ACCESS MATH-GRADE 3 CURRICULUM MAP

Course Code: 7712040
ESE Department and Student Services
Access Course Curriculum Maps

Each access course curriculum map is organized to align with the curriculum map for its corresponding general education course. Following the pacing of the curriculum maps will allow access course and general education teachers to collaboratively plan instructional strategies, resources, and content-related events, while also ensuring that course standards are thoroughly instructed.

In this curriculum map, each course standard includes the aligned Florida Standards Access Points, instructional resources, and a space to indicate the date of instruction. When developing standards-aligned lesson plans, teachers should keep in mind the “Big 3” of lesson planning:

1. Identify the Florida Standard to be taught,
2. Crosswalk to the corresponding Florida Standard Access Point, and
3. Identify resources to be used.

The instructional resources listed in this curriculum map were gathered from several sources, including general education curriculum maps, the Florida Access Project website (https://accessstofls.weebly.com/), CPALMS (http://www.cpalms.org/Public/), and Volusia’s approved curricula and instructional materials for access courses.

Access courses are setting-neutral, which means a student working on Florida Standards Access Points can be instructed on those standards in a variety of settings, including those with same-grade nondisabled peers in general educational courses. Grade-level access points instruction is delivered at the individual level needed for students to be successful and move learning forward.

Access points in the subject areas of Science, Social Studies, Art, Dance, Physical Education, Theatre, and Health provide tiered access to the general curriculum through three levels (Participatory, Supported, and Independent). Access points in English Language Arts and Mathematics do not contain these tiers, but instead contain Essential Understandings (or EUs). EUs consist of skills at varying levels of complexity and are a resource when planning for instruction.

Only students with a significant cognitive disability are eligible to participate in the Florida Standards Access Points curriculum pathway and be enrolled in access courses. Students with significant cognitive disabilities will learn and acquire skills at varied rates. Although efforts should be made to follow the curriculum map as written, modifications to the pacing in this curriculum map may need to occur. Prioritized standards, based on the Florida Standards Alternate Assessment (FSAA) Blueprint, have an asterisk and are highlighted in yellow throughout the curriculum map.
# Unit 1

## Topic 1: Exploring equal groups as a foundation for multiplication and division

**Pacing:** August 13 – October 1

*MAFS.3.OA.1.1:* Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each. **For example, describe a context in which a total number of objects can be expressed as $5 \times 7$.**

Examples of Opportunities for In-Depth Focus: Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.

### Resources

<table>
<thead>
<tr>
<th>AIMS:</th>
<th><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%202/AccountingForButterflies.pdf">Accounting for Butterflies</a> (Accounting for Butterflies) <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/FiguringFingersTallying.pdf">Figuring Fingers and Tallying Toes</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>LAKESHORE:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">Teacher Guide p. 4; Daily Math Practice Journal; pp 2, 4, 6, 8, 18, 20; Problem Solving Strategy Puzzles (purple); Discovery Can: Algebraic Thinking Cards 6-20; Discovery Can: Operations Cards 6, 11-22; How Did You Solve It? Cards 1-3</a></td>
</tr>
<tr>
<td>CPALMS:</td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40278">Interpreting Multiplication</a> <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40282">What Does 21 Mean?</a> <a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73412">Cheesy Arrays</a> <a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/67903">Circles of Stars</a> <a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/39979">Array to Multiple</a></td>
</tr>
</tbody>
</table>

### Related Access Points

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
</table>
| MAFS.3.OA.1.AP.1a: Find the total number inside an array with neither number in the columns or rows greater than five. | **Concrete:**  
- Find the number of groups by counting the rows of objects.  
- Find how many objects are in each group by counting the columns.  
- Use 1:1 correspondence to find the total within an array of objects in columns or rows no greater than five.  
- **Representation:**  
  - Find the number of groups by counting the rows in a pictorial array. |
- Find how many objects are in each group by counting the columns in a pictorial array.
- Find the total within a pictorial array.

Understand the following vocabulary: sets, array, total, combining, columns, rows, grouping.

**Resources**
- Element Card 3rd: [Click here](#)
- Curriculum Resource Guide: Equations: [Click here](#)
- Equals lesson 11.C.2

**MAFS.3.OA.1.AP.1b:** Solve multiplication problems with neither number greater than five.

**EUs**
- **Concrete:**
  - Arrange objects into equal sets to reflect a given multiplication expression (e.g., $3 \times 1$ as 3 groups of 1).
  - Use repeated addition/skip counting to find the total number of objects within an arrangement.

- **Representation:**
  Identify an arrangement of objects that matches a given multiplication expression.

**Resources**
- Curriculum Resource Guide: Equations: [Click here](#)
- Element Card 3rd: [Click here](#)
- Equals lesson 11.A.2, 11.A.4

**MAFS.3.OA.1.AP.1c:** Use objects to model multiplication involving up to five groups with up to five objects in each.

**EUs**
- **Concrete:**
  Arrange objects into equal sets to reflect a given multiplication expression (e.g., $3 \times 1$ as 3 groups of 1).

- **Representation:**
  Identify an arrangement of objects that matches a given multiplication expression.

**Resources**
- Element Card 3rd: [Click here](#)
- Equals lesson 11.A.1, 11.A.2, 11.A.4

**MAFS.3.OA.1.2:** 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. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.

**Examples of Opportunities for In-Depth Focus:** Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.

**Resources**
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/BoxingBagsAndMatches.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/BoxingBagsAndMatches.pdf) (Boxing Bags and Matches)
- LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
(Teacher Guide p.3; Reproducibles p.3; Daily Math Practice Journal pp. 3, 5, 7, 9, 15; Discovery Can: Operations Cards 2, 7, 21-25; Discovery Can: Algebraic Thinking Cards 17-20; How Did You Solve It? Cards 1-3)

CPALMS:
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45217
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45215
(Interpreting Division)
(What Does the Six Mean?)

ILLUSTRATIVE MATHEMATICS:
https://www.illustrativemathematics.org/content-standards/3/OA/A/2/tasks/1531
(Fish Tanks)
https://www.illustrativemathematics.org/content-standards/3/OA/A/2/tasks/1531
(Markers in Boxes)

LEARNZILLION:
https://learnzillion.com/lesson_plans/3471-4-practice-representing-division-in-different-ways-fp
(Practice representing division in different ways)

<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.OA.1.AP.2a:</strong></td>
<td>Determine the number of sets of whole numbers, five or less, that equal a dividend.</td>
<td>Instruction</td>
</tr>
</tbody>
</table>
| **EUs** | **Concrete:**
- Use manipulatives to make sets of objects with a given number in each (e.g., create sets of 3 objects from a total of 15 objects).
- Count the number of created sets (above example would result in 5 sets).

**Representation:**
- Understand the following vocabulary: divide, separate, total, etc.
- Use pictorial representations to make sets with a given number in each (e.g., create sets of 3 from a visual representation of 15 items).
- Count the number of created sets (above example would result in 5 sets). | |

**Resources**
Curriculum Resource Guide: Equations: [Click here](#)
Element Card 3rd: [Click here](#)

| **MAFS.3.OA.1.AP.2b:** | Use objects to model division situations involving up to five groups, with up to five objects in each group, and interpret the results. | Instruction |
| **EUs** | **Concrete:**
- Use manipulatives to model a division situation, e.g., 15 ÷ 3 as the number of objects in each set when 15 objects are divided equally into 3 sets, or as a number of sets when 15 objects are divided into equal sets of 3 objects each.
- Count the number of objects in each set or count the number of sets created.

**Representation:**
- Identify an arrangement of objects that matches a given division situation.
- Identify the following vocabulary and symbols: division (+), equal (=) | |

**Resources**
Element Card 3rd: [Click here](#)
Curriculum Resource Guide Equations: [Click here](#)
### MAFS.3.OA.1.3: 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.

#### Examples of Opportunities for In-Depth Focus:

Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.

#### Resources

**LAKESHORE:**
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
  - (Teacher Guide p. 3-4; Daily Math Practice Journal pp. 3, 5, 7, 9, 13, 17, 19; Problem Solving Strategy Puzzles (purple); Discovery Can: Algebraic Thinking Cards 6-20; Discovery Can: Operations Cards 6, 11-22; How Did You Solve It? Cards 3, 6-7)

**CPALMS:**
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43379](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43379) (Finding the Number of Groups)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42876](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42876) (Finding the Group Size)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40281](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40281) (Writing Multiplication Word Problem)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45214](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45214) (Writing a Problem with a Quotient)

**LEARNZILLION:**
- [https://learnzillion.com/lesson_plans/3472-6-understand-how-to-use-drawings-and-equations-to-solve-multiplication-and-division-problems-c](https://learnzillion.com/lesson_plans/3472-6-understand-how-to-use-drawings-and-equations-to-solve-multiplication-and-division-problems-c) (Understand how to use drawings and equations to solve multiplication and division problems, Cards 1, 2, 3, 6 and 8)

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<tr>
<td>Solve and check one- or two-step word problems requiring multiplication or division with the product or quotient up to 50.</td>
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</table>

#### EUs

**Concrete:**
- Match the vocabulary in a word problem to an action.
- Use manipulatives to model the context of the word problem.
- Count to find the answer.

**Representation:**
- Create a pictorial representation of the word problem.
- Use context clues to interpret the concepts, symbols, and vocabulary for addition, subtraction, multiplication, and division.

#### Resources

**Element Card 3rd:**  [Click here](#)


### MAFS.3.OA.3.7: Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
**Fluency Expectations or Examples of Culminating Standards:** Students fluently multiply and divide within 100. By the end of grade 3, they know all products of two one-digit numbers from memory. Multiplication and division are new in grade 3, and meeting the multiplication and division fluency standard 3.OA.3.7 with understanding is a major portion of students’ work in grade 3.

Examples of Opportunities for In-Depth Focus: Finding single-digit products and related quotients is a required fluency for grade 3. Reaching fluency will take much of the year for many students. These skills and the understandings that support them are crucial; students will rely on them for years to come as they learn to multiply and divide with multidigit whole numbers and to add, subtract, multiply, and divide with fractions. After multiplication and division situations have been established, reasoning about patterns in products (e.g., products involving factors of 5 or 9) can help students remember particular products and quotients. Practice — and if necessary, extra support — should continue all year for those who need it to attain fluency.

<table>
<thead>
<tr>
<th>Resources</th>
<th>AIMS: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/SaluteToFacts.pdf">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/SaluteToFacts.pdf</a> (Salute to Facts)</th>
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<td></td>
<td>LAKESHORE: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Daily Practice Journal-p. 8, 12, 14, 18; Discovery Can: Operations Cards 1, 6, 11-22)</td>
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<td>CPALMS: <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44498">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44498</a> (Fluency with Division)</td>
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<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/34878">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/34878</a> (Area isn’t just for squares)</td>
</tr>
<tr>
<td></td>
<td>ILLUSTRATIVE MATHEMATICS: <a href="https://www.illustrativemathematics.org/content-standards/3/OA/C/7/tasks/2064">https://www.illustrativemathematics.org/content-standards/3/OA/C/7/tasks/2064</a> (Kiri’s Multiplication Matching Game)</td>
</tr>
<tr>
<td></td>
<td>LEARNZILLION: https://learnzillion.com.lesson_plans/3475-8-understand-properties-of-multiplication-and-division-c?card=48909 (Understand properties of multiplication and division, Cards 1-3)</td>
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<tbody>
<tr>
<td>MAFS.3.OA.3.AP.7a:</td>
<td>Fluently multiply and divide within 20.</td>
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</table>

**EUs**

*Fluency means: accurately, efficiency (using a reasonable number of steps and time) and flexibility (using a variety of strategies) Taken from: Number Talks by Sherry Parrish*

**Concrete:**
- Use arrays to show equal groups of manipulatives.
- Use repeated addition/skip counting to find the total number of objects within an array up to 20.
- Use manipulatives to divide a given number up to 20 equally into a number of groups or groups of an equal number.

**Representation:**

![Twelve apples divided equally into three baskets.](image1)

![There are four apples in each basket.](image2)

![There are four baskets.](image3)
<table>
<thead>
<tr>
<th><strong>EUs</strong></th>
<th><strong>Concrete:</strong></th>
<th><strong>Date(s) Instruction</strong></th>
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</thead>
<tbody>
<tr>
<td>• Use pictures/drawings to represent arrays showing equal groups.</td>
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<tr>
<td>• Write an equation to express the total number of objects as a sum of equal addends (repeated addition).</td>
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<td>• Use pictures/drawings to divide a given number up to 20 equally into a number of groups or groups of an equal number.</td>
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<tr>
<td><strong>MAFS.3.OA.3.AP.7b:</strong></td>
<td>Fluently multiply 2, 5 or 10 within 100.</td>
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<tr>
<td><strong>EUs</strong></td>
<td><strong>Concrete:</strong></td>
<td><strong>Date(s) Instruction</strong></td>
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<tr>
<td>• Use arrays to show equal groups of 2, 5, or 10 with manipulatives (up to a 10 by 10 array).</td>
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<td>3 x 2 (three rows of two)</td>
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<tr>
<td>2 x 3 (two rows of three)</td>
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<td>• Use repeated addition/skip counting to find the total number of objects within an array up to 100.</td>
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<tr>
<td><strong>Representation:</strong></td>
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<tr>
<td>• Use pictures/drawings to represent arrays (up to a 10 by 10) showing equal groups of 2, 5, or 10.</td>
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<td>• Use pictures/drawings to represent arrays (up to a 10 by 10) showing 2, 5, or 10 equal groups.</td>
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<td>• Write an equation to express the total number, up to 100 objects, as a sum of equal addends (repeated addition).</td>
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<tr>
<td><strong>Resources</strong></td>
<td>Equals lessons 8.A.6, 11.B.2</td>
<td></td>
</tr>
<tr>
<td><strong>MAFS.3.OA.3.AP.7c:</strong></td>
<td>Fluently divide by 2, 5, or 10 using dividends within 100 that are multiples of 2, 5, or 10.</td>
<td></td>
</tr>
<tr>
<td><strong>EUs</strong></td>
<td><strong>Concrete:</strong></td>
<td><strong>Date(s) Instruction</strong></td>
</tr>
<tr>
<td>• Use manipulatives to divide a given number up to 100 equally into 2, 5 or 10 groups or groups of 2, 5, or 10.</td>
<td></td>
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</tbody>
</table>
**Representation:**
Use pictures/drawings to divide a given number up to 100 equally into 2, 5 or 10 groups or groups of 2, 5, or 10.

**Resources**

**MAFS.K12.MP.1.1:** Make sense of problems and persevere in solving them.
**MAFS.K12.MP.2.1:** Reason abstractly and quantitatively.
**MAFS.K12.MP.4.1:** Model with mathematics.

**Topic 2: Developing conceptual understanding of area**
August 27 – September 12

*MAFS.3.OA.2.5:* Apply properties of operations as strategies to multiply and divide.

Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find $8 \times 7$ as $(8 \times (5 + 2)) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)

**Resources**

<table>
<thead>
<tr>
<th>LAKESHORE:</th>
<th><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a></th>
</tr>
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<tbody>
<tr>
<td>(Teacher Guide p.5; Reproducibles p. 3; How Did you Solve It? Cards 10-14)</td>
<td>(Commutative property of multiplication.)</td>
</tr>
<tr>
<td>CPALMS:</td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40349">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40349</a> (Meeting the Reading Goal)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49439">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49439</a> (Efficient Multiplication)</td>
<td></td>
</tr>
<tr>
<td>Lessons:</td>
<td>(Understanding properties of multiplication and division, Cards 4-8)</td>
</tr>
<tr>
<td>Video:</td>
<td><a href="https://learnzillion.com/lesson_plans/3475">https://learnzillion.com/lesson_plans/3475</a> (Understand properties of multiplication and division)</td>
</tr>
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**Related Access Points**

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<tbody>
<tr>
<td><strong>MAFS.3.OA.2.AP.5a:</strong> Recognize multiplication as communicative and associative.</td>
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</tr>
</tbody>
</table>

**EUs**

- Use manipulatives to show how related problems (e.g., $2 \times 3 = 3 \times 2$) result in the same product.
• Use manipulatives to show how grouping of factors will not change the end product when working with more than 2 factors \( \{ \text{e.g., } (2 \times 3) \times 4 = 2 \times (3 \times 4) \} \).

**Representation:**
• Compare related problems \( (2 \times 3 = 3 \times 2) \).
• Compare related problems \( (2 \times 3) \times 4 = 2 \times (3 \times 4) \).
• Use the symbols: \( \times, =, (, \) and related concepts.

**Resources**

**MAFS.3.MD.3.5:** Recognize area as an attribute of plane figures and understand concepts of area measurement.

a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.

b. A plane figure which can be covered without gaps or overlaps by \( n \) unit squares is said to have an area of \( n \) square units.

**Resource**
AIMS: [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/GroundCover.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/GroundCover.pdf) (Ground Cover)
LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide p. 18, Reproducibles p. 10; Daily Math Journal pp. 46, 52, 54, 62; Area Tiles, Discovery Can: Geometric Measurement; How Did You Solve It? Cards 63-65)
CPALMS: [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44792](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44792) (Unit Square)
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44795](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44795) (Using Tiles of Different Sizes)
LEARNZILLION: Lessons [https://learnzillion.com/lesson_plans/3827-3-measure-area-by-counting-square-units-fp?card=52014](https://learnzillion.com/lesson_plans/3827-3-measure-area-by-counting-square-units-fp?card=52014) (Measure area by counting square units) (You will need to stop the video early and eliminate some questions from the practice)

**Related Access Points**
**MAFS.3.MD.3.AP.5a:**
Use tiling to determine area.

**EUs**
**Concrete:**
• Demonstrate that area can be determined by covering a surface with square tiles that have no gaps or overlaps.
• Identify the space on a rectangular surface to be tiled (e.g., piece of paper).
• Use square tiles to cover the entire identified space.

**Representation:**
• Identify that area can be measured by tiling.
• Recognize that one tile equals one unit square.

**Resources**
Element Card 3rd: [Click here](#)
**MAFS.3.MD.3.6**: Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

### Resources

- **AIMS:** [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/SweetSquares.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/SweetSquares.pdf) (Sweet Squares)
- **LAKESHORE:** [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide pp.19-20; Reproducibles p.11; Daily Math Practice pp 46, 50, 52, 54, 62; Area Tiles Discovery Can: Geometric Measurement; How Did You Solve It? Cards 63-65; Pick A Problem Cards 77.78, 79, 80)
- **CPALMS:**
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43566](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43566) (Dawn’s Vegetable Garden)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43576](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43576) (Fenced Dog Run)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43586](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43586) (How Many Square Units)
  - [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/29829](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/29829) (Count those Square Units)
- **ILLUSTRATIVE MATHEMATICS:** [https://www.illustrativemathematics.org/content-standards/3/MD/C/6/tasks/1515](https://www.illustrativemathematics.org/content-standards/3/MD/C/6/tasks/1515) (Finding the Area of Polygons)

### Related Access Points

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.MD.3.AP.6a:</strong> Measure area of rectangles by counting unit squares.</td>
<td></td>
</tr>
</tbody>
</table>

### EU's

**Concrete:**
- Count up to 20 objects (students are expected to multiply within 20, refer to MAFS.3.OA.3.AP.7a).
- Identify the space on a surface (e.g., piece of paper) to be measured.
- Demonstrate that area can be determined by covering a rectangular shape or space with square tiles that have no gaps or overlaps.
- Count to find the number of unit squares used to find the area of a rectangular figure.
- Tile a rectilinear figure (a figure with all edges meeting at right/90 degree angles).

**Representation:**
- Count to find the area of a rectangle when given a visual representation (i.e., a picture or an array).
- Understand the following concepts and vocabulary: rectangle, tile, unit square, gaps, overlaps, and total area.

### Resources

- **Content Module Perimeter, Area and Volume:** [Click here](#)
- **Curriculum Resource Guide Measurement and Geometry:** [Click here](#)
- **Element Card 3rd:** [Click here](#)
- **MASSI:** [Click here](#)
- **UDL Unit Elementary Measurement:** [Click here](#)

**MAFS.3.MD.3.7:** Relate area to the operations of multiplication and addition.
a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.

b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning.

c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths \(a\) and \(b + c\) is the sum of \(a \times b\) and \(a \times c\). Use area models to represent the distributive property in mathematical reasoning.

d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Examples of Opportunities for In-Depth Focus: Area is a major concept within measurement, and area models must function as a support for multiplicative reasoning in grade 3 and beyond.

<table>
<thead>
<tr>
<th>Resources</th>
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</tr>
</thead>
<tbody>
<tr>
<td>AIMS:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/GardensByDesign.pdf (Gardens by Design)</td>
</tr>
<tr>
<td>LAKESHORE:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Teacher Guide pp. 20-21; Daily Math Practice Journal pp. 46, 48, 52, 56-60; Area Tiles; Discovery Can: Geometric Measurement; How Did You Solve It? Cards 66-69; Pick a Problem Cards 77, 78, 79, 90, 98)</td>
</tr>
<tr>
<td>CPALMS:</td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46896">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46896</a> (Area of a Butterfly Garden)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46898">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46898</a> (Cover Me)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/34878">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/34878</a> (Area isn’t just for squares)</td>
</tr>
<tr>
<td>ILLUSTRATIVE MATHEMATICS:</td>
<td><a href="https://www.illustrativemathematics.org/content-standards/3/MD/C/7/tasks/1990">https://www.illustrativemathematics.org/content-standards/3/MD/C/7/tasks/1990</a> (India’s Bathroom Tiles)</td>
</tr>
<tr>
<td>LEARNZILLION:</td>
<td><a href="https://learnzillion.com/lesson_plans/3825-2-understand-that-area-is-measured-in-square-units-c">https://learnzillion.com/lesson_plans/3825-2-understand-that-area-is-measured-in-square-units-c</a> (understand that area is measured in square units)</td>
</tr>
<tr>
<td></td>
<td><a href="https://learnzillion.com/lesson_plans/3826-7-understand-that-the-area-of-a-rectangle-can-be-determined-by-multiplying-side-lengths-c?card=52009">https://learnzillion.com/lesson_plans/3826-7-understand-that-the-area-of-a-rectangle-can-be-determined-by-multiplying-side-lengths-c?card=52009</a> (Understand that the area of a rectangle can be determined by multiplying side lengths)</td>
</tr>
<tr>
<td></td>
<td><a href="https://learnzillion.com/lesson_plans/3831-8-multiply-to-find-the-area-of-rectangles-and-explore-the-commutative-property-fp">https://learnzillion.com/lesson_plans/3831-8-multiply-to-find-the-area-of-rectangles-and-explore-the-commutative-property-fp</a> (Multiply to find the area of rectangles and explore the commutative property, links 3.7 with OA.2.5)</td>
</tr>
</tbody>
</table>

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<tr>
<th>Related Access Points</th>
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<tbody>
<tr>
<td>MAFS.3.MD.3.AP.7a:</td>
<td>Use tiling and repeated addition to determine area.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>Concrete:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Count up to 20 objects (students are expected to multiply within 20, refer to MAFS.3.OA.3.AP.7a).</td>
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<tr>
<td></td>
<td>- Use square tiles to cover a rectangle.</td>
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<td></td>
<td>- Count the number of tiles in each row and use repeated addition to determine the area of the rectangle.</td>
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<tr>
<td>Representation:</td>
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<td>----------------</td>
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<tr>
<td>• Identify the number of unit squares used to find the area of a rectangular figure.</td>
<td></td>
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<tr>
<td>• Use repeated addition to find the area of a rectangle when given a picture or array.</td>
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<tr>
<td>• Understand the vocabulary and concepts of area, addition, repeated addition, +.</td>
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</tbody>
</table>

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<tr>
<td>Element Card 3rd: [Click here](<a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/AllAboardForRounding.pdf)</td>
</tr>
<tr>
<td>Content Module Perimeter, Area and Volume: [Click here](<a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/NumberLineRoundup.pdf)</td>
</tr>
<tr>
<td>Curriculum Resource Guide Measurement and Geometry: [Click here](<a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/NumbersInTheRound.pdf)</td>
</tr>
<tr>
<td>UDL Unit Elementary Measurement: [Click here](<a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/NumberLineRoundup.pdf)</td>
</tr>
</tbody>
</table>

**MAFS.K12.MP.2.1:** Reason abstractly and quantitatively.
**MAFS.K12.MP.6.1:** Attend to precision.
**MAFS.K12.MP.7.1:** Look for and make use of structure.

### Topic 3: Developing strategies for addition and subtraction

September 13 – October 1

* **MAFS.3.NBT.1.1:** Use place value understanding to round whole numbers to the nearest 10 or 100.

<table>
<thead>
<tr>
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<tr>
<td>AIMS: [<a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/AllAboardForRounding.pdf](<a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS</a> 3/AllAboardForRounding.pdf) (All Aboard for Rounding)</td>
</tr>
<tr>
<td>LAKESHORE: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Teacher Guide pp. 8-9; Reproducibles pp.3, 7; Daily Math Practice Journal pp. 22, 24, 26, 28, 29; Magnetic Blocks; How Did You Solve It? Cards 21-23; Pick a Problem Cards 26, 30, 37, 40)</td>
</tr>
<tr>
<td>CPAMLS: <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42721">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42721</a> (Mystery Number Rounding Problem)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42728">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42728</a> (Rounding to the Nearest Hundred)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42729">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42729</a> (The Smallest and Largest Numbers Possible)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31029">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/28978</a> (Rounding to the Nearest Ten)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/28978">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/28978</a> (Rockin’ Round Number line lesson 1 &amp; 2)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31029">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31029</a> (Rounding for Decades)</td>
</tr>
<tr>
<td>ILLUSTRATIVE MATHEMATICS: <a href="https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/745">https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/745</a> (Rounding to 50 or 500)</td>
</tr>
<tr>
<td><a href="https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/1805">https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/1805</a> (Rounding to the Nearest 10 and 100)</td>
</tr>
<tr>
<td>LEARNZILLION: <a href="https://learnzillion.com/lesson_plans/3976-1-understanding-rounding-to-the-nearest-ten-c">https://learnzillion.com/lesson_plans/3976-1-understanding-rounding-to-the-nearest-ten-c</a> (Understanding rounding to the nearest ten)</td>
</tr>
</tbody>
</table>
### Related Access Points

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<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MAFS.3.NBT.1.AP.1a: Use place value to round to the nearest 10 or 100.</td>
<td></td>
</tr>
</tbody>
</table>

#### EUs

**Concrete:**
- Identify ones, tens, and hundreds when given a number card.
- Using a number line, locate a given number and then identify the closest 10 or 100.
- Identify if a number is in the middle of two numbers that we round up.

**Representation:**
- Match vocabulary of ones, tens, and hundreds to digits in a number.
- Understand the following concepts and vocabulary: round and nearest.

#### Resources
- Element Card 3rd: [Click here](#)

### MAFS.3.NBT.1.2: Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

**Remarks/Examples:** Students fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (Although 3.OA.3.7 and 3.NBT.1.2 are both fluency standards, these two standards do not represent equal investments of time in grade 3. Note that students in grade 2 were already adding and subtracting within 1000, just not fluently. That makes 3.NBT.1.2 a relatively small and incremental expectation. By contrast, multiplication and division are new in grade 3, and meeting the multiplication and division fluency standard 3.OA.3.7 with understanding is a major portion of students’ work in grade 3.)

#### Resources
- AIMS: [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_2/BasePlaceThePluses.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_2/BasePlaceThePluses.pdf) (Base Place: The Pluses)
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/StringBeadSubtraction.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/StringBeadSubtraction.pdf) (String Bead Subtraction)
- LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
- Teacher Guide p. 9; Reproducibles p.3; Daily Math Practice Journal pp. 22, 24, 26, 28, 29; How Did You Solve It? Cards 24-27; Pick A Problem Cards 31, 36, 38; Discovery Can: Operations Cards 3-5, 8-10; Problem Solving Strategy Puzzles (blue)
- CPALMS:
<table>
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</thead>
<tbody>
<tr>
<td><strong>MAFS.3.NBT.1.AP.2a:</strong></td>
<td>Use the relationships between addition and subtraction to solve problems.</td>
<td></td>
</tr>
</tbody>
</table>

**EUs**

**Concrete:**
- Using manipulatives join (addition) and separate (subtraction) sets to show the inverse relationship between addition and subtraction.

**Representation:**
- Understand the following concepts, symbols, and vocabulary for: add, subtract, sum, difference, total.
- Compare related equations (e.g., $2 + 3 = 5$ and $5 - 3 = 2$)

**Resources**

Element Card 3rd: [Click here](#)


<table>
<thead>
<tr>
<th><strong>MAFS.3.NBT.1.AP.2b:</strong></th>
<th>Solve multi-step addition and subtraction problems up to 100.</th>
<th></th>
</tr>
</thead>
</table>

**EUs**

**Concrete:**
- Use base ten blocks to create sets of objects within 100.
- Use base ten blocks or other manipulatives to solve one-step addition and subtraction problems.

**Representation:**
- Understand the following concepts, symbols, and vocabulary for: +, -, =.
- Create a visual representation to solve one-step addition and subtraction problems.

**Resources**

Equals lessons 8.A.8, 8.A.9, 8.B.6, 8.B.7

*MAFS.3.MD.4.8* Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
## Related Access Points

<table>
<thead>
<tr>
<th>MAFS.3.MD.4.AP.8a:</th>
<th>Use addition to find the perimeter of a rectangle.</th>
<th></th>
</tr>
</thead>
</table>

### EUs

**Concrete:**
- Recognize that perimeter can be determined by tiling the sides of a rectangle with square tiles with no gaps or overlaps.
- Count the number of tiles on each side.
- Add sides together to determine the perimeter.

**Representation:**
- Use addition to identify the perimeter of a figure.
- Understand the vocabulary and concepts of perimeter, sides, addition, +, gaps, and overlaps.

### Resources

- **AIMS:**

- **LAKESHORE:**
  - [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)

- **CPALMS:**
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46483](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46483) (Find All the Possible Rectangles)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46485](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46485) (Rectangles With Same Perimeter)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46478](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46478) (What’s the Missing Length?)

- **LEARNZILLION:**

<table>
<thead>
<tr>
<th>MAFS.3.MD.4.AP.8b:</th>
<th>Draw different rectangles with the same area but different perimeters on graph paper.</th>
<th></th>
</tr>
</thead>
</table>
• Use manipulatives to model rectangles.
• Use manipulatives to model rectangles with the same area, but different perimeters (e.g., area = 12; length = 6, width = 2 OR length = 3, width = 4).

