

# 4 Math Unit 03: Multiply by One & Two Digit Numbers

Content Area: **Mathematics**  
Course(s):  
Time Period: **November**  
Length: **3 Weeks**  
Status: **Published**

## Unit Overview

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In fourth grade, students compute products of one-digit numbers and multi-digit numbers (up to four digits) and products of two two-digit numbers. 4.NBT.5 They divide multi-digit numbers (up to four digits) by one-digit numbers. As with addition and subtraction, students should use methods they understand and can explain. Visual representations such as area and array diagrams that students draw and connect to equations and other written numerical work are useful for this purpose, which is why 4.NBT.5 explicitly states that they are to be used to illustrate and explain the calculation. By reasoning repeatedly (MP.8) about the connection between math drawings and written numerical work, students can come to see multiplication and division algorithms as abbreviations or summaries of their reasoning about quantities.

- How can you multiply by multiples of 10, 100, and 1,000?
- How can you estimate when you multiply?
- How can you use a model to multiply?
- How can you use the Distributive Property to multiply?
- How can you use multiplication to solve problems?

## Students will be able to...

- use strategies and properties to multiply by 1-digit numbers
- use strategies and properties to multiply by 2-digit numbers

## Standards

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MA.4.OA.A.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.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.

## Materials

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- [EnVision Math](#)
- 3-1 Mental Math: Multiply by Multiples of 10, 100, and 1,000
- 3-2 Mental Math: Round to Estimate Products 3-3 The Distributive Property

- 3-4 Mental Math Strategies for Multiplication
- 3-5 Arrays and Partial Products
- 3-6 Use Partial Products to Multiply by 1-Digit Numbers
- 3-7 Multiply 2-Digit and 3-Digit Numbers by 1-Digit Numbers
- 3-8 Multiply 4-Digit by 1-Digit Numbers
- 3-9 Multiply by 1-Digit Numbers
- 3-10 Math Practices and Problem Solving
- 4-1 Mental Math: Multiply Multiples of 10
- 4-2 Use Models to Multiply 2-Digit Numbers by Multiples of 10
- 4-3 Estimate: Use Reasoning
- 4-4 Estimate: Use Compatible Numbers
- 4-5 Arrays and Partial Products
- 4-6 Multiply Using the Distributive Property
- 4-7 Use Partial Products to Multiply by 2-Digit Numbers
- 4-8 Multiply 2-Digit Numbers by Multiples of 10
- 4-9 Multiply 2-Digit by 2-Digit Numbers
- 4-10 Continue to Multiply by 2-Digit Numbers
- 4-11 Math Practices and Problem Solving

- [ST Math](#)
- [Happy Numbers](#)
- [3 Act Lessons](#)
- [Building Fact Fluency Kit](#)
- [Brainiaccamp Manipulatives](#)
- [Nearpod Lessons](#)
- [Brainpop Resources](#)
- [Math Diagnosis and Intervention System](#)
- [Online Resources](#)

## Technology

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- 8.1.5.A.1,2,4 (solve problems, word processing, databases, spreadsheets)
- 8.1.5.F.1 (digital tools to support scientific finding)
- 8.2.5.C.1,2,3 (solve problems, troubleshoot repair tools)

## Assessment

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### Formative Assessment

- Teacher Observation
- Daily Quick Check
- Quizzes

- Exit Tickets

## **Summative Assessment**

- Topic Tests
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

## **Accommodations & Modifications**

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### **Special Education**

- Follow IEP Plan which may contain some of the following examples...
- In class/pull out support with special ed teacher
- Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Limit number of questions
- Scribe
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

### **504**

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

## **ELL**

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

## **At-risk of Failure**

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

## **Gifted & Talented**

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

## **Interdisciplinary Connections**

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Topic 1 Math and Science Project - Using different presentations tools, students will collect different types of paper. Talk about the uses of paper. Tell how strong each type of paper is. Tell how the paper feels. Tell if the paper can soak up water.

## **ELA:**

NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with

scaffolding as needed.

**Science:**

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

## **21st Century Life Literacies & Key Skills**

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### **Critical Thinking and Problem Solving:**

Problem-solving activities starting with the lesson “Solve and Share” and ending with higher order thinking questions that utilize the mathematical practices

### **Communication and Collaboration:**

Throughout the lesson, students are provided with opportunities to discuss their ideas as they investigate mathematical concepts.

### **Creativity:**

Students have opportunities to express their creativity by solving problems their own way, participating in performance tasks, and group projects.

### **Technology:**

Use of iPads, instructional apps, lab materials embedded in lessons. Programs such as BrainPop, Math Reflex, Google Slides are used to support instruction.

## **Career Ready Practices**

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- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.

