

# Unit 1 -Big Ideas Chapters 1-4

Content Area: **Mathematics**  
Course(s): **Mathematics 3**  
Time Period: **September**  
Length: **46 Instructional Days**  
Status: **Published**

## Unit 1 Overview: Big Ideas Math Chapters 1-4

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### Unit 1--Big Ideas Math Chapters 1 -4

(Length of Time: 1st Trimester)

This unit includes:

- Understanding Multiplication and Division (Chapter 1)
- Multiplication Facts and Strategies (Chapter 2 & 3)
- Division Facts and Strategies (Chapter 4)

## Priority Standards

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MATH.3.OA.A	Represent and solve problems involving multiplication and division
MATH.3.OA.B	Understand properties of multiplication and the relationship between multiplication and division
MATH.3.OA.C	Multiply and divide within 100
MATH.3.OA.D	Solve problems involving the four operations, and identify and explain patterns in arithmetic

## Unit 1 Learning Goals

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Big Ideas Chapter	Content Focus	CCSS Priority Standard	Learning Goal
<b>1</b>	<b>Understanding Multiplication</b>	<b>Standard:</b> 3.OA.A - Represent and solve problems involving multiplication and division.	<b>Students will be a</b>  -Represent and solve multiplication and div

		<p><b>Standard:</b></p> <p>3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Apply properties of multiplication and division to multiply and divide.</li> <li>-Understand division as an unknown-factor problem.</li> </ul>
2	<b>Multiplication Facts and Strategies</b>	<p><b>Standard:</b></p> <p>3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.</p> <p><b>Standard:</b></p> <p>3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that <math>8 \times 5 = 40</math>, one knows <math>40 \div 8 = 5</math>) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</p> <p><b>Standard:</b></p> <p>3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Apply properties of multiplication and division to multiply and divide.</li> <li>-By the end of Grade 3, know from memory all products of two one-digit numbers.</li> <li>-Solve two-step word problems involving the four operations.</li> </ul>

		strategies including rounding.	
3	<b>More Multiplication Facts and Strategies</b>	<p><b>Standard:</b></p> <p>3.OA.A - Represent and solve problems involving multiplication and division.</p> <p><b>Standard:</b></p> <p>3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.</p> <p><b>Standard:</b></p> <p>3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</p> <p><b>Standard:</b></p> <p>3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess</p>	<p><b>Students will be able to:</b></p> <p>-Represent and solve multiplication and division problems.</p> <p><b>Students will be able to:</b></p> <p>-Apply properties of multiplication and division to solve multiplication and division problems.</p> <p>-Understand division as an unknown-factor problem.</p> <p><b>Students will be able to:</b></p> <p>-By the end of Grade 3, know from memory all products of two one-digit numbers.</p>

		<p>the reasonableness of answers using mental computation and estimation strategies including rounding.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Solve two-step word problems involving the four operations.</li> </ul>
<p>4</p>	<p><b>Division Facts and Strategies</b></p>	<p><b>Standard:</b></p> <p>3.OA.A - Represent and solve problems involving multiplication and division.</p> <p><b>Standard:</b></p> <p>3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.</p> <p><b>Standard:</b></p> <p>3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</p> <p><b>Standard:</b></p> <p>3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.</p>	<p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Represent and solve multiplication and division problems.</li> </ul> <p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-Apply properties of multiplication and division to solve problems.</li> <li>-Understand division as a multiplication factor problem.</li> </ul> <p><b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>-By the end of Grade 3, know from memory all products of two one-digit numbers.</li> </ul> <p><b>Students will be able to:</b></p>

			-Solve two-step word problems involving addition, subtraction, multiplication, and division of whole numbers. -Solve two-step word problems involving multiplication and division of whole numbers. -Solve two-step word problems involving addition, subtraction, multiplication, and division of whole numbers.
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## Learning Targets

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Students will be able to:

- Divide a number by 2, 5, or 10.
- Divide a number by 3 or 4.
- Divide a number by 6 or 7.
- Divide a number by 8 or 9.
- Divide with 0 or 1.
- Multiply by 0 or 1.
- Multiply by 10.
- Multiply by 2.
- Multiply by 3.
- Multiply by 4.
- Multiply by 5.
- Multiply by 6.
- Multiply by 7.
- Multiply by 8.
- Multiply by 9.
- Multiply factors in any order.
- Use a number line to divide.
- Use a number line to multiply.
- Use a strategy to divide.
- Use a strategy to multiply two factors.
- Use an array to divide.
- Use an array to multiply.
- Use division to find the number of equal groups.

- Use division to find the size of equal groups.
- Use equal groups to multiply.
- Use facts families to relate multiplication and division.
- Use the Associative Property of Multiplication.
- Use the Distributive Property to multiply.
- Use the problem-solving plan to solve word problems.

## **Materials and Resources**

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- Big Ideas Materials
- Frax
- iReady
- Reflex Math

## **Unit Assessments ( Required)**

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- Big Ideas Chapter 1 Assessment
- Big Ideas Chapter 2 Assessment
- Big Ideas Chapter 3 Assessment
- Big Ideas Chapter 4 Assessment

## **Strategies for Students in Need of Intervention**

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- Extended pacing of lessons
- Provide a multiplication chart
- Provide key vocabulary word definitions
- Provide written notes/ directions
- Small group instruction based on levels/abilities
- Use of approaching level questions/assignments
- Use of calculator
- Use of manipulatives
- Use of visual aids

## **Learning Plan and Pacing Guide**

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Trimester 1 ~ Big Ideas Chapters 1-4

Time Frame	Lesson	Standard(s)	Target
Big Ideas Chapter 1  (9 days)	Lesson 1.1: Use Equal Groups to Multiply	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use equal groups to multiply
	Lesson 1.2: Use Number Lines to Multiply	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: Use a number line to multiply.
	Lesson 1.3: Use Arrays to Multiply	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use an array to multiply
	Lesson 1.4: Multiply in Any Order	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can multiply factors in any order
	Lesson 1.5: Divide: Size of Equal Groups	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use division to find the size of equal groups
	Lesson 1.6: Divide: Number of Equal Groups	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use division to find the number of equal groups.
	Lesson 1.7: Use a number line to divide	Standard: 3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use a number line to divide.

		Standard:	
	Lesson Chapter 1 Review	3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use different strategies to multiply and divide
		Standard:	
		3.OA.A - Represent and solve problems involving multiplication and division.	
	Lesson Chapter 1 Assessment	Standard:	Target: I can use different strategies to multiply and divide
		3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.	
		Standard:	
		3.OA.A - Represent and solve problems involving multiplication and division.	
		Standard:	
		3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	
Big Ideas Chapter 2	Lesson 2.1: Multiply by 2		Target: I can multiply by 2.
(9 days)		Standard:	
		3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.	
		Standard:	
	Lesson 2.2: Multiply by 5	3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can multiply by 5.



Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Lesson 2.3:  
Multiply by 10

Target: I can multiply  
by 10.

Standard:

3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Lesson 2.4:  
Multiply by 0 or 1

Target: I can multiply by 0 or 1.

Standard:

3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Standard:

3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.

Lesson 2.5: Use  
the Distributive  
Property

Target: I can use the  
Distributive Property  
to multiply..

(2 Days)

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson 2.6:  
Problem Solving:  
Multiplication

Standard:

3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.

Target: I can use the problem-solving plan to solve word problems.

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson Chapter 2  
Review

Standard:

3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.