**Representation:**
• Use visual representations of various figures and sizes.
• Understand that shapes could have the same area, but may look different (i.e., have a different length and width).
• Create shapes that have the same area, but have a different perimeter (i.e., length and width).
• Understand the following concepts and vocabulary: perimeter, area, sides, rectangle, factor, array, length, and width.

**Resources**
Element Card 3rd: [Click here](#)
Equals lessons 5.D.2, 11.E.3

**MAFS.K12.MP.6.1:** Attend to precision.
**MAFS.K12.MP.8.1:** Look for and express regularity in repeated reasoning.
### Unit 2

#### Topic 4: Understanding unit fractions

**MAFS.3.G.1.2:** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

*For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*

**Resources**

| AIMS: | https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/AIMS-3rd-Grade.aspx  
(Folding Flags)  
LAKESHORE: | https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx  
(Teacher Guide p. 24; Reproducibles p.13; Daily Math Practice Journal pp. 64-66, 68, 70; How Did You Solve It? Cards 81-90)  
CPALMS: | http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41224  
(Four Parts of the Whole)  
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41221  
(Two Equal Parts)  
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41209  
(Unit Fractions)  
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41237  
(Halves of an Irregular Polygon)  
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43392  
(What Does One Fifth Mean)  
http://www.cpalms.org/Public/PreviewResourceUrl/Preview/23429  
(Fun with Pattern Block Fractions)  
ILLUSTRATIVE MATHEMATICS: | https://www.illustrativemathematics.org/content-standards/3/G/A/2/tasks/1502  
(Halves, Thirds, Sixths)  
(Understand fractions as the partitioning of a whole)  
(Partition wholes and locate unit fractions)  
ORIGO ONE VIDEO: | https://www.youtube.com/watch?v=UHlfHqVj7nI&amp;index=12&amp;list=PLftMBEZKW0IhvcniGF9mQj1Pr_Kvo4l  
(Partitioning-Interpreting Fractions as Part of a Whole) |

**Related Access Points**

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.G.1.AP.2a:</strong> Partition a rectangle into equal parts with equal area.</td>
<td></td>
</tr>
</tbody>
</table>

**EUs**

**Concrete:**
- Partition (split) a rectangular object into two, three, or four equal parts (e.g., fold rectangular pieces of paper into two or four equal pieces).

**Representation:**
- Identify equal parts of a rectangular shape.
- Understand the following concepts and vocabulary: equal, parts, partition, area, rectangle, one half, one third, one fourth.

**Resources**

Curriculum Resource Guide Equations: [Click here](#)
* *MAFS.3.NF.1.1:* Understand a fraction \( \frac{1}{b} \) as the quantity formed by 1 part when a whole is partitioned into \( b \) equal parts; understand a fraction \( \frac{a}{b} \) as the quantity formed by \( a \) parts of size \( \frac{1}{b} \).

**Resources**

AIMS:
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/FiguringFractions.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/FiguringFractions.pdf) (Figuring Fractions)

LAKESHORE:
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide pp. 11-12; Reproducibles p. 3; Daily Math Practice Journal pp. 30-32, 35-36, 45; Discovery Can: Fractions; Giant Magnetic Fraction Circles and Bars; Fraction Circles Tub; How Did You Solve It? Cards 33-35; Pick A Problem Cards 41, 42, 43, 96, 97, 98, 99, 100)

CPALMS:
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43384](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43384) (Painting a Wall)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43389](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43389) (Three Quarters of the Race)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43392](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43392) (What Does One Fifth Mean)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43394](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43394) (Which Shows One Third?)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/27912](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/27912) (Fraction Folding Part 1)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/30110](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/30110) (It Is all About the Whole)

ILLUSTRATIVE MATHEMATICS:
- [https://www.illustrativemathematics.org/content-standards/3/G/A/2/tasks/1502](https://www.illustrativemathematics.org/content-standards/3/G/A/2/tasks/1502) (Halves, Thirds, Sixths)
- [https://www.illustrativemathematics.org/content-standards/3/NF/A/1/tasks/833](https://www.illustrativemathematics.org/content-standards/3/NF/A/1/tasks/833) (Naming the Whole for a Fraction)

LEARNZILLION:

ORIGO ONE VIDEO:
- [https://www.youtube.com/watch?v=-9QBH-nvLgY&index=8&list=PLftMBEZKW0IRWvcniGF9mQj1Pr_Kvoa4I](https://www.youtube.com/watch?v=-9QBH-nvLgY&index=8&list=PLftMBEZKW0IRWvcniGF9mQj1Pr_Kvoa4I) (Fractions – Exploring the Area Model of Fractions)
- [https://www.youtube.com/watch?v=hvAs8r2LPA4&index=6&list=PLftMBEZKW0IRWvcniGF9mQj1Pr_Kvoa4I](https://www.youtube.com/watch?v=hvAs8r2LPA4&index=6&list=PLftMBEZKW0IRWvcniGF9mQj1Pr_Kvoa4I) (Exploring the Length Model of Fractions (stop video at 0:50)- also introduces number lines briefly)

**Related Access Points**

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.NF.1.AP.1a:</strong></td>
<td>Identify the number of highlighted parts (numerator) of a given representation (rectangles and circles).</td>
</tr>
<tr>
<td><strong>Concrete:</strong></td>
<td>Given a model of a shape that has been divided into equal parts with parts covered to represent a fraction, count the number of pieces covered (numerator).</td>
</tr>
</tbody>
</table>
**Representation:**
- Understand that fractions are equal parts of a whole and the numerator represents the number of highlighted parts. The numerator describes the number of pieces of a given size. (e.g., 1 third, 2 thirds, 3 thirds).
- Given a visual representation of a shape that has been divided into equal parts with parts highlighted to represent a fraction, count the number of pieces highlighted (numerator).
- Understand the following concepts, symbols, and vocabulary: whole, numerator, fraction, equal parts.

**Resources**
Curriculum Resource Guide Fractions and Decimals: [Click here](#)
Element Card 3rd: [Click here](#)

**EUs**
Concrete:
Given a model of a shape that has been divided into equal parts, count the total number of equal parts (denominator).

**Representation:**
- Understand that the denominator of the fraction indicates the number of equal parts of the whole. The denominator describes the size of the pieces (e.g., fourths, fifths, sixths, etc.).
- Given a visual representation of a shape that has been divided into equal parts, count the total number of equal parts (denominator).
- Understand the following concepts, symbols, and vocabulary: whole, denominator, fraction, equal parts.

**Resources**
Content Module Fractions and Decimals: [Click here](#)
Curriculum Resource Guide Fractions and Decimals: [Click here](#)
Element Card 3rd: [Click here](#)

**MAFS.3.NF.1.AP.1b:** Identify the total number of parts (denominator) of a given representation (rectangles and circles).

**Concrete:**
Given a model of a shape that has been divided into equal parts (2, 3, 4, or 8 parts), count the total number of equal parts (denominator).

**Representation:**
- Identify the total number of equal parts as the denominator.
- Given the same model of a shape that has been divided into equal parts (above) with parts covered to represent a fraction, count the number of pieces covered (numerator).
- Identify the number of pieces covered as the numerator.

**MAFS.3.NF.1.AP.1c:** Identify the fraction that matches the representation of partitioned rectangles and circles into halves, fourths, thirds, and eighths.

**Concrete:**
- Select a numerical fraction as a representation of the number of pieces of a given size (halves, fourths, thirds, eighths) from an equally divided whole rectangle or circle. For example:
Understand the following concepts, symbols, and vocabulary: whole, numerator, denominator, /, equal parts.

Resources
- Content Module: Fractions and Decimals: Click here
- Curriculum Resource Guide: Fractions and Decimals: Click here
- Element Card 3rd: Click here

**MAFS.3.NF.1.2:** Understand a fraction as a number on the number line; represent fractions on a number line diagram.

a. Represent a fraction \( \frac{1}{b} \) on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into \( b \) equal parts. Recognize that each part has size \( \frac{1}{b} \) and that the endpoint of the part based at 0 locates the number \( \frac{1}{b} \) on the number line.

Represent a fraction \( \frac{a}{b} \) on a number line diagram by marking off \( a \) lengths \( \frac{1}{b} \) from 0. Recognize that the resulting interval has size \( \frac{a}{b} \) and that its endpoint locates the number \( \frac{a}{b} \) on the number line.

Example of Opportunities for In-Depth Focus: Developing an understanding of fractions as numbers is essential for future work with the number system. It is critical that students at this grade are able to place fractions on a number line diagram and understand them as a related component of their ever-expanding number system.

Fluency Expectations or Examples of Culminating Standards: Students fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3.NBT.1.2 a relatively small and incremental expectation.

Resources
- AIMS: https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/FractionFoldUp.pdf (Fractions Fold Up--number line goes past 1)
  https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/FractionLineUp.pdf (Fraction Line Up-- number line goes past 1)
- LAKE SHORE:
  https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx
- Teacher Guide pp. 13-14; Reproducibles pp. 3, 9; Daily Math Practice Journal pp. 30, 32, 34, 36, 38, 40, 42-44; Discovery Can: Fractions; Giant Magnetic Fraction; Circles and Bars; Fractions Circles Tub; How Did You Solve It? Cards 36-40)
- CPALMS:
  http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44672 (Five-Eighths on the Number Line)
  http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44673 (Four-Sixths on the Number Line)
  http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44674 (One-Third on the Number Line)
  http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44675 (Three-Fourths on the Number Line)
  http://www.cpalms.org/Public/PreviewResourceLesson/Preview/27853 (Interactive Fraction Number Lines)
  http://www.cpalms.org/Public/PreviewResourceUpload/Preview/43330 (Locating Fractions Less than One on A number Line)
Related Access Points

MAFS.3.NF.1.AP.2a: Locate given common unit fractions (i.e., 1/2, 1/4) on a number line or ruler.

EUs

Concrete:
- Given a number line only representing 0-1, identify the distance from 0-1 as a whole.
- Given a number line only representing 0-1, divided into two equal parts, identify each part as a half of the whole length. Identify the end location of the first part as 1/2.
- Given a number line only representing 0-1, divided into three equal parts, identify each part as a third of the whole length. Identify the end location of the first part as 1/3.
- Given a number line only representing 0-1, divided into four equal parts, identify each part as a quarter of the whole length. Identify the end location of the first part as 1/4.
- Given a number line only representing 0-1, divided into eight equal parts, identify each part as an eighth of the whole length. Identify the end location of the first part as 1/8.

Representation:
Understand the following concepts, symbols, and vocabulary: equal parts, unit fraction, and number line.

Resources
- Content Module: Fractions and Decimals: Click here
- Element Card 3rd: Click here

MAFS.K12.MP.3.1: Construct viable arguments and critique the reasoning of others.
MAFS.K12.MP.4.1: Model with mathematics.
MAFS.K12.MP.6.1: Attend to precision.

Topic 5: Using fractions in Measurement Data

MAFS.3.NF.1.1: Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.
Related Access Points | Description | Date(s) Instruction
--- | --- | ---
**MAFS.3.NF.1.AP.1a:** | Identify the number of highlighted parts (numerator) of a given representation (rectangles and circles). | 

**EUs** | **Concrete:**  
- Given a model of a shape that has been divided into equal parts with parts covered to represent a fraction, count the number of pieces covered (numerator).  
  
  **Representation:**  
- Understand that fractions are equal parts of a whole and the numerator represents the number of highlighted parts. The numerator describes the number of pieces of a given size. (e.g., 1 third, 2 thirds, 3 thirds).  
- Given a visual representation of a shape that has been divided into equal parts with parts highlighted to represent a fraction, count the number of pieces highlighted (numerator).  
- Understand the following concepts, symbols, and vocabulary: whole, numerator, fraction, equal parts.  

**Resources** | Curriculum Resource Guide Fractions and Decimals: [Click here](#)  
Element Card 3rd: [Click here](#)  

**MAFS.3.NF.1.AP.1b:** | Identify the total number of parts (denominator) of a given representation (rectangles and circles). | Date(s) Instruction
<table>
<thead>
<tr>
<th><strong>EUs</strong></th>
<th><strong>Concrete:</strong> Given a model of a shape that has been divided into equal parts, count the total number of equal parts (denominator).</th>
<th></th>
</tr>
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| **Representation:** | - Understand that the denominator of the fraction indicates the number of equal parts of the whole. The denominator describes the size of the pieces (e.g., fourths, fifths, sixths, etc.).  
- Given a visual representation of a shape that has been divided into equal parts, count the total number of equal parts (denominator).  
- Understand the following concepts, symbols, and vocabulary: whole, denominator, fraction, equal parts. |  |
| **Resources** | Content Module Fractions and Decimals: [Click here](#)  
Curriculum Resource Guide Fractions and Decimals: [Click here](#)  
Element Card 3rd: [Click here](#)  

| **MAFS.3.NF.1.AP.1c:** | Identify the fraction that matches the representation of partitioned rectangles and circles into halves, fourths, thirds, and eighths. | **Date(s) Instruction** |

| **EUs** | **Concrete:** Given a model of a shape that has been divided into equal parts (2, 3, 4, or 8 parts), count the total number of equal parts (denominator).  
- Identify the total number of equal parts as the denominator.  
- Given the same model of a shape that has been divided into equal parts (above) with parts covered to represent a fraction, count the number of pieces covered (numerator).  
- Identify the number of pieces covered as the numerator. |  |
| **Representation:** | - Select a numerical fraction as a representation of the number of pieces of a given size (halves, fourths, thirds, eighths) from an equally divided whole rectangle or circle. For example:  
  - 1 half is represented as 1/2  
  - 3 fourths is represented as 3/4  
  - 2 thirds is represented as 2/3  
  - 5 eighths is represented as 5/8  
- Understand the following concepts, symbols, and vocabulary: whole, numerator, denominator, /, equal parts. |  |
| **Resources** | Content Module: Fractions and Decimals: [Click here](#)  
Curriculum Resource Guide: Fractions and Decimals: [Click here](#)  
Element Card 3rd: [Click here](#)  

**MAFS.3.NF.1.2:** Understand a fraction as a number on the number line; represent fractions on a number line diagram.
a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into $b$ equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.

Represent a fraction $a/b$ on a number line diagram by marking off $a$ lengths $1/b$ from 0. Recognize that the resulting interval has size $a/b$ and that its endpoint locates the number $a/b$ on the number line.

**Example of Opportunities for In-Depth Focus:** Developing an understanding of fractions as numbers is essential for future work with the number system. It is critical that students at this grade are able to place fractions on a number line diagram and understand them as a related component of their ever-expanding number system.

**Fluency Expectations or Examples of Culminating Standards:** Students fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. 3.NBT.1.2 is a relatively small and incremental expectation.

