Correlated to the
Archdiocese of Philadelphia
Mathematics Standards for Grade 2
Contents

Category: Operations and Algebraic Thinking

Standard M.2.A Represent and solve problems involving addition and subtraction.

M.2.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem .......................................................... 11


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Category: Operations and Algebraic Thinking

**Standard M.2.A**

Represent and solve problems involving addition and subtraction.
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Essential Questions**

**What should I be able to answer?**

**What guides my thinking?**

- Where and how do I use math and numbers in the real world?

- What are different ways to count?

* See each Chapter Opener (Literature Connection, Math Connection, Books to Read), also the introduction and problem solving exercises for many lessons.

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**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

Lesson 4: Count On to Add—pp. 9–10
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Differentiated Instruction: Gifted and Talented: Skip Counting and Multiplication—TE p. 547F
Intervention Suggestions: 1. Skip count forward by 2s and 5s; 4. Count back by 4s. 5. Count by 3s—TE p. 547K
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Essential Questions**

*What should I be able to answer?*

*What guides my thinking?*

- How can I use manipulatives and drawings to help me solve a problem?

* See model/draw to show addition—pp. 11–12, 15–16, 155, 159, 163–164, 203–204, 381, 383, 387, 389–390, 391, 397, 401, 403


* See Math Centers: Manipulative Activity in the TE at the beginning of each chapter. See the TE Lesson Planner box for recommended materials/manipulatives to be used during the lesson presentation.

* To access online resources, go to—

www.progressinmathematics.com

Grade 2

**TEACHER CENTER** (login required)

1 PLANNING
   - LESSON PLANNING
     - Blackline Masters

2 PRACTICE
   - VIRTUAL MANIPULATIVES
     - Manipulatives

**STUDENT CENTER / FAMILY CENTER** (no login required)

VIRTUAL MANIPULATIVES

- Manipulatives
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Essential Questions**

*What should I be able to answer?*

*What guides my thinking?*

- How can making a list or table help me solve a problem?

* See problem solving strategies: Make an Organized List—pp. 68, 76, 369–70, 371, 388, 430, 534; Make a Table—pp. 229–30, 231, 304, 333, 371
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

- “Problem of the Day” – During Morning Meeting/Circle Time or as a warm-up to the daily Math lesson, the class can solve one of the four types of addition/subtraction problems.
- “Learning Centers” – Teacher observation of children playing addition and subtraction games involving word problems in Learning Centers.
- “Role Play” – Students can act out an addition or subtraction word problem.

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Check Your Progress: Lessons 1–5—on-line
- Check Your Progress: Lessons 6–10—on-line
- Check Your Progress: Lessons 11–15—on-line
- Check Your Progress: Lessons 16–21—on-line

**CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS**

- Check Your Progress: Lessons 1–6B—on-line
- Check Your Progress: Lessons 7–9A—on-line
- Check Your Progress: Lessons 10–13—on-line

**CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS**

- Check Your Progress: Lessons 1–6—on-line
- Check Your Progress: Lessons 7–11—on-line
- Check Your Progress: Lessons 12–17—on-line

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—
www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core
Check Your Progress with Analyses

— CONTINUED ON NEXT PAGE —
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

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**FORMATIVE**

- “Problem of the Day” – During Morning Meeting/Circle Time or as a warm-up to the daily Math lesson, the class can solve one of the four types of addition/subtraction problems.

- “Learning Centers” – Teacher observation of children playing addition and subtraction games involving word problems in Learning Centers.

- “Role Play” – Students can act out an addition or subtraction word problem.

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* See Math Centers (Manipulative Activity, Game/Content Area Activity, and Calendar Project)—TE pp. 1H, 63H, 113H, 153H, 193H, 245H, 289H, 347H, 381H, 443H, 489H, 547H
Category: Operations and Algebraic Thinking

**Standard M.2.A**  Represent and solve problems involving addition and subtraction.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**SUMMATIVE**

- Math Journals – Students can solve a weekly word problem in their Math Journals. In these journals, students should be able to show their work as well as explain how they solved the problem.

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Chapter 1 Test—on-line
- Performance Assessment—p. 55

**CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS**

- Chapter 4 Test—on-line
- Performance Assessment—p. 189

**CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS**

- Chapter 5 Test—on-line
- Performance Assessment—p. 237

* To access online summative assessment, go to—

  www.progressinmathematics.com

  Grade 2 > Teacher Center (login required) > Common Core

  Chapter Tests (with Item Analysis)

  * See “Problem Solving” on the chapter test.

  Post Tests (with Item Analysis)
Represent and solve problems involving addition and subtraction.

Skills

What skills do I need to have in order to answer the essential questions?

M.2.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

CHAPTER 1 ADDITION AND SUBTRACTION FACTS

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Lesson 2: Problem Solving: Read and Write in Math: Find Extra Information—pp. 5–6
Lesson 3: Related Addition Facts—pp. 7–8
Lesson 4: Count On to Add—pp. 9–10
Lesson 5: Extend Facts to 20—pp. 11–12
Lesson 6: Make 10 to Add—pp. 15–16
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Lesson 9: Three Addends—pp. 21–22
Lesson 10: Four Addends—pp. 23–24
Lesson 11A: Add or Subtract to Compare—on-line
Lesson 12 Count Back to Subtract—pp. 29–30
Lesson 14 Relate Addition and Subtraction—pp. 33–34
Lesson 15 Use Addition to Check—pp. 35–36
Lesson 16: Count Up to Subtract—pp. 39–40
Lesson 16B: Writing a Number Sentence—on-line
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Lesson 21: Problem Solving Applications: Mixed Strategies—pp. 49–50

CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS

Lesson 1: Add Ones and Tens—pp. 155–156

– CONTINUED ON NEXT PAGE –
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Skills**

What skills do I need to have in order to answer the essential questions?

M.2.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

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Lesson 6: Regroup Ones as Tens—pp. 165–166
Lesson 6A: Mental Math: Add Two-Digit Numbers—on-line
Lesson 6B: Mental Math: Use Comparisons—on-line
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Lesson 10: Add: Choose the Method—pp. 177–178
Lesson 11: Addition Practice—pp. 179–180

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Lesson 2: Mental Math Subtraction—pp. 197–198
Lesson 6: Regroup Tens as Ones—pp. 205–206
Lesson 6A: Mental Math: Subtract Two-Digit Numbers—on-line
Lesson 8: Rewrite Two–Digit Subtraction—pp. 211–212
Lesson 9: Add to Check—pp. 213–214
Lesson 10: Subtraction Practice—pp. 215–216

-- CONTINUED ON NEXT PAGE --
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.A.1** Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

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**Sadlier Progress in Mathematics Grade 2**

**Chapter 11 Measurement**

Lesson 18A: Solve Two-Step Problems—on-line

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Archdiocese of Philadelphia
Category: Operations and Algebraic Thinking

**Standard M.2.A**
Represent and solve problems involving addition and subtraction.

**Content**

What content do I need to know in order to answer the essential questions?

- Math Vocabulary: add, addend, addition sentence, count back, count on/up, difference, doubles fact, doubles + 1, doubles -, equals, fact family, join, minus, missing addend, number sentence, order, part + part = whole, plus, related addition facts, related subtraction facts, subtract, subtraction sentence, sum, take away, ten-frame, & whole – part = part.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —
  www.progressinmathematics.com
  Grade 2

**TEACHER CENTER** (login required)
- PLANNING
  - MATH ALIVE AT HOME
    - Take-Home Activities (Vocabulary)
- PRACTICE
  - Vocabulary Activities
- RESOURCES
  - AUDIO GLOSSARY (English and Spanish)

**Student Center/Family Center** (no login required)
- PRACTICE
  - Vocabulary Activities
- AUDIO GLOSSARY (English and Spanish)
- MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

### Content

**What content do I need to know in order to answer the essential questions?**

- **Math Concepts:** M.1.A Represent and solve problems involving addition and subtraction & M.1.B. Understand and apply properties of operations and the relationship between addition and subtraction.

- Students should be exposed to the 4 main types of addition and subtraction situations:
  - **Take-from example:** David had 63 stickers. He gave 37 to Susan. How many stickers does David have now? $63 - 37 = \square$
  
  - **Add to example:** David had $37. His grandpa gave him some money for his birthday. Now he has $63. How much money did David’s grandpa give him? $37 + \square = 63$
  
  - **Compare example:** David has 63 stickers. Susan has 37 stickers. How many more stickers does David have than Susan? $63 - 37 = \square$
    
    Even though the modeling of the two problems above is different, the equation, $63 - 37 = \square$, can represent both situations (How many more do I need to make 63?)
  
  - **Take-from (Start Unknown) example:** David had some stickers. He gave 37 to Susan. Now he has 26 stickers. How many stickers did David have before? $\square - 37 = 26$

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**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- **Lesson 1:** Addition Concepts—pp. 3–4
- **Lesson 3:** Related Addition Facts—pp. 7–8
- **Lesson 4:** Count On to Add—pp. 9–10
- **Lesson 11:** Subtraction Concepts—pp. 27–28
- **Lesson 11A:** Add or Subtract to Compare—on-line
- **Lesson 12:** Count Back to Subtract—pp. 29–30
- **Lesson 14:** Relate Addition and Subtraction—pp. 33–34
- **Lesson 14A:** Think Addition to Subtract—on-line
- **Lesson 15:** Use Addition to Check—pp. 35–36
- **Lesson 16:** Count Up to Subtract—pp. 39–40
- **Lesson 16B:** Writing a Number Sentence—on-line
- **Lesson 17:** Fact Families—pp. 41–42
- **Lesson 18:** Missing Addends—pp. 43–44
- **Lesson 20:** Problem Solving Strategy: Choose the Operation—pp. 47–48
- **Lesson 21:** Problem Solving Applications: Mixed Strategies—pp. 49–50

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Archdiocese of Philadelphia

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Represent and solve problems involving addition and subtraction.

Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

• Students can create their own word problems about topics in ELA, Religion, Science, & Social Studies.

* See Write Your Own (problem formulation)—pp. 24, 48, 102, 138, 182, 216, 230, 278, 370, 428, 478, 532, 588
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

### Tools for Learning

*Which tools will I use that will assist me in my learning?*

- Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, stickers, ten-frame.
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndAl.aspx): Please see the recommended websites from the Technology Committee.
- Textbook

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*To access online resources, go to—
www.progressinmathematics.com*

**Grade 2**

**TEACHER CENTER** (login required)

1 **PLANNING**
   - LESSON PLANNING
     - Scope and Sequence
     - Road Maps
     - Priority Lessons Table of Contents
     - Pacing Guides
     - Blackline Masters
   - PROFESSIONAL DEVELOPMENT
     - Chapter Support
     - Research Base
     - Math Study
   - MATH ALIVE AT HOME
     - Take-Home Activities
   - MANAGEMENT SYSTEM
     - Chapter Records
2 **PRACTICE**
   - PRACTICE
     - Skills Update
     - Math Minutes
     - Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Tools for Learning**
Which tools will I use that will assist me in my learning?

- Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, stickers, ten-frame.
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndAl.aspx): Please see the recommended websites from the Technology Committee.
- Textbook

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Sadlier Progress in Mathematics Grade 2

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Category: Operations and Algebraic Thinking

**Standard M.2.A** Represent and solve problems involving addition and subtraction.

**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, stickers, ten-frame.
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndAl.aspx): Please see the recommended websites from the Technology Committee.
- Textbook

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**Sadlier Progress in Mathematics Grade 2**

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5 RESOURCES

**AUDIO GLOSSARY**

- From A to Z (English)
- De la A a la Z (Spanish)

**ADDITIONAL TEACHER RESOURCES**

- Authors
- National Mathematics Advisory Board

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**STUDENT CENTER / FAMILY CENTER** (no login required)

**PRACTICE**

- Skills Update
- Math Minutes
- Problem of the Day
- Practice Activities
- Vocabulary Activities

**ALTERNATIVE TEACHING MODELS**

- Tutorials (animated math lessons)

**VIRTUAL MANIPULATIVES**

- Manipulatives

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Archdiocese of Philadelphia

Sadlier *Progress in Mathematics* Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Operations and Algebraic Thinking

Standard M.2.A Represent and solve problems involving addition and subtraction.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, stickers, ten-frame.
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndAl.aspx): Please see the recommended websites from the Technology Committee.
- Textbook

Archdiocese of Philadelphia
Category: Operations and Algebraic Thinking

Standard M.2.B
Add and subtract within 20.
Category: Operations and Algebraic Thinking

**Standard M.2.B** Add and subtract within 20.

**Essential Questions**
*What should I be able to answer?*
*What guides my thinking?*

- What are different ways to count?

**Chapter 1 Addition and Subtraction Facts**
- Lesson 4: Count On to Add—pp. 9–10
- Lesson 12 Count Back to Subtract—pp. 29–30

**Chapter 2 Place Value to 100**
- Lesson 14: Count by 3s and 4s—pp. 95–96

**Chapter 8 Place Value to 1000**
- Lesson 4A: Skip Count to 1000—on-line
- Lesson 5: Counting Patterns with 3-Digit Numbers—pp. 357–358

**Chapter 9 Addition and Subtraction: Three-Digit Numbers**
- Lesson 2: Count On 1, 10, and 100—pp. 385–386
- Lesson 12: Count Back 1, 10, and 100—pp. 409–410

**Chapter 12 Multiplication and Division**
- Differentiated Instruction: Gifted and Talented: Skip Counting and Multiplication—TE p. 547F
- Intervention Suggestions: 1. Skip count forward by 2s and 5s; 4. Count back by 4s. 5. Count by 3s—TE p. 547K

Sadlier *Progress in Mathematics* Grade 2

Archdiocese of Philadelphia

Sadlier *Progress in Mathematics* Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Operations and Algebraic Thinking


Essential Questions
What should I be able to answer?
What guides my thinking?

- How can I use the words before, after, and between to describe number order?

  CHAPTER 2 PLACE VALUE TO 100
  Intervention Suggestions: 3-4. Identify the number that comes just before, between, or just after a given number—TE p. 63K
  Lesson 9: Order Using a Number Line—pp. 83–84
  Lesson 16: Ordinals to 31st—pp. 99–100

- How can I use what I know about addition to help me subtract?

  CHAPTER 1 ADDITION AND SUBTRACTION FACTS
  Lesson 1: Addition Concepts—pp. 3–4
  Lesson 3: Related Addition Facts—pp. 7–8
  Lesson 11: Subtraction Concepts—pp. 27–28
  Lesson 11A: Add or Subtract to Compare—on-line
  Lesson 12 Count Back to Subtract—pp. 29–30
  Lesson 14 Relate Addition and Subtraction—pp. 33–34
Category: Operations and Algebraic Thinking

**Standard M.2.B**
Add and subtract within 20.

**Assessment**
*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**
- “Around the World” – Using flash cards
- “Calendar Time” – During Circle Time or Morning Meeting
- “Case of the Missing Pennies” – Each pair of student must be given a cup and 20 pennies or counters. Students must lay the pennies or counters out so all can be seen. One student
- Clip the Sum” – Make game boards with the numbers 0 – 9 in a random order.

<table>
<thead>
<tr>
<th>3</th>
<th>7</th>
<th>0</th>
<th>2</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>9</td>
</tr>
</tbody>
</table>

- Have students work in groups of 3 or 4. Each student must choose a goal sum between 2 – 18. When it is the player’s turn, 2 paper clips or counters are tossed onto the board. Whatever the numbers the paper clips or counters land on, the student must create a number sentence. For example, 7 + 9 = 16. Whoever’s goal sum in the group is closest to 16 gets a point. The game continues until a player reaches 3. Then, a new goal sum is chosen.

*See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.*

*To access online formative assessment, go to—
www.progressinmathematics.com

**Grade 2 > Teacher Center** (login required) > **Common Core**
Check Your Progress with Analyses
Add and subtract within 20.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**SUMMATIVE**

- Math Journals – Students should be given various problems involving sum and difference to 20 to solve in their Math Journals.

- Timed Fact Practice – Since this standard emphasize fluency, students should constantly be attempting to better their time with flash cards for addition/subtraction or using computer software/games. In the beginning, students can use manipulatives to show problems but by the end of 2nd Grade, students should know their facts to 20 without the use of manipulatives.

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Chapter 1 Test—on-line
- Performance Assessment—p. 55

* To access online summative assessment, go to—
  [www.progressinmathematics.com](http://www.progressinmathematics.com)

  * Grade 2 > Teacher Center (login required) > Common Core
    - Chapter Tests (with Item Analysis)
    * See “Problem Solving” on the chapter test.
    - Post Tests (with Item Analysis)
Category: Operations and Algebraic Thinking

**Standard M.2.B** Add and subtract within 20.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.B.1** Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

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**SKILLS UPDATE—REVIEW OF GRADE 1 SKILLS**

- Addition Facts to 10—p. A
- Subtraction Facts to 10—p. B

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Lesson 1: Addition Concepts—pp. 3–4
- Lesson 2: Problem Solving: Read and Write in Math: Find Extra Information—pp. 5–6
- Lesson 3: Related Addition Facts—pp. 7–8
- Lesson 4: Count On to Add—pp. 9–10
- Lesson 5: Extend Facts to 20—pp. 11–12
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- Lesson 8: Doubles + 1, Doubles –1—pp. 19–20
- Lesson 9: Three Addends—pp. 21–22
- Lesson 10: Four Addends—pp. 23–24
- Lesson 12 Count Back to Subtract—pp. 29–30
- Lesson 14 Relate Addition and Subtraction—pp. 33–34
  - Lesson 14A: Think Addition to Subtract—on-line
- Lesson 15 Use Addition to Check—pp. 35–36
- Lesson 16: Count Up to Subtract—pp. 39–40
  - Lesson 16A: Make 10 to Subtract—on-line
- Lesson 17: Fact Families—pp. 41–42
- Lesson 18: Missing Addends—pp. 43–44
- Lesson 19: Fact Patterns—pp. 45–46
Category: Operations and Algebraic Thinking


Content
What content do I need to know in order to answer the essential questions?

- Math Vocabulary: add, addend, addition sentence, count back, count on/up, difference, doubles fact, doubles + 1, doubles -, equals, fact family, join, minus, missing addend, number sentence, order, part + part = whole, plus, related addition facts, related subtraction facts, subtract, subtraction sentence, sum, take away, ten-frame, & whole – part = part.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources — www.progressinmathematics.com

Sadlier Progress in Mathematics Grade 2

Grade 2

TEACHER CENTER (login required)

PLANNING
MATH ALIVE AT HOME
Take-Home Activities (Vocabulary)

PRACTICE
Vocabulary Activities

RESOURCES
AUDIO GLOSSARY (English and Spanish)

Student Center/Family Center (no login required)

PRACTICE
Vocabulary Activities
AUDIO GLOSSARY (English and Spanish)
MATH ALIVE AT HOME
Take-Home Activities (Vocabulary)
Category: Operations and Algebraic Thinking

**Standard M.2.B** Add and subtract within 20.

**Content**

*What content do I need to know in order to answer the essential questions?*


**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Lesson 1: Addition Concepts—pp. 3–4
- Lesson 3: Related Addition Facts—pp. 7–8
- Lesson 4: Count On to Add—pp. 9–10
- Lesson 11: Subtraction Concepts—pp. 27–28
- **Lesson 11A: Add or Subtract to Compare—on-line**
- Lesson 12 Count Back to Subtract—pp. 29–30
- Lesson 14 Relate Addition and Subtraction—pp. 33–34
- **Lesson 14A: Think Addition to Subtract—on-line**
- Lesson 15 Use Addition to Check—pp. 35–36
- Lesson 16: Count Up to Subtract—pp. 39–40
- **Lesson 16B: Writing a Number Sentence—on-line**
- Lesson 17: Fact Families—pp. 41–42
- Lesson 18: Missing Addends—pp. 43–44
Category: Operations and Algebraic Thinking


Integration of Learning

What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

• ELA: Students should use magazines or newspapers to find examples of basic addition and subtraction facts and how they are used in real life.

• Religion: Students can use the words before and after to describe the order of the parts of the Mass.

• Science: Use the words before and after to describe the position of the planets in the solar system.

CHAPTER 2 PLACE VALUE TO 100

Intervention Suggestions: 3-4. Identify the number that comes just before, between, or just after a given number—TE p. 63K

Lesson 9: Order Using a Number Line—pp. 83–84
Category: Operations and Algebraic Thinking

**Standard M.2.B** Add and subtract within 20.

**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Children’s Literature: Annie’s One to Ten by Annie Owen; Cats Add Up! by Diane Ochiltree; The Philharmonic Gets Dressed by Karla Kuskin; Pondlarker by Fred Gwynne; & 12 Ways to Get to 11 by Eve Mirriam.

- First in Math Website (http://www.firstinmath.com): Skill Sets, More or Less, First in Tens, Ten Wheels, Grand Slam Addition & Subtraction, First to 20, K2 3 to 9, K2 More or Less, K2 Skip Game.

- Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, ten-frame.

- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndMathFacts.aspx); Please see the recommended websites from the Technology Committee.

- Textbook

* To access online resources, go to—

www.progressinmathematics.com

Grade 2

**TEACHER CENTER** (login required)

1 PLANNING

- LESSON PLANNING
  - Scope and Sequence
  - Road Maps
  - Priority Lessons Table of Contents
  - Pacing Guides
  - Blackline Masters

PROFESSIONAL DEVELOPMENT

- Chapter Support
- Research Base
- Math Study
- MATH ALIVE AT HOME
  - Take-Home Activities
- MANAGEMENT SYSTEM
  - Chapter Records

2 PRACTICE

- PRACTICE
  - Skills Update
  - Math Minutes
  - Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Operations and Algebraic Thinking


Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: Annie’s One to Ten by Annie Owen; Cats Add Up! by Diane Ochiltree; The Philharmonic Gets Dressed by Karla Kuskin; Pondlarker by Fred Gwynne; & 12 Ways to Get to 11 by Eve Mirriam.

- First in Math Website (http://www.firstinmath.com): Skill Sets, More or Less, First in Tens, Ten Wheels, Grand Slam Addition & Subtraction, First to 20, K2 3 to 9, K2 More or Less, K2 Skip Game.

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- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndMathFacts.aspx); Please see the recommended websites from the Technology Committee.

- Textbook

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Practice Activities
Vocabulary Activities
VIRTUAL MANIPULATIVES
Manipulatives
ENRICHMENT
Flash Activities
ALTERNATIVE TEACHING MODELS
Tutorials
3 ASSESSMENT
ASSESSMENT
Benchmark Tests
Check Your Progress
Lessons for Priority Lessons Assessments
4 COMMON CORE
PLANNING & PACING
Correlations
Chapter Pacing Guides
Teacher Lesson Plans
INSTRUCTION
Student Lessons
ASSESSMENT
Check Your Progress with Analyses

--- CONTINUED ON NEXT PAGE ---
Category: Operations and Algebraic Thinking


Tools for Learning
Which tools will I use that will assist me in my learning?

• Children’s Literature: Annie’s One to Ten by Annie Owen; Cats Add Up! by Diane Ochiltree; The Philharmonic Gets Dressed by Karla Kuskin; Pondlarker by Fred Gwynne; & 12 Ways to Get to 11 by Eve Mirriam.
• First in Math Website (http://www.firstinmath.com): Skill Sets, More or Less, First in Tens, Ten Wheels, Grand Slam Addition & Subtraction, First to 20, K2 3 to 9, K2 More or Less, K2 Skip Game.
• Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, ten-frame.
• Technology: Ed-U-Smart (http://ed-u-smart.com/2ndMathFacts.aspx); Please see the recommended websites from the Technology Committee.
• Textbook

— CONTINUED FROM PREVIOUS PAGE —

Sadlier Progress in Mathematics Grade 2

Chapter Tests with Analyses
Cumulative Reviews with Analyses
Post Test with Analyses

5 RESOURCES
AUDIO GLOSSARY
From A to Z (English)
De la A a la Z (Spanish)

ADDITIONAL TEACHER RESOURCES
Authors
National Mathematics Advisory Board

STUDENT CENTER / FAMILY CENTER (no login required)
PRACTICE
Skills Update
Math Minutes
Problem of the Day
Practice Activities
Vocabulary Activities

ALTERNATIVE TEACHING MODELS
Tutorials (animated math lessons)

VIRTUAL MANIPULATIVES
Manipulatives

— CONTINUED ON NEXT PAGE —
Category: Operations and Algebraic Thinking


Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: Annie’s One to Ten by Annie Owen; Cats Add Up! by Diane Ochiltree; The Philharmonic Gets Dressed by Karla Kuskin; Pondlarker by Fred Gwynne; & 12 Ways to Get to 11 by Eve Mirriam.

- First in Math Website (http://www.firstinmath.com): Skill Sets, More or Less, First in Tens, Ten Wheels, Grand Slam Addition & Subtraction, First to 20, K2 3 to 9, K2 More or Less, K2 Skip Game.

- Manipulatives: connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, ten-frame.

- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndMathFacts.aspx); Please see the recommended websites from the Technology Committee.

- Textbook

Archdiocese of Philadelphia
Category: Operations and Algebraic Thinking

Standard M.2.C
Work with equal groups of objects to gain foundations for multiplication.
Category: Operations and Algebraic Thinking

Standard M.2.C  Work with equal groups of objects to gain foundations for multiplication.

Essential Questions
What should I be able to answer?
What guides my thinking?

- How can I tell if a number is even or odd?

CHAPTER 2 PLACE VALUE TO 100
Lesson 12A: Model Even and Odd—on-line
Lesson 13: Even and Odd Numbers—pp. 93–94
Lesson 17: Problem Solving Strategy: Use Logical Reasoning (even)—pp. 101–102
Lesson 18: Problem Solving Applications: Mixed Strategies (odd)—pp. 104

CHAPTER 3 DATA AND GRAPHS: USING OPERATIONS
Lesson 9: Line Plots: Do You Remember?—p. 134
Lesson 10: Venn Diagrams: Number Sort (even numbers)—p. 136

CHAPTER 12 MULTIPLICATION AND DIVISION
Intervention Suggestions: 6. Identify even and odd numbers—TE p. 547K

- How can I tell if a number is even or odd?

CHAPTER 12 MULTIPLICATION AND DIVISION
Lesson 1: Multiplication as Repeated Addition—pp. 549–550

- Where can I use multiplication in the real world?

CHAPTER 12 MULTIPLICATION AND DIVISION
Chapter Opener—TE pp. 547–548
* See also lesson introduction and problem solving exercises—pp. 550–551, 553, 555–560, 562, 587–590
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

- **“Even or Odd”** – Give each student 15 connecting cubes. Have the students make a train with 8 cubes. Then, disconnect the 8 cube train into groups of two. Students should recognize that four equal groups of two are made. Repeat the activity for 9, 12, & 15. Emphasize that some trains will have left over cubes. On a hundreds chart, students should color even numbers one color and odd numbers another color. This visual representation will show students that even numbers end in 0, 2, 4, 6, & 8 while odd numbers end in 1, 3, 5, 7, & 9. In their Math Journals, students should write about things that come in pairs – gloves, mittens, shoes, socks, twins, etc. Teach the students a song to remember even and odd numbers.

- **“Amazing Arrays”** – Allow students to create arrays using Dot Art/BINGO stamps and stickers. Students can create these arrays on large chart paper. Emphasize the necessity of keeping the Dot Art/BINGO stamps and stickers in neat rows and columns. Once the arrays are created students can write multiplication sentences. Students can also switch arrays to solve problems. Students can also use Geoboards to form rectangular arrays.

**CHAPTER 2 PLACE VALUE TO 100**

*Lesson 12A: Model Even and Odd—on-line*

*Check Your Progress: Lessons 8–12A—on-line*

*See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.*

*To access online formative assessment, go to—*

[www.progressinmathematics.com](http://www.progressinmathematics.com)

**Grade 2 > Teacher Center (login required) > Common Core**

*Check Your Progress with Analyses*
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

### Assessment

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

#### SUMMATIVE

- “Scrumptious Snack” – For snack, give students a baggie of cereal, crackers, fruit snacks, popcorn, pretzels, raisins, etc. First, have students count how many pieces of food they have. They should determine if they have an even or odd amount. Then, have the children make an array to match a flashcard. Challenge students to see how many arrays they can build in 10 minutes. When finished, they can share their arrays with another class so they can explain their mathematical reasoning. Of course, they can eat their arrays when finished!

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**Chapter 2 Place Value to 100**

- Chapter 1 Test—on-line
- Performance Assessment—p. 109

**Chapter 12 Multiplication and Division**

- Chapter 12 Test—on-line
- Performance Assessment—p. 595

* To access online summative assessment, go to—
  www.progressinmathematics.com

  **Grade 2 > Teacher Center** (login required) > **Common Core**
  - Chapter Tests (with Item Analysis)
  - * See “Problem Solving” on the chapter test.
  - Post Tests (with Item Analysis)
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

- **M.2.C.1** Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

**CHAPTER 2 Place Value to 100**

- