

# 3 Math Unit 01: Understand Multiplication and Division

Content Area: **Mathematics**  
Course(s):  
Time Period: **September**  
Length: **4 weeks**  
Status: **Published**

## Unit Overview

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The focus of this unit is threefold:

- to build students' agency as doers of mathematics. It is important that students understand that math is not just something done in school. Math is part of our daily lives and shows up in almost every activity. It is also important that students see themselves as skilled doers of math, so helping them understand that doing math is not just carrying out operations or calculations. Rather, doing math is more accurately making sense of solving problems and finding patterns and relationships among quantities and numbers. Lesson 1-1 helps students see themselves as doers of math as they examine their attitudes towards math and their images of themselves as doers of math.
- to build students' proficiency with the habits of mind that are integral to doing mathematics. These include the thinking captured by the practice and process standards found in many state standards for mathematics: that is, the thinking that makes up the problem-solving process and that is involved in finding patterns and relationships among quantities and values. Lessons 1-2 through 1-5 focus on helping students build proficiency with these habits of mind.
- to build understanding of the norms of interaction that allow for a productive math learning environment where students can develop, refine, and enhance the habits of mind that are integral to doing math. Lesson 1-6 offers the opportunity for students to develop together the classroom norms for math for the school year.

## What Students Are Learning

- Students use different representations to conceptualize problems and relate a number to the quantity it represents.
- Students ask appropriate questions of their classmates around their solution strategies.
- Students model real-world situations in different ways.
- Students consider available tools when solving a problem.
- Students look for patterns in operations.

## 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.B.5	Apply properties of operations as strategies to multiply and divide.

## Materials

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- [EnVision Math](#)
- 1.1 Multiplication as Repeated Addition
- 1.2 Multiplication on the Number Line
- 1.3 Arrays and Multiplication
- 1.4 The Commutative Property
- 1.5 Division as Sharing
- 1.6 Division as Repeated Subtraction
- 1.7 Use Appropriate Tools
  
- [ST Math](#)
- [Happy Numbers](#)
- [3 Act Lessons](#)
- [Building Fact Fluency Kit](#)
- [Brainingcamp 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
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### **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.