Target: I can use different strategies to multiply and divide

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

Lesson Chapter 2  
Assessment

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can use different strategies to multiply and divide

Standard:

3.OA.B - Understand properties of multiplication and the relationship between multiplication and division.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Big Ideas  
Chapter 3

Lesson 3.1:  
Multiply by 3

(12 days)

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Target: I can multiply by 3.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson 3.2:  
Multiply by 4

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Target: I can multiply by 4.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson 3.3:  
Multiply by 6

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from

Target: I can multiply by 6.

memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson 3.4:  
Multiply by 7

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can multiply by 7.

Lesson 3.5:  
Multiply by 8

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can multiply by 8..

Lesson 3.6:  
Multiply by 9

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can multiply by 9..

Lesson 3.7: Any  
Strategy to  
Multiply

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can use any strategy to multiply.

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson 3.8:  
Multiply Three  
Factors

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can use the Associative Property to multiply three factors.

Lesson 3.9:  
Problem-Solving  
Word Problems  
(2 Days)

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.

Target: I can problem-solve multi-step word problems.

Lesson : Ch 3  
Review Test A

Standard:

Target: I can multiply fluently within 100.

3.OA.A - Represent and solve problems involving multiplication and division.

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Lesson : Ch 3 Test  
B

Target: I can multiply  
fluently within 100.

Standard:

3.OA.D - Solve two-step word problems, including problems involving money, using the four operations. 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.

<p>Week of Conferences (5 days)</p>	<p>Review Chapters 1-3 with Multiplication Games</p>	<p>Standard:  3.OA.A - Represent and solve problems involving multiplication and division.  Standard:  3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.  Standard:</p>	<p>Target: I can use different strategies to multiply..</p>
<p>Big Ideas Chapter 4 (11 days)</p>	<p>Lesson 1: Use Arrays to Divide</p>	<p>Standard:  3.OA.A - Represent and solve problems involving multiplication and division.  Standard:  3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.  Standard:</p>	<p>Target: I can use arrays to divide.</p>
	<p>Lesson 2: Relate Multiplication and Division</p>	<p>Standard:  3.OA.A - Represent and solve problems involving multiplication and division.  Standard:  3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.  Standard:</p>	<p>Target: I can relate multiplication and division.</p>
	<p>Lesson 3: Divide 2, 5, or 10</p>	<p>Standard:  3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</p>	<p>Target: I can divide by 2, 5, and 10.</p>



	Standard:	
Lesson 4: Divide by 3 or 4	3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. Standard:	Target: I can divide by 3 or 4.
Lesson 5: Divide by 6 or 7	3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. Standard:	Target: I can divide by 6 or 7.
Lesson 6: Divide by 8 or 9	3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. Standard:	Target: I can divide a number by 8 or 9
Lesson 7: Divide with 0 or 1	3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. Standard:	Target: I can divide with 0 and 1.
	3.OA.A - Represent and solve problems involving multiplication and division.	
Lesson 8: Practice Division Strategies	Standard:  3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. Standard:	Target: I can use any strategy to divide.
Lesson: 4.9 Problem-Solving Division	Standard:  3.OA.A - Represent and solve problems involving multiplication and division.	Target: I can use problem solving strategies to divide when solving word

problems.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Lesson: Chapter 4  
Review

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standard:

3.OA.A - Represent and solve problems involving multiplication and division.

Target: I can use any strategy to divide.

Lesson: Chapter 4  
Test

Standard:

3.OA.C - With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that, one knows) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Target: I can use any strategy to divide.

## Technology Integration

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- Big Ideas Online
- Frax
- Google Classroom
- iReady
- Reflex math : <https://www.reflexmath.com/>
- [www.khanacademy.com](http://www.khanacademy.com)

TECH.8.1.5.A.3

Use a graphic organizer to organize information about problem or issue.

TECH.8.1.5.C

Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

TECH.8.1.5.E

Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

## **21st Century Career Ready Practices**

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CAEP.9.2.4.A.2

Identify various life roles and civic and work - related activities in the school, home, and community.

CAEP.9.2.4.A.3

Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.

CAEP.9.2.4.A.4

Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.