Powers and Exponents

Use powers and exponents in expressions.

**expon
base
power
square
cubed**

Lesson 4 *pp. 99-104*
Multiplication Patterns

Use basic facts and patterns to multiply multiples of 10, 100, and 1,000 mentally.

- notebook paper

powers

Lesson 5 *pp. 105-110*
Problem Solving Investigation: Make a Table

Make a table to solve problems.

Check My Progress
Lesson 6 *pp. 113-118*
Hands On: Use Partial Products and the Distributive Property

Explore multiplication by using area models.

- place-value chart
- play money
- area models

**Distrib
Proper**

Lesson 7 *pp. 119-124*
The Distributive Property

Use the Distributive Property to multiply mentally.

- grid paper
- colored pencils

**Distrib
Proper**

Lesson 8 *pp. 125-130*
Estimate Products

Estimate products by using rounding and compatible numbers.

**compat
numbe**

Lesson 9 *pp. 131-136*
Multiply by One-Digit Numbers

Multiply up to a three-digit number by a one-digit number. • place-value chart
• play money

Lesson 10 *pp. 137-142*
Multiply by Two-Digit Numbers

Multiply up to a three-digit number by a two-digit number. • area models

Fluency Practice
My Review and Reflect

Integration of 21st Century Themes and Career Exploration

Students will work in cooperative groups to solve problems. Students will interact with the Smartboard to enhance the learning process.

CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.

Technology Integration

Students will interact with the Smartboard to enhance the learning process. Students will use various web-based, interactive sites to expand the content, as needed.

TECH.8.1.5.A.CS1	Understand and use technology systems
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.
TECH.8.1.5.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
TECH.8.1.5.A.CS2	Select and use applications effectively and productively.

Interdisciplinary Connections

Students will read and write throughout the entire unit. They will also use art supplies.

LA.W.5.2.D	Use precise language and domain-specific vocabulary to inform about or explain the topic.
LA.RI.5.1	Quote accurately from a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
LA.RF.5.4.A	Read grade-level text with purpose and understanding.
LA.RI.5.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

Differentiation

- Use of different resources to match the readiness levels of the students when working on the activities in the daily lessons.
- Respond to students' needs for reteaching, reinforcing, and extending learning.
- Use of a variety of instructional strategies to engage students in learning.
- Question prompts to promote student engagement
- Use discussion to promote collaboration among students
- Integrate technology to offer varied learning experiences
- Adjust instruction based on formative tasks/assessments

Modifications & Accommodations

- In class support and scaffolding based on the individual IEP's

Benchmark Assessments

Students will complete AimsWeb testing.

Formative Assessments

- Task completion
- Answers and discussions
- Student maps
- Bingo
- Quizzes

- Participation

Summative Assessments

- Quizzes
- Final Test

Instructional Materials

My Math materials

See embedded materials in activities above

Standards

MA.5.NBT.B.5	Fluently multiply multi-digit whole numbers using the standard algorithm.
MA.5.NBT.A.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.
MA.5.NBT.A.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.