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<td>LAKESHORE: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> Teacher Guide pp.13-14; Reproducibles pp 3, 9; Daily Math Practice pp. 30, 32, 34, 36, 38, 40, 42-44; Discovery Can: Fractions; Giant Magnetic Fraction; Circles and Bars; Fraction Circles Tub; How Did You Solve It? Cards 36-40)</td>
</tr>
<tr>
<td></td>
<td>CPALMS: <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44672">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44672</a> (Five-Eighths on the Number Line)</td>
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<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44673">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44673</a> (Four-Sixths on the Number Line)</td>
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<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44674">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44674</a> (One-Third on the Number Line)</td>
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<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44675">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44675</a> (Three-Fourths on the Number Line)</td>
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<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44676">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44676</a> (Four Fourths)</td>
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<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/27853">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/27853</a> (Interactive Fraction Number Lines)</td>
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</tr>
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<td></td>
<td>LEARNZILLION: <a href="https://learnzillion.com/lesson_plans/3463-6-combine-unit-fractions-to-create-new-fractions-fp">https://learnzillion.com/lesson_plans/3463-6-combine-unit-fractions-to-create-new-fractions-fp</a> (Combine unit fractions to create new fractions)</td>
</tr>
<tr>
<td></td>
<td><a href="https://learnzillion.com/lesson_plans/3458-8-understand-fractions-as-a-distance-from-zero-c">https://learnzillion.com/lesson_plans/3458-8-understand-fractions-as-a-distance-from-zero-c</a> (Understand fractions as a distance from zero)</td>
</tr>
<tr>
<td></td>
<td><a href="https://learnzillion.com/lesson_plans/3466-9-use-fractions-to-show-a-distance-from-zero-fp">https://learnzillion.com/lesson_plans/3466-9-use-fractions-to-show-a-distance-from-zero-fp</a> (Use fractions to show a distance from zero)</td>
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<tr>
<td></td>
<td>ORIGO ONE VIDEO <a href="https://www.youtube.com/watch?v=kGH5VvMxGyg&amp;index=9&amp;list=PLftMBEZKW0IRWvnciGF9mQj1Pr_Kvoa4">https://www.youtube.com/watch?v=kGH5VvMxGyg&amp;index=9&amp;list=PLftMBEZKW0IRWvnciGF9mQj1Pr_Kvoa4</a> (Fractions on a Number Line - Exploring the Number Line Model of a Fractions)</td>
</tr>
<tr>
<td>Related Access Points</td>
<td>Description</td>
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<td>-----------------------</td>
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</tr>
<tr>
<td><strong>MAFS.3.NF.1.AP.2a</strong></td>
<td>Locate given common unit fractions (i.e., 1/2, 1/4) on a number line or ruler.</td>
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**EUs**

**Concrete:**
- Given a number line only representing 0-1, identify the distance from 0-1 as a whole.
- Given a number line only representing 0-1, divided into two equal parts, identify each part as a half of the whole length. Identify the end location of the first part as 1/2.
- Given a number line only representing 0-1, divided into three equal parts, identify each part as a third of the whole length. Identify the end location of the first part as 1/3.
- Given a number line only representing 0-1, divided into four equal parts, identify each part as a quarter of the whole length. Identify the end location of the first part as 1/4.
- Given a number line only representing 0-1, divided into eight equal parts, identify each part as an eighth of the whole length. Identify the end location of the first part as 1/8.

**Representation:**
Understand the following concepts, symbols, and vocabulary: equal parts, unit fraction, and number line.

**Resources**
- **Content Module: Fractions and Decimals:** [Click here]
- **Element Card 3rd:** [Click here]
- **Equals lessons 12.B.4, 12.B.6**

**MAFS.3.MD.2.4:** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

**Resources**
- **LAKESHORE:** [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Daily Math Practice Journal pp 55, 57, 58; How Did You Solve It? Cards 61-62)
- **CPALMS:**
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45673](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45673) (Measuring Our Pencils Part One)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45674](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45674) (Measuring Our Pencils Part Two)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45671](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45671) (The Teacher’s Shoe-Part 1)
  - [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45672](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45672) (The Teacher’s Shoe-Part 2)
- **LEARNZILLION:** [https://learnzillion.com/lesson_plans/6360](https://learnzillion.com/lesson_plans/6360) (Measuring objects using whole, half, and quarter inches)
**Related Access Points** | **Description** | **Date(s) Instruction**
--- | --- | ---
MAFS.3.MD.2.AP.4a: | Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. |  
EUs | Concrete: |  
• Use a ruler marked with fourths, halves, and whole inches to measure items. |  
Representation: |  
• Understand the vocabulary of ¼ inch, ½ inch and whole inch.  
• Use visuals to identify increments of ¼ inch, ½ inch and whole inch. |  
Resources | Element Card 3rd: [Click here](#)  
Content Module: Perimeter, Area and Volume: [Click here](#)  
Curriculum Resource Guide: Measurement and Geometry: [Click here](#)  
Equals lessons 9.A.5, 10.A.1 |  
MAFS.3.MD.2.AP.4b: | Organize measurement data into a line plot. |  
EUs | Concrete: |  
• Use manipulatives to create a data set on a line plot. |  
Representation: |  
• Select a visual for a line plot to represent the data set.  
• Understand the vocabulary of data, data sets, and line plot. |  
Resources | Element Card 3rd: [Click here](#)  
Curriculum Resource Guide: Data Analysis: [Click here](#)  
Equals lessons 10.A.3 |  
MAFS.K12.MP.2.1: | Reason abstractly and quantitatively. |  
MAFS.K12.MP.5.1: | Use appropriate tools strategically. |  
**Topic 6: Solving addition and subtraction problems involving measurement** | November 1 - 16 |  
*MAFS.3.MD.1.1:* Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. |  
Resources | AIMS:  
[https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/MinuteByMinute.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/MinuteByMinute.pdf) (Minute By Minute)  
LAKESHORE:  
[https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)  
Daily Math Practice Journal pp. 47, 48, 50, 51, 54, 56, 61; Problem Solving Strategy Puzzles (Green); How Did You Solve It? Cards 52-55; Pick A Problem Cards 51, 52, 53, 54, 55, 56, 57, 58)  
CPALMS:  
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45669](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45669) (Find the Time) |
## ILLUSTRATIVE MATHEMATICS:
[https://www.illustrativemathematics.org/content-standards/tasks/1989](https://www.illustrativemathematics.org/content-standards/tasks/1989) (Dajuana’s Homework)

## LEARNZILLION:
[https://learnzillion.com/lesson_plans/8531-reading-the-exact-minute-on-a-clock](https://learnzillion.com/lesson_plans/8531-reading-the-exact-minute-on-a-clock) (Reading the exact minute on a clock)
[https://learnzillion.com/lesson_plans/9023-solving-elapsed-time-word-problems-to-the-nearest-minute](https://learnzillion.com/lesson_plans/9023-solving-elapsed-time-word-problems-to-the-nearest-minute) (Solving elapsed time word problems to the nearest minute)

### Related Access Points

<table>
<thead>
<tr>
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</tr>
</thead>
</table>

### MAFS.3.MD.1.AP.1a:

Solve word problems involving the addition and subtraction of time intervals of whole hours or within an hour (whole hours: 5:00 to 8:00, within hours: 7:15 to 7:45) on a number line.

#### EUs

**Concrete:**
- Count by fives to 60.
- Demonstrate how an analog clock moves to increase time.
- Use an analog/digital clock to increase/decrease time intervals of whole hours or within an hour.
- Match numerical representation of time on an analog/digital clock.

**Representation:**
- Use a number line to identify intervals of time.
- Understand the concept of increasing/decreasing time.
- Use visual representation (picture schedule) to identify elapsed time.
- Understand vocabulary for: digital clock, analog clock, o’clock, hour, half hour, quarter hour, time.
  - Understand that 60 min = 1 hour.

#### Resources

- Element Card 3rd: [Click here](#)
- Curriculum Resource Guide Measurement and Geometry: [Click here](#)

### MAFS.3.MD.1.AP.1b:

Determine the equivalence between the number of minutes and the number of hours (e.g., 60 minutes = 1 hour) on a number line.

#### EUs

**Concrete:**
- Use an analog clock to demonstrate the number of minutes in an hour.
- Use a number line to demonstrate the number of minutes in an hour (e.g., use manipulatives on a number line).
- Read time on a digital clock.

**Representation:**
- Match numerical time from a digital clock to time on an analog clock.
- Understand vocabulary for: hours and minutes.
- Understand that 60 min = 1 hour.

**Resources**
- Element Card 3rd: [Click here](#)
- Curriculum Resource Guide: Fractions and Decimals: [Click here](#)
- Equals lessons 12.D.6

**MAFS.3.MD.1.2:** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.

**Remarks/Examples:** Examples of Opportunities for In-Depth Focus
Continuous measurement quantities such as liquid volume, mass, and so on are an important context for fraction arithmetic (cf. 4.NF.2.4c, 5.NF.2.7c, 5.NF.2.3). In grade 3, students begin to get a feel for continuous measurement quantities and solve whole-number problems involving such quantities.

**AIMS:**
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/KingsContainers.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/KingsContainers.pdf) (The King’s Containers)

**LAKESHORE:**
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)

(Daily Math Practice Journal pp. 46, 48, 50, 52, 54, 56, 62; How Did You Solve It? Cards 56-58; Pick A Problem Cards 59, 60, 61, 67, 84)

**CPALMS:**
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42730](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42730) (Estimating and Measuring Mass)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42731](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42731) (Estimating and Measuring Volume)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42451](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42451) (Addition and Subtraction with Mass and Volume)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/131163](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/131163) (Is that Estimate Correct?)

**ILLUSTRATIVE MATHEMATICS:**
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/131163](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/131163) (How Heavy?)

**LEARNZILLION:**
- [https://learnzillion.com/lesson_plans/7180-understand-mass-and-how-mass-is-measured](https://learnzillion.com/lesson_plans/7180-understand-mass-and-how-mass-is-measured) (Understand mass and how mass is measured)
- [https://learnzillion.com/lesson_plans/7338-find-the-mass-of-an-object-using-a-balance-scale](https://learnzillion.com/lesson_plans/7338-find-the-mass-of-an-object-using-a-balance-scale) (Find the mass of an object using a balance scale)

**Related Access Points**

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.MD.1.AP.2a:</strong></td>
<td>Select the appropriate tool for the measurement of liquid volume and mass.</td>
</tr>
<tr>
<td><strong>EUs</strong></td>
<td>Concrete:</td>
</tr>
</tbody>
</table>
- Identify that liquid volume and mass can be measured.
- Recognize which tools are used for measurement, such as measuring cup for liquid volume, scale for grams, etc.

**Representation:**
- Understand vocabulary for: grams (g), kilograms (kg), and liters (l).
- Match tools with units of measurement (i.e., a measuring cup/beaker measures volume and a scale measures weight).

**Resources**
Element Card 3rd: [Click here](#)  
Curriculum Resource Guide: Measurement and Geometry: [Click here](#)  

**MAFS.3.MD.1.AP.2b:** Select appropriate units for measurement involving liquid volume and mass.

**EUs**
**Concrete:**
Recognize which tools are used for measurement, such as measuring cup for liquid volume, scale for grams, etc.

**Representation:**
- Understand vocabulary for: liters, grams, kilograms, volume, and mass.
- Match tools with units of measurement.
- Recognize the symbols associated with measurement (e.g., g = grams; kg = kilograms; l = liters).

**Resources**
Element Card 3rd: [Click here](#)  
Curriculum Resource Guide Measurement and Geometry: [Click here](#)  

**MAFS.3.MD.1.AP.2c:** Add to solve one-step word problems involving liquid volume and mass.

**EUs**
**Concrete:**
Use manipulatives to model a one-step word problem involving addition.

**Representation:**
- Use visual representation to model a word problem.
- Understand the following addition concepts and vocabulary: altogether, plus, in all, etc.
- Use symbols from the word problem to label sums (e.g., 6 g + 6 g = 12 g).
- Solve one-step word problems involving addition.

**Resources**
Element Card 3rd: [Click here](#)  
Curriculum Resource Guide Measurement and Geometry: [Click here](#)

**MAFS.3.MD.1.AP.2d:** Estimate liquid volume and mass.

**EUs**
**Concrete:**
- Use a cup with visual supports to estimate liquid volume (liters).
- Use objects of varying mass to estimate grams and kilograms.
### Representation:
- Understand the vocabulary of volume, liquid, liter, mass, gram, kilogram, more, less.

### Resources
Element Card 3rd: [Click here](#)
Curriculum Resource Guide Measurement and Geometry: [Click here](#)

**MAFS.K12.MP.1.1:** Make sense of problems and persevere in solving them.
**MAFS.K12.MP.4.1:** Model with mathematics.
**MAFS.K12.MP.5.1:** Use appropriate tools strategically.

**Topic 7: Understanding the relationship between multiplication and division**

**MAFS.3.OA.1.2:** Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 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.

*For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*

**Examples of Opportunities for In-Depth Focus:** Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.

### Resources
**AIMS:**
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/CampFairShares.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/CampFairShares.pdf) (Camp Fair Shares)
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/BoxingBagsAndMatches.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/BoxingBagsAndMatches.pdf) (Boxing Bags and Matches)
**LAKESHORE:** [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
(Teacher Guide p 3; Reproducibles p.3; Daily Math Practice Journal pp. 3, 5, 7, 9, 15; Discovery Can: Operations Cards 2, 7, 21-25; Discovery Can: Algebraic Thinking Cards 17-20; How Did You Solve It? Cards 1-3)
**CPALMS:**
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45217](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45217) (Interpreting Division)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45216](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45216) (Using a Number Line to Solve a Division Problem)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45215](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45215) (What Does the Six Mean?)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45214](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45214) (Writing a Problem With a Quotient)
**ILLUSTRATIVE MATHEMATICS:**
- [https://www.illustrativemathematics.org/content-standards/3/OA/A/2/tasks/1531](https://www.illustrativemathematics.org/content-standards/3/OA/A/2/tasks/1531) (Markers in Boxes)
**LEARNZILLION:**
- [https://learnzillion.com/lesson_plans/9527-1-understand-that-quotients-are-shares-or-groups-c?card=80507](https://learnzillion.com/lesson_plans/9527-1-understand-that-quotients-are-shares-or-groups-c?card=80507) (Understand that quotients are shares or groups)
- [https://learnzillion.com/lesson_plans/2990-2-fluently-divide-to-find-equal-groups-or-shares-fp?card=43947](https://learnzillion.com/lesson_plans/2990-2-fluently-divide-to-find-equal-groups-or-shares-fp?card=43947) (Fluently divide to find equal or shares)

### Related Access Points
<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the number of sets of whole numbers, five or less, that equal a dividend.</td>
<td>November 26 – December 11</td>
</tr>
</tbody>
</table>
| EUs | **Concrete:**  
|     |   • Use manipulatives to make sets of objects with a given number in each (e.g., create sets of 3 objects from a total of 15 objects).  
|     |   • Count the number of created sets (above example would result in 5 sets).  
|     | **Representation:**  
|     |   • Understand the following vocabulary: divide, separate, total, etc.  
|     |   • Use pictorial representations to make sets with a given number in each (e.g., create sets of 3 from a visual representation of 15 items).  
|     |   • Count the number of created sets (above example would result in 5 sets).  
| Resources | **Curriculum Resource Guide: Equations:** [Click here](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299)  
|     |   **Element Card 3rd:** [Click here](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309)  
| MAFS.3.OA.1.AP.2b | Use objects to model division situations involving up to five groups, with up to five objects in each group, and interpret the results.  
| EUs | **Concrete:**  
|     |   • Use manipulatives to model a division situation, e.g., 15 ÷ 3 as the number of objects in each set when 15 objects are divided equally into 3 sets, or as a number of sets when 15 objects are divided into equal sets of 3 objects each.  
|     |   • Count the number of objects in each set or count the number of sets created.  
|     | **Representation:**  
|     |   • Identify an arrangement of objects that matches a given division situation.  
|     |   • Identify the following vocabulary and symbols: division (÷), equal (=)  
| Resources | **Element Card 3rd:** [Click here](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309)  
|     |   **Curriculum Resource Guide Equations:** [Click here](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299)  
|     |   **Equals lessons 11.C.2, 11.C.3**  
| MAFS.3.OA.1.3 | **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.**  
| Examples of Opportunities for In-Depth Focus | Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.  
| Resources | **LAKESHORE:** [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)  
|     |   **Teacher Guide p. 3-4; Daily Math Practice Journal p. 3, 5, 7, 9, 11, 13, 17, 19; Problem Solving Strategy Puzzles (purple); Discovery Can: Algebraic Thinking Cards 6-20; Discovery Can: Operations Cards 6, 11-22; How Did You Solve It? Cards 3, 6-7**  
|     | **CPALMS:** [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42875](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42875); [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309); [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299)  
|     |   **(Finding an Unknown Product) (Bake Sale) (Books at the Book Fair)**
### Related Access Points

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solve and check one- or two-step word problems requiring multiplication or division with the product or quotient up to 50.</td>
<td></td>
</tr>
</tbody>
</table>

### EUs

**Concrete:**
- Match the vocabulary in a word problem to an action.
- Use manipulatives to model the context of the word problem.
- Count to find the answer.

**Representation:**
- Create a pictorial representation of the word problem.
- Use context clues to interpret the concepts, symbols, and vocabulary for addition, subtraction, multiplication, and division.

### Resources

- **Element Card 3rd:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
- **CPALMS:**
  - [Alien Math](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40393)
  - [Changing Division Equations into Multiplication Equations](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40388)
  - [Using Multiplication to Solve Division Problems](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40385)
  - [Multiplication as the Inverse of Division](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73284)
  - [Grandma wants to know](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/29229)
  - [Three is not a crowd](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73284)

### MAFS.3.OA.1.AP.3a

*For example, find* $32 \div 8$ *by finding the number that makes 32 when multiplied by 8.*

### MAFS.3.OA.2.6

**Understand division as an unknown-factor problem.**

For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.
<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.OA.2.AP.6a:</td>
<td>Model division as the inverse of multiplication for quantities less than 10.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td><strong>Concrete:</strong> &lt;br&gt;• Separate manipulatives into sets (division) followed by recombining of those sets (multiplication) to show the inverse relationship between multiplication and division. &lt;br&gt;<strong>Representation:</strong> &lt;br&gt;• Use the following vocabulary: divide, separate, combine, multiply, etc. &lt;br&gt;• Compare related expressions (e.g., 6 ÷ 3 = 2 is related to 2 × 3 = 6).</td>
<td></td>
</tr>
</tbody>
</table>

**MAFS.3.OA.3.7:** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

**Fluency Expectations or Examples of Culminating Standards:** Students fluently multiply and divide within 100. By the end of grade 3, they know all products of two one-digit numbers from memory. Multiplication and division are new in grade 3, and meeting the multiplication and division fluency standard 3.OA.3.7 with understanding is a major portion of students’ work in grade 3.

**Remarks/Examples:**

**Fluency Expectations or Examples of Culminating Standards:** Students fluently multiply and divide within 100. By the end of grade 3, they know all products of two one-digit numbers from memory. Multiplication and division are new in grade 3, and meeting the multiplication and division fluency standard 3.OA.3.7 with understanding is a major portion of students’ work in grade 3.

**Examples of Opportunities for In-Depth Focus:** Finding single-digit products and related quotients is a required fluency for grade 3. Reaching fluency will take much of the year for many students. These skills and the understandings that support them are crucial; students will rely on them for years to come as they learn to multiply and divide with multidigit whole numbers and to add, subtract, multiply, and divide with fractions. After multiplication and division situations have been established, reasoning about patterns in products (e.g., products involving factors of 5 or 9) can help students remember particular products and quotients. Practice — and if necessary, extra support — should continue all year for those who need it to attain fluency.

**Resources**

- **LAKESHORE:**
  [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)  
  (Daily Math Practice Journal pp. 8, 12, 14, 18; Discovery Can: Operations Cards 2, 7, 23-25; Pick A Problem Cards 15, 17, 18)
- **CPALMS:**
  [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44498](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44498)  
  (Fluency With Division)
- **ILLUSTRATIVE MATHEMATICS:**
  [https://www.illustrativemathematics.org/content-standards/3/OA/C/7/tasks/2064](https://www.illustrativemathematics.org/content-standards/3/OA/C/7/tasks/2064)  
  (Kiri's Multiplication Matching Game)
- **LEARNZILLION:**
  (Apply the relationship between the multiplication and division to multiply within 100)

<table>
<thead>
<tr>
<th>Related Access Points</th>
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<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.OA.3.AP.7a:</td>
<td>Fluently multiply and divide within 20.</td>
<td></td>
</tr>
</tbody>
</table>
**EUs**

*Fluency means: accurately, efficiency (using a reasonable number of steps and time) and flexibility (using a variety of strategies) Taken from: *Number Talks by Sherry Parrish*

<table>
<thead>
<tr>
<th>Concrete:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use arrays to show equal groups of manipulatives.</td>
</tr>
<tr>
<td>• Use repeated addition/skip counting to find the total number of objects within an array up to 20.</td>
</tr>
<tr>
<td>• Use manipulatives to divide a given number up to 20 equally into a number of groups or groups of an equal number.</td>
</tr>
</tbody>
</table>

![Twelve apples divided equally into three baskets.](image1)

There are four apples in each basket.

![Twelve apples with three apples in each basket.](image2)

There are four baskets.

<table>
<thead>
<tr>
<th>Representation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use pictures/drawings to represent arrays showing equal groups.</td>
</tr>
<tr>
<td>• Write an equation to express the total number of objects as a sum of equal addends (repeated addition).</td>
</tr>
<tr>
<td>• Use pictures/drawings to divide a given number up to 20 equally into a number of groups or groups of an equal number.</td>
</tr>
</tbody>
</table>

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.

MAFS.K12.MP.7.1: Look for and make use of structure.
### Topic 8: Investigating patterns in number and operations

**MAFS.3.OA.4.8**: Solve two-step word problems 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.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>AIMS: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/PicturingASolution.pdf">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/PicturingASolution.pdf</a> (Picturing a Solution)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAKESHORE: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Teacher Guide p. 7; How Did You Solve It? Card 17; Pick A Problem Cards 7, 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPAIMS: <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42732">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42732</a> (Multiplication and Division with Mass and Volume) <a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73238">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73238</a> (Getting the hang of two-step word problems)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Related Access Points

<table>
<thead>
<tr>
<th>EUs</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.OA.4.AP.8a:</strong> Solve and check one-step word problems using the four operations within 100.</td>
<td>Concrete: Match the vocabulary in a word problem to an action. Use manipulatives to model the context of the word problem. Count to find the answer. Representation: Create a pictorial representation of the word problem. Understand context clues to interpret the concepts, symbols, and vocabulary for addition, subtraction, multiplication, and division.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element Card 3rd: Click here</td>
<td></td>
</tr>
<tr>
<td>Equals lessons 11.D.6</td>
<td></td>
</tr>
</tbody>
</table>

**MAFS.3.OA.4.9**: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

<table>
<thead>
<tr>
<th>Resources</th>
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</thead>
<tbody>
<tr>
<td>LAKESHORE: <a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Teacher Guide p.8; Daily Math Practice Journa -pp. 10, 14, 16; Discovery Can: Algebraic Thinking Cards 1-4, 21-25; How Did You Solve It? Card 20)</td>
<td></td>
</tr>
<tr>
<td>CPAIMS: <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42699">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42699</a> (Adding Odd Numbers) <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42716">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42716</a> (Adding Odds and Evens)</td>
<td></td>
</tr>
<tr>
<td>Related Access Points</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>MAFS.3.OA.4.AP.9a:</td>
<td>Identify and describe the rule for a numerical pattern where numbers increase by 2, 5 or 10.</td>
</tr>
<tr>
<td><strong>EUs</strong></td>
<td><strong>Concrete:</strong> Given a model of a growing pattern of manipulatives, identify the rule for the pattern is an increase of 2, 5 or 10. <strong>Representation:</strong> - Select the representation of a numerical pattern that correctly uses the rule “add 2,” “add 5” or “add 10.” - Understand the following concepts and vocabulary: adding, growing pattern, increasing/increases.</td>
</tr>
<tr>
<td>MAFS.3.OA.4.AP.9b:</td>
<td>Select or name the three next terms in a numeral pattern where numbers increase by 2, 5, or 10.</td>
</tr>
<tr>
<td><strong>EUs</strong></td>
<td><strong>Concrete:</strong> Given the rule (add 2, 5 or 10) use manipulatives to show the next three terms in a numerical pattern. <strong>Representation:</strong> - Given the rule (add 2, 5 or 10) use visual representation to show the next three terms in a numerical pattern. - Understand the following concepts and vocabulary: adding, growing pattern, increasing/increases.</td>
</tr>
<tr>
<td>MAFS.3.OA.4.AP.9c:</td>
<td>Identify multiplication patterns in a real-world setting.</td>
</tr>
<tr>
<td><strong>EUs</strong></td>
<td><strong>Concrete:</strong> - Use manipulatives to demonstrate patterns in addition (e.g., add 3 rule) as it relates to real-world settings (e.g., distributing papers, snacks, etc. to groups). - Given a template, build an array to model a multiplication problem. (Create deliberate multiplicative pairs, e.g., 3 × 2 and 2 × 3 to demonstrate the pattern E.g., Use students to</td>
</tr>
</tbody>
</table>
create 3 groups of 2 students and 2 groups of 3 students. Explicitly share the pattern between the two expressions with students.)

**Representation:**
- Recognize patterns and use words to describe the patterns they see in a multiplication table.
- Understand the following concepts and vocabulary: growing pattern, multiplication, increasing/increases.

**Resources**

Element Card 3rd:  [Click here]

*MAFS.3.NBT.1.1: Use place value understanding to round whole numbers to the nearest 10 or 100.*

AIMS:  
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/AllAboardForRounding.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS 3/AllAboardForRounding.pdf) (All Aboard for Rounding)  

LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)  
(Teacher Guide pp. 8-9; Reproducibles pp. 3, 7; Daily Math Practice Journal pp. 22, 24, 26, 28, 29; Magnetic Place Value Blocks; How Did You Solve It? Cards 21-23; Pick A Problem Cards 26-30, 37, 40)  

CPALMS:  
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42721](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42721) (Mystery Number Rounding Problem)  
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42728](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42728) (Rounding to the Nearest Hundred)  
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42725](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42725) (Rounding to the Nearest Ten)  
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42729](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42729) (The Smallest and Largest Numbers Possible)  
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/28978](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/28978) (Rockin’ Round Number line lesson 1 & 2)  
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31029](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31029) (Rounding for Decades)  

ILLUSTRATIVE MATHEMATICS:  
- [https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/745](https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/745) (Rounding to 50 or 500)  
- [https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/1805](https://www.illustrativemathematics.org/content-standards/3/NBT/A/1/tasks/1805) (Rounding to the Nearest 10 and 100)  

LEARNZILLION:  
Videos:  
- [https://learnzillion.com/lesson_plans/6242](https://learnzillion.com/lesson_plans/6242) (Round to the nearest ten using a number line)  
- [https://learnzillion.com/lesson_plans/8570](https://learnzillion.com/lesson_plans/8570) (Round to the nearest hundred using a number line)

<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.NBT.1.AP.1a;</td>
<td>Use place value to round to the nearest 10 or 100.</td>
<td></td>
</tr>
</tbody>
</table>

**EUs**

**Concrete:**
- Identify ones, tens, and hundreds when given a number card.  
- Using a number line, locate a given number and then identify the closest 10 or 100.
- Identify if a number is in the middle of two numbers that we round up.

**Representation:**
- Match vocabulary of ones, tens, and hundreds to digits in a number.
- Understand the following concepts and vocabulary: round and nearest.

**Resources**
Element Card 3rd:

* **MAFS.3.NBT.1.3:** Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

**Resources**
LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
(Teacher Guide pp.10-11; Reproducibles p.3: Daily Math Practice Journal pp. 22, 23, 24, 25, 26, 27; How Did You Solve It? Cards 28-32; Magnetic Place Value Blocks)

CPALMS:
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46891](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46891) (Explaining Multiplication Using Multiples of Ten)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46889](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46889) (How Are These Two Problems Related?)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46892](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46892) (Multiplying by Multiples of Ten)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46893](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46893) (Packages of 50)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73705](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73705) (Fishing for multiples of 10)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73382](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73382) (Ten, Ten, and more ten)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73055](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73055) (Ten Ten we all win)

ILLUSTRATIVE MATHEMATICS:

LEARNZILLION:

**Related Access Points**

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
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</thead>
<tbody>
<tr>
<td><strong>MAFS.3.NBT.1.AP.3a:</strong> Multiply one-digit numbers by 10, 20, and 50.</td>
<td></td>
</tr>
</tbody>
</table>

**EUs**

**Concrete:**
- Use base 10 rods/manipulatives or bundles of 20 or 50 to create up to nine sets.
- Skip count the repeated sets.

**Representation:**
- Create a visual representation when given an expression (e.g., 3 × 10 is 3 groups of 10).

**Resources**
Element Card 3rd:

* **MAFS.3.MD.2.3:** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.
For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

<table>
<thead>
<tr>
<th>Resources</th>
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</thead>
<tbody>
<tr>
<td>LAKESHORE:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Daily Math Practice Journal pp. 47, 59, 61, 63; How Did You Solve It? Cards 59-60; Pick-A-Problem, cards 62, 63, 64, 65, 66, 68)</td>
<td></td>
</tr>
<tr>
<td>CPALMS:</td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44766">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44766</a> (Collecting Cans For Recycling)</td>
<td></td>
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<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44767">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44767</a> (Favorite Activity After School)</td>
<td></td>
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<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44772">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44772</a> (Flowers in the Garden)</td>
<td></td>
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<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44776">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44776</a> (Lunch Orders)</td>
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<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73289">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/73289</a> (Graphs your way)</td>
<td></td>
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<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceLesson/Preview/34337">http://www.cpalms.org/Public/PreviewResourceLesson/Preview/34337</a> (Paper Air Planes away)</td>
<td></td>
</tr>
<tr>
<td>ILLUSTRATIVE MATHEMATICS:</td>
<td><a href="https://www.illustrativemathematics.org/content-standards/3/MD/B/3/tasks/1315">https://www.illustrativemathematics.org/content-standards/3/MD/B/3/tasks/1315</a> (Classroom Supplies)</td>
<td></td>
</tr>
<tr>
<td>LEARNZILLION:</td>
<td><a href="https://learnzillion.com/lesson_plans/3789-7-use-graphs-with-scales-other-than-one-c?card=51660">https://learnzillion.com/lesson_plans/3789-7-use-graphs-with-scales-other-than-one-c?card=51660</a> (Use graphs with scales other than one)</td>
<td></td>
</tr>
<tr>
<td>Video:</td>
<td><a href="https://learnzillion.com/lesson_plans/4787-draw-bars-on-a-graph">https://learnzillion.com/lesson_plans/4787-draw-bars-on-a-graph</a> (Draw Bars on A Graph)</td>
<td></td>
</tr>
<tr>
<td>Related Access Points</td>
<td>Description</td>
<td>Date(s) Instruction</td>
</tr>
<tr>
<td>MAFS.3.MD.2.AP.3a:</td>
<td>Collect data and organize into a picture or bar graph.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td><strong>Concrete:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sort data set based on a single attribute (e.g., pencils vs. markers).</td>
<td></td>
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<tr>
<td></td>
<td>• Organize the data into a picture or bar graph using objects that represent one piece of data (may have number symbols).</td>
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<tr>
<td></td>
<td>• Compare data sets to identify more or less (e.g., this bar represents a set with more).</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Representation:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify a picture and bar graph.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use a key to identify the visual representations of data on the graph.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify a numerical representation of a data set (e.g., bar graph representing five pencils).</td>
<td></td>
</tr>
<tr>
<td>Resources</td>
<td>Curriculum Resource Guide: Data Analysis: Click here</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Element Card 3rd: Click here</td>
<td></td>
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<td></td>
<td>MASSI: Click here</td>
<td></td>
</tr>
<tr>
<td>MAFS.3.MD.2.AP.3b:</td>
<td>Select the appropriate statement that compares the data representations based on a given graph (picture, bar, line plots).</td>
<td>Date(s) Instruction</td>
</tr>
</tbody>
</table>
### EUs

**Concrete:**
- Use an object representing the data set to identify which category has more on a bar graph, picture graph, or line plot.
- Use an object representing the data set to identify which category has less on a bar graph, picture graph, or line plot.

**Representation:**
- Understand the vocabulary of more, less, least, most, same, equal, data set, bar graph, picture graph, and line plots.
- Identify visuals (i.e., pictures) used to represent data in a graph.

### Resources

Element Card 3<sup>rd</sup>: [Click here](#)
Curriculum Resource Guide Data Analysis: [Click here](#)
Curriculum Resource Guide Ratio and Proportions: [Click here](#)


---

**MAFS.K12_MP.1.1:** Make sense of problems and persevere in solving them.

**MAFS.K12_MP.7.1:** Look for and make use of structure.

**Topic 9: Developing strategies for multiplication**

*MAFS.3.OA.2.5:* Apply properties of operations as strategies to multiply and divide.

Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)

---

**MAFS.K12.3.OA.2.5:**

LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
(Teacher Guide p.5; Reproducibles p.3; How Did You Solve It? Cards 10-14; Pick a Problem Cards 7, 9, 10, 14, 23, 24, 25)

CPALMS:
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40347](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40347) (Break Apart Put Together)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40349](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40349) (Meeting the Reading Goal)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46899](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46899) (Using Arrays to Model the Distributive Property)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42714](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42714) (Decomposing into Equal Addends)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49439](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/49439) (Efficient Multiplication)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/26760](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/26760) (Amazing Arrays)

LEARNZILLION:
- ORIGIO ONE VIDEO: [https://www.youtube.com/watch?v=4GqSzhl-kGs&index=11&list=PLftMBEZKWoIRvcniGF9mQj1Pr_Kvoa4I](https://www.youtube.com/watch?v=4GqSzhl-kGs&index=11&list=PLftMBEZKWoIRvcniGF9mQj1Pr_Kvoa4I) (Division Property of Zero – Can I Divide By 0?)
### Related Access Points

**MAFS.3.OA.2.AP.5a:** Recognize multiplication as communicative and associative.

<table>
<thead>
<tr>
<th>Related Access Points</th>
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</thead>
<tbody>
<tr>
<td><strong>EUs</strong></td>
<td><strong>Concrete:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use manipulatives to show how related problems (e.g., $2 \times 3 = 3 \times 2$) result in the same product.</td>
<td></td>
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<tr>
<td></td>
<td>• Use manipulatives to show how grouping of factors will not change the end product when working with more than 2 factors (e.g., $(2\times3)\times4 = 2\times(3\times4)$).</td>
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</tr>
<tr>
<td></td>
<td><strong>Representation:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Compare related problems $(2 \times 3 = 3 \times 2)$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Compare related problems $(2\times3)\times4 = 2\times(3\times4))$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use the symbols: $\times, =, (,$ and related concepts.</td>
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</tr>
</tbody>
</table>

### Resources

**MAFS.3.MD.3.7:** Relate area to the operations of multiplication and addition.

- **a.** Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- **b.** Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- **c.** Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths $a$ and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
- **d.** Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

**Examples of Opportunities for In-Depth Focus:** Area is a major concept within measurement, and area models must function as a support for multiplicative reasoning in grade 3 and beyond.

#### AIMS:
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/GardensByDesign.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/GardensByDesign.pdf) (Gardens By Design)
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PlanningPlots.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PlanningPlots.pdf) (Planning Plots)
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PolarToyFactory.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PolarToyFactory.pdf) (Polar Toy Factory)

#### LAKESHORE:
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide pp. 20-21; Daily Math Practice Journal pp. 46, 48, 53, 56, 60, 63)

#### CPALMS:
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46896](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46896) (Area of a Butterfly Garden)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46898](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46898) (Cover Me)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46897](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46897) (Decompose Shapes to Find Area)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46899](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46899) (Using Arrays to Model the Distributive Property)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43566](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43566) (Dawn’s Vegetable Garden)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/32604](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/32604) (Area we need to know)

#### ILLUSTRATIVE MATHEMATICS:
### Related Access Points

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MAFS.3.MD.3.AP.7a: Use tiling and repeated addition to determine area.</td>
<td>Instruction</td>
</tr>
</tbody>
</table>

### EUs

**Concrete:**
- Count up to 20 objects (students are expected to multiply within 20, refer to MAFS.3.OA.3.AP.7a).
- Use square tiles to cover a rectangle.
- Count the number of tiles in each row and use repeated addition to determine the area of the rectangle.

**Representation:**
- Identify the number of unit squares used to find the area of a rectangular figure.
- Use repeated addition to find the area of a rectangle when given a picture or array.
- Understand the vocabulary and concepts of area, addition, repeated addition, +.

### Resources

- **Element Card 3rd:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/WhatIsTheOne.pdf) (What is the One?)
- **Content Module Perimeter, Area and Volume:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
- **Curriculum Resource Guide Measurement and Geometry:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/WhatIsTheOne.pdf)
- **UDL Unit Elementary Measurement:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/WhatIsTheOne.pdf)

### MAFS.K12.MP.3.1: Construct viable arguments and critique the reasoning of others.

**MAFS.K12.MP.7.1: Look for and make use of structure.**

### Topic 10: Understanding equivalent fractions

* **MAFS.3.NF.1.3:** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
  a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
  b. Recognize and generate simple equivalent fractions, e.g., \(1/2 = 2/4, \ 4/6 = 2/3\). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
  c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.*
  d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

### Resources

- **AIMS:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/WhatIsTheOne.pdf) (What is the One?)
- **LAKESHORE:** [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
(Teacher Guide pp. 14-17; Reproducibles p. 3; Daily Math Practice Journal pp. 30-45; Discovery Can: Fractions; Giant Magnetic Fraction; Circles and Bars; Fraction Circles Tub; How Did You Solve It? Cards 41-51; Pick A Problem Cards 44, 45, 46, 47, 48, 49, 50)

CPALMS:
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44757](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44757) (Equivalent Fractions)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44676](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44676) (Four Fourths)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44751](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44751) (How Many Fourths are in Two Wholes)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44678](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44678) (The Cake Problem)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44677](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44677) (Generating Equivalent Fractions)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/37667](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/37667) (Equivalent fraction dominoes)
- [http://www.cpalms.org/Public/PreviewResourceUrl/Preview/27368](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/27368) (Match my fractions)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/30075](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/30075) (The pizza exchange)
- [http://www.cpalms.org/Public/PreviewResourceLesson/Preview/29220](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/29220) (Twizzle the fractions)

ILLUSTRATIVE MATHEMATICS:

LEARNZILLION:
- [https://learnzillion.com/lesson_plans/4141-4-recognize-fractions-that-are-equivalent-to-whole-numbers-c?card=56720](https://learnzillion.com/lesson_plans/4141-4-recognize-fractions-that-are-equivalent-to-whole-numbers-c?card=56720) (Recognize fractions that are equivalent to whole numbers)

<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.NF.1.AP.3a:</td>
<td>Identify equivalent fractions on a number line divided into fourths and halves within 3 units.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>Concrete:</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>• Locate two given fractions (with the same denominator) on a number line(s) that is divided into halves or fourths.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>• Use the number line(s) to determine if the fractions are equal, greater than, or less than each other based on their location on the number line (e.g., 3/4 &gt; 1/4 because 3/4 is a greater distance from zero on the number line).</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>Representation:</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>• Apply understanding of the symbols of &lt;, &gt;, and = with fractions.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>• Understand the following concepts of comparison, greater than, less than, equal, unit fraction.</td>
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<tr>
<td>Resources</td>
<td>Element Card 3rd: <a href="#">Click here</a></td>
<td></td>
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</tbody>
</table>

**MAFS.K12.MP.4.1:** Model with mathematics.

**MAFS.K12.MP.6.1:** Attend to precision.

**Topic 11: Comparing Fractions**

*MAFS.3.NF.1.3:* Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

February 14 – 28
e. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
f. Recognize and generate simple equivalent fractions, e.g., \(1/2 = 2/4, 4/6 = 2/3\). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
g. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form \(3 = 3/1\); recognize that \(6/1 = 6\); locate \(4/4\) and \(1\) at the same point of a number line diagram.
h. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

**AIMS:**
[https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/WhatsTheOne.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS_3/WhatsTheOne.pdf) (What is the One?)

**LAKESHORE:**
[https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
(Teacher Guide pp.14-17; Reproducibles p.3: Daily Math Practice Journal pp. 30-45; Discovery Can: Fractions Giant; Magnetic Fraction; Circles and Bars; Fraction Circles Tub; How Did You Solve It? Cards 41-51; Pick A Problem Cards 44, 45, 46, 47, 48, 49, 50)

**CPALMS:**
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44757](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44757) (Equivalent Fractions)
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44676](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44676) (Four Fourths)
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44678](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44678) (How Many Fourths are in Two Wholes)
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44751](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44751) (The Cake Problem)
[http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31351](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/31351) (Comparing fractions with brownies)

**ILLUSTRATIVE MATHEMATICS:**
[https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/880](https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/880) (Comparing Fractions with a different Whole)
[https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1353](https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1353) (Comparing Fractions with the same Denominator)
[https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1354](https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1354) (Comparing Fractions with the same numerator)
[https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1356](https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1356) (Fraction Comparisons with pictures)

**LEARNZILLION:**

<table>
<thead>
<tr>
<th><strong>Related Access Points</strong></th>
<th><strong>Description</strong></th>
<th><strong>Date(s) Instruction</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.NF.1.AP.3a:</strong></td>
<td>Identify equivalent fractions on a number line divided into fourths and halves within 3 units.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>Concrete:</td>
<td></td>
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<td>-----</td>
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<tr>
<td>• Locate two given fractions (with the same denominator) on a number line(s) that is divided into halves or fourths.</td>
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<td></td>
</tr>
<tr>
<td>• Use the number line(s) to determine if the fractions are equal, greater than, or less than each other based on their location on the number line (e.g., ( \frac{3}{4} &gt; \frac{1}{4} ) because ( \frac{3}{4} ) is a greater distance from zero on the number line).</td>
<td></td>
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</tr>
</tbody>
</table>

| Representation: |
| • Apply understanding of the symbols of \(<\), \(>\), and \(=\) with fractions. |
| • Understand the following concepts of comparison, greater than, less than, equal, unit fraction. |

<table>
<thead>
<tr>
<th>Resources</th>
<th>Element Card 3rd: <a href="#">Click here</a></th>
</tr>
</thead>
</table>

**MAFS.K12.MP.3.1:** Construct viable arguments and critique the reasoning of others.

**MAFS.K12.MP.5.1:** Use appropriate tools strategically.

**MAFS.K12.MP.7.1:** Look for and make use of structure.
<table>
<thead>
<tr>
<th>Unit 4</th>
<th>March 1 – May 31</th>
</tr>
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<tbody>
<tr>
<td>Topic 12: Solving problems involving area</td>
<td>March 1 – 14</td>
</tr>
</tbody>
</table>

**MAFS.3.OA.1.4:** Determine the unknown whole number in a multiplication or division equation relating three whole numbers.

*For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = [] ÷ 3, 6 × 6 = ?.*

**Remarks/Examples:**

Examples of Opportunities for In-Depth Focus: Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.

**Resources**

<table>
<thead>
<tr>
<th>LAKESHORE:</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a></td>
</tr>
<tr>
<td>(Daily Math Practice Journal pp. 2, 4, 6, 10, 16, 20; Discovery Can: Algebraic Thinking Cards 6-10)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CPALEMS:</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44761">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44761</a> (Find the Unknown Number)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44760">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44760</a> (Missing Number In Division Equations)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44759">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44759</a> (Missing Numbers in Multiplication Equations)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40388">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40388</a> (Multiplication and Division Equations)</td>
</tr>
<tr>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40388">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40388</a> (Changing Multiplication Equations into Division Equations)</td>
</tr>
<tr>
<td><a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=AxVwSJt0tnxP4lst5Errdly03RBVSBu9QJccO1ENXzSpCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxtcy5vcmcvUHVibGijL1ByZXZpZXdSZXNvdXJjZUxic3Nvbi9QcmV2aWV3LzM5MzczNDUw">https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=AxVwSJt0tnxP4lst5Errdly03RBVSBu9QJccO1ENXzSpCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxtcy5vcmcvUHVibGijL1ByZXZpZXdSZXNvdXJjZUxic3Nvbi9QcmV2aWV3LzM5MzczNDUw</a> (Tasty Algebra using toasted O’s)</td>
</tr>
<tr>
<td><a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=L40K0VheWHA7MPUe0gK4vINJozij5MAIcK_y_0byC52pCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxtcy5vcmcvUHVibGijL1ByZXZpZXdSZXNvdXJjZUxic3Nvbi9QcmV2aWV3Lzc2NzDUw">https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=L40K0VheWHA7MPUe0gK4vINJozij5MAIcK_y_0byC52pCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxtcy5vcmcvUHVibGijL1ByZXZpZXdSZXNvdXJjZUxic3Nvbi9QcmV2aWV3Lzc2NzDUw</a> (Discovering the Mystery Factor)</td>
</tr>
</tbody>
</table>

**ILLUSTRATIVE MATHEMATICS:**

[https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1356](https://www.illustrativemathematics.org/content-standards/3/NF/A/3/tasks/1356) (Finding the unknown in a division equation)

**LEARNZILLION:**

Videos:

[https://learnzillion.com/lesson_plans/2999](https://learnzillion.com/lesson_plans/2999) (Use inverse operations to find unknowns in multiplication & division problems)

[https://learnzillion.com/lesson_plans/4175?card=57965](https://learnzillion.com/lesson_plans/4175?card=57965) (Practice using inverse operations to multiply within 100)

**Related Access Points**

<table>
<thead>
<tr>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.OA.1.AP.4a:</strong> Find the unknown number in a multiplication equation.</td>
<td></td>
</tr>
</tbody>
</table>

**EUs**

**Concrete:**

- Use manipulatives to solve for the unknown number in the equation.

**Representation:**

- Create a pictorial representation of the multiplication equation.
Understand the following concepts, symbols, and vocabulary for unknown symbols and operations (e.g., _, □, ?, etc.).

<table>
<thead>
<tr>
<th>Resources</th>
<th>Equals lessons 10.C.2</th>
</tr>
</thead>
</table>

**MAFS.3.OA.2.5: Apply properties of operations as strategies to multiply and divide.**

Examples: If \(6 \times 4 = 24\) is known, then \(4 \times 6 = 24\) is also known. (Commutative property of multiplication.) \(3 \times 5 \times 2\) can be found by \(3 \times 5 = 15\), then \(15 \times 2 = 30\), or by \(5 \times 2 = 10\), then \(3 \times 10 = 30\). (Associative property of multiplication.) Knowing that \(8 \times 5 = 40\) and \(8 \times 2 = 16\), one can find \(8 \times 7\) as \(8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56\). (Distributive property.)

| Resources | LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide p. 5; Reproducibles p. 3; How Did You Solve It? Cards 10-14; Pick A Problem Cards 7, 9, 10, 14, 23, 24, 25)  
CPALMS: [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40347](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40347) (Break Apart Put Together)  
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40349](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40349) (Meeting the Reading Goal)  
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40357](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40357) (Using the Associative Property of Multiplication)  
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42714](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42714) (Decomposing into Equal Addends)  
[http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40363](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40363) (Does it work for Division?)  
ILLUSTRATIVE MATHEMATICS: [https://www.illustrativemathematics.org/content-standards/3/OA/B/5/tasks/1821](https://www.illustrativemathematics.org/content-standards/3/OA/B/5/tasks/1821) (Valid Equalities (Part 2)) |

<table>
<thead>
<tr>
<th>Related Access Points</th>
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<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.OA.2.AP.5a;</td>
<td>Recognize multiplication as communicative and associative.</td>
<td></td>
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</tbody>
</table>

**EUs**

| Concrete: | Use manipulatives to show how related problems (e.g., \(2 \times 3 = 3 \times 2\)) result in the same product.  
Use manipulatives to show how grouping of factors will not change the end product when working with more than 2 factors {e.g., \((2\times3)\times4 = 2\times(3\times4)\)}. |
|------------|----------------------------------------------------------|

**Representation:**

- Compare related problems \((2 \times 3 = 3 \times 2)\).
- Compare related problems \{\((2\times3)\times4 = 2\times(3\times4)\}\).
- Use the symbols: \(\times, =, (,\) and related concepts.

**Resources**


**MAFS.3.MD.3.7:** Relate area to the operations of multiplication and addition.

- Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths $a$ and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.

d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Remarks/Examples:
Examples of Opportunities for In-Depth Focus: Area is a major concept within measurement, and area models must function as a support for multiplicative reasoning in grade 3 and beyond.

<table>
<thead>
<tr>
<th>Resources</th>
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</thead>
<tbody>
<tr>
<td>AIMS:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/GardensByDesign.pdf">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/GardensByDesign.pdf</a>  (Gardens By Design)</td>
</tr>
<tr>
<td></td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PlanningPlots.pdf">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PlanningPlots.pdf</a>     (Planning Plots)</td>
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<td></td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PolarToyFactory.pdf">https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PolarToyFactory.pdf</a>    (Polar Toy Factory)</td>
</tr>
<tr>
<td>LAKESHORE:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a></td>
</tr>
<tr>
<td></td>
<td>(Teacher Guide pp. 20-21; Daily Math Practice Journal pp. 46, 48, 52, 56-60, 63; Area Tiles, Discovery Can: Geometric Measurement; How Did You Solve It? Cards 66-69; Pick A Problem Cards 77, 78, 79, 80, 98)</td>
</tr>
<tr>
<td>CPALMS:</td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46896">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46896</a>     (Area of a Butterfly Garden)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46898">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46898</a>     (Cover Me)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46897">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46897</a>     (Decompose Shapes to Find Area)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46899">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46899</a>     (Using Arrays to Model the Distributive Property)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43576">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43576</a>     (Fenced Dog Run)</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43566">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43566</a>     (Dawn’s Vegetable Garden)</td>
</tr>
<tr>
<td></td>
<td><a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=-2Y9Xz6mU0hnBObleR2ocd9qgdjaV9h4VHlIZU5rYw2pCOmfMJJ3UCAFodHRwOi8vd3d3LmNvYXYwc6cy5vcmcvUHVibGljL1ByZXZpZXNdZXRwXjZUxlc3NvbT9QcmV2aWV3LzM0ODc4">https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=-2Y9Xz6mU0hnBObleR2ocd9qgdjaV9h4VHlIZU5rYw2pCOmfMJJ3UCAFodHRwOi8vd3d3LmNvYXYwc6cy5vcmcvUHVibGljL1ByZXZpZXNdZXRwXjZUxlc3NvbT9QcmV2aWV3LzM0ODc4</a>  (Area isn’t just for squares)</td>
</tr>
<tr>
<td></td>
<td><a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=UpCLbIgr0x2vcYl_WW_WbNe6EcjZRSk4AcPOOXL5bEOpCOfMJJ3UCAFodHRwOi8vd3d3LmNvYXYwc6cy5vcmcvUHVibGljL1ByZXZpZXNdZXRwXjZUxlc3NvbT9QcmV2aWV3LzMyNjA0">https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=UpCLbIgr0x2vcYl_WW_WbNe6EcjZRSk4AcPOOXL5bEOpCOfMJJ3UCAFodHRwOi8vd3d3LmNvYXYwc6cy5vcmcvUHVibGljL1ByZXZpZXNdZXRwXjZUxlc3NvbT9QcmV2aWV3LzMyNjA0</a>  (Area we need to know)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.MD.3.AP.7a:</td>
<td>Use tiling and repeated addition to determine area.</td>
<td></td>
</tr>
<tr>
<td>EUs</td>
<td>Concrete:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Count up to 20 objects (students are expected to multiply within 20, refer to MAFS.3.OA.3.AP.7a).</td>
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</tr>
<tr>
<td></td>
<td>• Use square tiles to cover a rectangle.</td>
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<tr>
<td></td>
<td>• Count the number of tiles in each row and use repeated addition to determine the area of the rectangle.</td>
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<tr>
<td></td>
<td>Representation:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Identify the number of unit squares used to find the area of a rectangular figure.</td>
<td></td>
</tr>
</tbody>
</table>
Use repeated addition to find the area of a rectangle when given a picture or array.
Understand the vocabulary and concepts of area, addition, repeated addition, +.

**MAFS.K12.MP.6.1:** Attend to precision.
**MAFS.K12.MP.8.1:** Look for and express regularity in repeated reasoning.

**MAFS.K12.MD.4.8:** Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

**MAFS.3.MD.4.AP.8a:** Use addition to find the perimeter of a rectangle.

<table>
<thead>
<tr>
<th>Related Access Points</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>MAFS.3.MD.4.AP.8a:</strong></td>
<td>Use addition to find the perimeter of a rectangle.</td>
<td>Instruction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources</th>
<th>Element Card 3rd: <a href="#">Click here</a> Content Module Perimeter, Area and Volume: <a href="#">Click here</a> Curriculum Resource Guide Measurement and Geometry: <a href="#">Click here</a> UDL Unit Elementary Measurement: <a href="#">Click here</a> Equals lessons 5.D.3, 11.E.2, 11.E.3</th>
</tr>
</thead>
</table>

**MAFS.K12.MP.2.1:** Reason abstractly and quantitatively.
**MAFS.K12.MP.6.1:** Attend to precision.
**MAFS.K12.MP.8.1:** Look for and express regularity in repeated reasoning.

**Topic 13:** Solving problems involving shapes

March 25 – April 5

**AIMS:**
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PerimeterAreaOfRectangles.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PerimeterAreaOfRectangles.pdf) (Perimeter Area of Rectangles Book)
- [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide p. 22; Reproducibles p. 12; Daily Math Practice Journal pp. 55, 60; Area Tiles, Discovery Can: Geometric Measurement Area & Perimeter Match Ups; How Did You Solve It? Cards 70, 71, 74; Pick A Problem Cards 71-75, 77, 78, 79, 80, 81, 82, 83)

**CPALMS:**
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46485](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46485) (Rectangles with the same perimeter)
- [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46483](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/46483) (Find all the Possible Rectangles)

**LEARNZILLION:**
- [https://learnzillion.com/lesson_plans/8917-use-a-chart-to-understand-how-rectangles-can-have-the-same-perimeter-with-different-areas](https://learnzillion.com/lesson_plans/8917-use-a-chart-to-understand-how-rectangles-can-have-the-same-perimeter-with-different-areas) (Using a Chart to Understand that rectangles can have the same perimeter with a different area)
- Recognize that perimeter can be determined by tiling the sides of a rectangle with square tiles with no gaps or overlaps.
- Count the number of tiles on each side.
- Add sides together to determine the perimeter.

**Representation:**
- Use addition to identify the perimeter of a figure.
- Understand the vocabulary and concepts of perimeter, sides, addition, +, gaps, and overlaps.

**Resources**
- Element Card 3rd: [Click here](#)
- Content Module Perimeter, Area and Volume: [Click here](#)
- Curriculum Resource Guide Measurement and Geometry: [Click here](#)
- UDL Unit Elementary Measurement: [Click here](#)
- Equals lessons 11.E.1

**MAFS.3.MD.4.AP.8b:** Draw different rectangles with the same area but different perimeters on graph paper.

**EUs**

**Concrete:**
- Use manipulatives to model rectangles.
- Use manipulatives to model rectangles with the same area, but different perimeters (e.g., area = 12: length = 6, width = 2 OR length = 3, width = 4).

**Representation:**
- Use visual representations of various figures and sizes.
- Understand that shapes could have the same area, but may look different (i.e., have a different length and width).
- Create shapes that have the same area, but have a different perimeter (i.e., length and width).
- Understand the following concepts and vocabulary: perimeter, area, sides, rectangle, factor, array, length, and width.

**Resources**
- Element Card 3rd: [Click here](#)
- Equals lessons 5.D.2, 11.E.3

*MAFS.3.G.1.1: Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.*

**Resources**
- AIMS: [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/DesigningWithTriangles.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/DesigningWithTriangles.pdf) (Designing With Triangles)
- LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx)
  (Teacher Guide pp. 23-24; Daily Math Practice Journal pp. 64-67, 69-71; Giant Magnetic Pattern Blocks; How Did You Solve It? Cards 75-80; Pick A Problem Cards 86, 87, 88, 89, 90, 91, 92, 93, 94, 95)
- CPALMS: [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40397](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40397) (Drawing Quadrilaterals)
<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFS.3.G.1.AP.1a:</td>
<td>Identify the attributes of quadrilaterals.</td>
<td></td>
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<tr>
<td></td>
<td>Concrete:</td>
<td></td>
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<tr>
<td></td>
<td>Use manipulatives to count the number of sides to determine if the shape is a quadrilateral.</td>
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<tr>
<td></td>
<td>Use manipulatives to count the number of vertices or angles to determine if the shape is a quadrilateral.</td>
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<tr>
<td></td>
<td>Representation:</td>
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<tr>
<td></td>
<td>Use a pictorial representation, count the number of sides to determine if the shape is a quadrilateral.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use a pictorial representation, count the number of vertices or angles to determine if the shape is a quadrilateral.</td>
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<tr>
<td></td>
<td>Understand the concepts and vocabulary of sides, quadrilateral, vertices, angles.</td>
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<tr>
<td>Resources</td>
<td>Element Card 3rd: <a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=JeuQi8PTEiIDx94tuWerAwMyjQwyp8TC3LmloALGxepCOFMJ3UCAFodHRwOi8vd3d3LmNwYWxtcy5vcmcvUHVibGljL1ByZXZpZXNvdXJjZUxic3Nvbi9QcmV2aWV3LzM3OTM5">Click here</a> (Pretzel Quadrilaterals)</td>
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<tr>
<td></td>
<td>Equals lessons 9.C.3</td>
<td></td>
</tr>
<tr>
<td>MAFS.3.G.1.AP.1b:</td>
<td>Identify different examples of quadrilaterals.</td>
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<tr>
<td></td>
<td>Concrete:</td>
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<tr>
<td></td>
<td>Sort shapes into quadrilaterals and non-quadrilaterals.</td>
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<tr>
<td></td>
<td>Representation:</td>
<td></td>
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<tr>
<td></td>
<td>Count the number of sides to identify different examples of quadrilaterals (e.g., square, rectangle, trapezoid, parallelogram, rhombus, etc.).</td>
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</tr>
<tr>
<td></td>
<td>Understand the concept of same and different.</td>
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<tr>
<td>Resources</td>
<td>Element Card 3rd: <a href="https://learnzillion.com/lesson_plans/5783-sort-quadrilaterals-by-their-attributes">Click here</a> (Sort Quadrilaterals by their Attributes)</td>
<td></td>
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<tr>
<td></td>
<td>Equals lessons 9.C.3</td>
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</tr>
<tr>
<td><strong>MAFS.K12.MP.1.1:</strong></td>
<td>Make sense of problems and persevere in solving them.</td>
<td></td>
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<tr>
<td><strong>MAFS.K12.MP.3.1:</strong></td>
<td>Construct viable arguments and critique the reasoning of others.</td>
<td></td>
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<tr>
<td><strong>MAFS.K12.MP.7.1:</strong></td>
<td>Look for and make use of structure.</td>
<td></td>
</tr>
<tr>
<td><strong>Topic 14:</strong></td>
<td>Using multiplication and division to solve measurement problems</td>
<td>April 8 – 19</td>
</tr>
</tbody>
</table>
### MAFS.3.OA.1.3: 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.

**Remarks/Examples:**

Examples of Opportunities for In-Depth Focus: Word problems involving equal groups, arrays, and measurement quantities can be used to build students’ understanding of and skill with multiplication and division, as well as to allow students to demonstrate their understanding of and skill with these operations.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAKESHORE:</td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a> (Teacher Guide pp. 3-5; Daily Math Practice Journal pp. 3, 5, 7, 9, 11, 13, 17, 19; Problem Solving Strategy Puzzles (purple); Discovery Can: Algebraic Thinking Cards 6-20; Discovery Can: Operations Cards 6, 11-22; How Did You Solve It? Cards 3, 6-7)</td>
</tr>
<tr>
<td>CPALMS:</td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43379">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/43379</a> (Finding the Number of Groups) <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40281">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/40281</a> (Finding the Group Size the Group Size) <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45214">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/45214</a> (Writing Multiplication Word Problem) <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309</a> (Writing a Problem With a Quotient) <a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299</a> (Books at the Book Fair)</td>
</tr>
</tbody>
</table>

### Related Access Points

**MAFS.3.OA.1.AP.3a:** Solve and check one- or two-step word problems requiring multiplication or division with the product or quotient up to 50.

**EU:**

- **Concrete:**
  - Match the vocabulary in a word problem to an action.
  - Use manipulatives to model the context of the word problem.
  - Count to find the answer.

- **Representation:**
  - Create a pictorial representation of the word problem.
- Use context clues to interpret the concepts, symbols, and vocabulary for addition, subtraction, multiplication, and division.

| Resources | Element Card 3rd: [Click here](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/KingsContainers.pdf) (The King's Containers)  
https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/WaterInApples.pdf (Water in Apples)  
https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx (Daily Math Practice Journal pp. 46, 48, 50, 52, 54, 56, 62; How Did You Solve It? Cards 56-58; Pick A Problem Cards 59, 60, 61, 67, 84)  
https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=C3U3cVF-aofXRPUFQfl1wP341JhjUewTSIRMrnKUCpCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxtcy5vcmcvUHVibGljL1ByZzZpZmZvZWNvbXJhY2U2MjAxNjM5MjA5Mzg4OTIvMC9oaXRpbWUuanBn (Is that Estimate Correct?)  
LAKESHORE:  
AIMS:  
https://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42730 (Estimating and Measuring Mass)  
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42731 (Estimating and Measuring Volume)  
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/42451 (Addition and Subtraction with Mass and Volume)  
https://learnzillion.com/lesson_plans/2132-1-using-multiplication-to-solve-word-problems-involving-measurement-l-g-kg-c (Using Multiplication to solve Measurement word problems)  
https://learnzillion.com/lesson_plans/2136-2-the-potato-family-using-multiplication-to-solve-word-problems-involving-measurement-l-g-kg-fp (The Potato Family)  
https://learnzillion.com/lesson_plans/2134-4-growing-math-skills-using-division-to-solve-word-problems-involving-measurement-l-g-kg-c (Using Division to solve Measurement word problems)  
https://learnzillion.com/lesson_plans/2137-5-the-lemonade-split-using-division-to-solve-word-problems-involving-measurement-l-g-kg-fp (Lemonade Split) |

### MAFS.3.MD.1.2:
Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units.

**Remarks/Examples:**
Examples of Opportunities for In-Depth Focus: Continuous measurement quantities such as liquid volume, mass, and so on are an important context for fraction arithmetic (cf. 4.NF.2.4c, 5.NF.2.7c, 5.NF.2.3). In grade 3, students begin to get a feel for continuous measurement quantities and solve whole-number problems involving such quantities.

### Resources

<table>
<thead>
<tr>
<th>Related Access Points</th>
<th>Description</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>MAFS.3.MD.1.AP.2a:</td>
<td>Select the appropriate tool for the measurement of liquid volume and mass.</td>
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<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| **EUs**          | **Concrete:**
|                  | - Identify that liquid volume and mass can be measured.
|                  | - Recognize which tools are used for measurement, such as measuring cup for liquid volume, scale for grams, etc.
|                  | **Representation:**
|                  | - Understand vocabulary for: grams (g), kilograms (kg), and liters (l).
|                  | - Match tools with units of measurement (i.e., a measuring cup/beaker measures volume and a scale measures weight). |
| **Resources**    | Element Card 3\(^{rd}\): [Click here](#)
|                  | Curriculum Resource Guide: Measurement and Geometry: [Click here](#)

<table>
<thead>
<tr>
<th>MAFS.3.MD.1.AP.2b:</th>
<th>Select appropriate units for measurement involving liquid volume and mass.</th>
</tr>
</thead>
</table>
| **EUs**          | **Concrete:**
|                  | - Recognize which tools are used for measurement, such as measuring cup for liquid volume, scale for grams, etc.
|                  | **Representation:**
|                  | - Understand vocabulary for: liters, grams, kilograms, volume, and mass.
|                  | - Match tools with units of measurement.
|                  | - Recognize the symbols associated with measurement (e.g., g = grams; kg = kilograms; l = liters). |
| **Resources**    | Element Card 3\(^{rd}\): [Click here](#)
|                  | Curriculum Resource Guide Measurement and Geometry: [Click here](#)

<table>
<thead>
<tr>
<th>MAFS.3.MD.1.AP.2c:</th>
<th>Add to solve one-step word problems involving liquid volume and mass.</th>
</tr>
</thead>
</table>
| **EUs**          | **Concrete:**
|                  | - Use manipulatives to model a one-step word problem involving addition.
|                  | **Representation:**
|                  | - Use visual representation to model a word problem.
|                  | - Understand the following addition concepts and vocabulary: altogether, plus, in all, etc.
|                  | - Use symbols from the word problem to label sums (e.g., $6\text{ g} + 6\text{ g} = 12\text{ g}$).
|                  | - Solve one-step word problems involving addition. |
| **Resources**    | Element Card 3\(^{rd}\): [Click here](#)
|                  | Curriculum Resource Guide Measurement and Geometry: [Click here](#) |

<table>
<thead>
<tr>
<th>MAFS.3.MD.1.AP.2d:</th>
<th>Estimate liquid volume and mass.</th>
</tr>
</thead>
</table>
| **EUs**          | **Concrete:**
|                  | - Use a cup with visual supports to estimate liquid volume (liters). |

**MAFS.3.MD.1.AP.2a:** Date(s) Instruction

**MAFS.3.MD.1.AP.2b:** Date(s) Instruction

**MAFS.3.MD.1.AP.2c:** Date(s) Instruction

**MAFS.3.MD.1.AP.2d:** Date(s) Instruction
- Use objects of varying mass to estimate grams and kilograms.

**Representation:**
- Understand the vocabulary of volume, liquid, liter, mass, gram, kilogram, more, less.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Element Card 3&lt;sup&gt;rd&lt;/sup&gt;: <a href="#">Click here</a></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Curriculum Resource Guide Measurement and Geometry: <a href="#">Click here</a></td>
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</tbody>
</table>

**MAFS.K12.MP.1.1:** Make sense of problems and persevere in solving them.
**MAFS.K12.MP.2.1:** Reason abstractly and quantitatively.
**MAFS.K12.MP.5.1:** Use appropriate tools strategically.

**Topic 15: Demonstrating computational fluency in problem solving**

**MAFS.3.OA.3.7:** 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.

Fluency Expectations or Examples of Culminating Standards: Students fluently multiply and divide within 100. By the end of grade 3, they know all products of two one-digit numbers from memory. Multiplication and division are new in grade 3, and meeting the multiplication and division fluency standard 3.OA.3.7 with understanding is a major portion of students' work in grade 3.

Examples of Opportunities for In-Depth Focus: Finding single-digit products and related quotients is a required fluency for grade 3. Reaching fluency will take much of the year for many students. These skills and the understandings that support them are crucial; students will rely on them for years to come as they learn to multiply and divide with multidigit whole numbers and to add, subtract, multiply, and divide with fractions. After multiplication and division situations have been established, reasoning about patterns in products (e.g., products involving factors of 5 or 9) can help students remember particular products and quotients. Practice — and if necessary, extra support — should continue all year for those who need it to attain fluency.

<table>
<thead>
<tr>
<th>Resources</th>
<th>LAKESHORE:</th>
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<tbody>
<tr>
<td></td>
<td><a href="https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx">https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx</a></td>
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<tr>
<td></td>
<td>(Daily Math Practice Journal pp. 8, 12, 14, 18; Discovery Can: Operations Cards 2, 7, 23-25; Pick A Problem Cards 15, 17, 18)</td>
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<td>CPALMS:</td>
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<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44498">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44498</a> (Fluency With Division)</td>
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<td></td>
<td><a href="http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44502">http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/44502</a> (Using Flexible Strategies)</td>
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<td><a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=--2Y9Xz6mUOhnBObleR2ocd9bvdjaV9h4VHlIZU5rYw2pCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxcty5vcmcvUHViGjJl1ByZXZpZXdsZXNvdxXjJUxlc3NvbijQcmV2aWV3LzM0ODc4">https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=--2Y9Xz6mUOhnBObleR2ocd9bvdjaV9h4VHlIZU5rYw2pCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxcty5vcmcvUHViGjJl1ByZXZpZXdsZXNvdxXjJUxlc3NvbijQcmV2aWV3LzM0ODc4</a> (Area isn’t just for squares)</td>
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<td><a href="https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=UpCLBbg0x2vcYlWW_WbNe6EcjZRSk4AcPOOXL5bEOpCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxcty5vcmcvUHViGjJl1ByZXZpZXdsZXNvdxXjJUxlc3NvbijQcmV2aWV3LzMvNyJQ">https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=UpCLBbg0x2vcYlWW_WbNe6EcjZRSk4AcPOOXL5bEOpCOfMJJ3UCAFodHRwOi8vd3d3LmNwYWxcty5vcmcvUHViGjJl1ByZXZpZXdsZXNvdxXjJUxlc3NvbijQcmV2aWV3LzMvNyJQ</a> (Area we need to know)</td>
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<td>ILLUSTRATIVE MATHEMATICS:</td>
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<td><a href="https://www.illustrativemathematics.org/content-standards/3/OA/C/7/tasks/2064">https://www.illustrativemathematics.org/content-standards/3/OA/C/7/tasks/2064</a> (Kiri’s Multiplication Matching Game)</td>
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<tr>
<td></td>
<td>LEARNZILLION:</td>
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<td></td>
<td><a href="https://learnzillion.com/lesson_plans/2084-4-understanding-the-relationship-between-multiplication-and-division-to-multiply-and-divide-within-100-C">https://learnzillion.com/lesson_plans/2084-4-understanding-the-relationship-between-multiplication-and-division-to-multiply-and-divide-within-100-C</a> (Multiplying and Dividing within 100)</td>
</tr>
<tr>
<td>Related Access Points</td>
<td>Description</td>
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<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td>MAFS.3.OA.3.AP.7a:</td>
<td>Fluently multiply and divide within 20.</td>
</tr>
</tbody>
</table>

**Concrete:**
- Use arrays to show equal groups of manipulatives.
- Use repeated addition/skip counting to find the total number of objects within an array up to 20.
- Use manipulatives to divide a given number up to 20 equally into a number of groups or groups of an equal number.

EUs
*Fluency means: accurately, efficiency (using a reasonable number of steps and time) and flexibility (using a variety of strategies)* Taken from: *Number Talks by Sherry Parrish*

**Representation:**
- Use pictures/drawings to represent arrays showing equal groups.
- Write an equation to express the total number of objects as a sum of equal addends (repeated addition).
- Use pictures/drawings to divide a given number up to 20 equally into a number of groups or groups of an equal number.

**Resources**

<table>
<thead>
<tr>
<th>MAFS.3.OA.3.AP.7b:</th>
<th>Fluently multiply 2, 5 or 10 within 100.</th>
<th>Date(s) Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concrete:</strong></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Use arrays to show equal groups of 2, 5, or 10 with manipulatives (up to a 10 by 10 array).</td>
<td></td>
</tr>
</tbody>
</table>

**EUs**

- Use arrays to show 2, 5, or 10 equal groups with manipulatives (up to a 10 by 10 array).
• Use repeated addition/skip counting to find the total number of objects within an array up to 100.

**Representation:**
- Use pictures/drawings to represent arrays (up to a 10 by 10) showing equal groups of 2, 5, or 10.
- Use pictures/drawings to represent arrays (up to a 10 by 10) showing 2, 5, or 10 equal groups.
- Write an equation to express the total number, up to 100 objects, as a sum of equal addends (repeated addition).

**Resources**
 Equals lessons 8.A.6, 11.B.2

**MAFS.3.OA.3.AP.7c:** Fluently divide by 2, 5, or 10 using dividends within 100 that are multiples of 2, 5, or 10.

**Concrete:**
- Use manipulatives to divide a given number up to 100 equally into 2, 5 or 10 groups or groups of 2, 5, or 10.

**EUs**

**Representation:**
- Use pictures/drawings to divide a given number up to 100 equally into 2, 5 or 10 groups or groups of 2, 5, or 10.

**Resources**

**MAFS.3.OA.4.8:** Solve two-step word problems 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.

**Resources**
 AIMS: [https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PicturingASolution.pdf](https://intranet.volusia.k12.fl.us/departments/elementarymath/AIMS%203/PicturingASolution.pdf) (Picture a Solution)
LAKESHORE: [https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx](https://intranet.volusia.k12.fl.us/departments/elementarymath/Pages/Third-Grade.aspx) (Teacher Guide p. 7; How Did You Solve It? Card 17; Pick A Problem Cards 7, 9)
CPALMS: [http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41307](http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41307) (Zoo Field Trip)
### Related Access Points

**MAFS.3.OA.4.AP.8a:** Solve and check one-step word problems using the four operations within 100.

**MAFS.3.NBT.1.2:** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

**Remarks/Examples:** Students fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. (Although 3.OA.3.7 and 3.NBT.1.2 are both fluency standards, these two standards do not represent equal investments of time in grade 3. Note that students in grade 2 were already adding and subtracting within 1000, just not fluently. That makes 3.NBT.1.2 a relatively small and incremental expectation. By contrast, multiplication and division are new in grade 3, and meeting the multiplication and division fluency standard 3.OA.3.7 with understanding is a major portion of students’ work in grade 3.)

### Instruction

**Concrete:**
- Match the vocabulary in a word problem to an action.
- Use manipulatives to model the context of the word problem.
- Count to find the answer.

**Representation:**
- Create a pictorial representation of the word problem.
- Understand context clues to interpret the concepts, symbols, and vocabulary for addition, subtraction, multiplication, and division.

### Resources

**Element Card 3**: [Click here](#)

Equals lessons 11.6

**CPALMS:**

http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41309 (Bake Sale)
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41299 (Books at the Book Fair)
http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/41429 (Party Beverages)

https://webmail.volusia.k12.fl.us/owa/redir.aspx?REF=Sn4cQ-VFPdjXdzzPzjkSYx8LrFajJ9JmwmWPsK9Ed2pCOfMJ3UCAFodHRwOi8vd3d3LmNwYXVtcy5vcmcvUHVibGljL1ByZXZpZXNvdXJjZUxlc3Nvbj9QcmV2aWV3LzczMjM4 (Getting the hang of two-step word problems)

**LEARNZILLION:**

Adding and Subtracting Using Properties
(Adding Within 1000)
(Subtraction Within 1000)
(Wanda’s Method)
(Decoding Decomposing)

LEARNZILLION:

Related Access Points | Description | Date(s)
---|---|---
MAFS.3.NBT.1.AP.2a: | Use the relationships between addition and subtraction to solve problems. | Instruction
EUs | Concrete:
• Using manipulatives join (addition) and separate (subtraction) sets to show the inverse relationship between addition and subtraction.

Representation:
• Understand the following concepts, symbols, and vocabulary for: add, subtract, sum, difference, total.
• Compare related equations (e.g., 2 + 3 = 5 and 5 − 3 = 2)

MAFS.3.NBT.1.AP.2b: | Solve multi-step addition and subtraction problems up to 100. | Instruction
EUs | Concrete:
• Use base ten blocks to create sets of objects within 100.
• Use base ten blocks or other manipulatives to solve one-step addition and subtraction problems.

Representation:
• Understand the following concepts, symbols, and vocabulary for: +, -, =.
• Create a visual representation to solve one-step addition and subtraction problems.

Resources | Equals lessons 8.A.8, 8.A.9, 8.B.6, 8.B.7
MAFS.K12.MP.2.1: | Reason abstractly and quantitatively.
MAFS.K12.MP.8.1: | Look for and express regularity in repeated reasoning.

MAFS.K12.MP.1.1: Make sense of problems and persevere in solving them.
Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

**MAFS.K12.MP.2.1:**
Reason abstractly and quantitatively.
Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute the \(m\); and knowing and flexibly using different properties of operations and objects.

**MAFS.K12.MP.3.1:**
Construct viable arguments and critique the reasoning of others.
Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

**MAFS.K12.MP.4.1:**
Model with mathematics.
Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.
**MAFS.K12.MP.5.1:**

Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

**MAFS.K12.MP.6.1:**

Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

**MAFS.K12.MP.7.1:**

Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see $7 \times 8$ equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as $2 \times 7$ and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers $x$ and $y$.

**MAFS.K12.MP.8.1:**

Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through $(1, 2)$ with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.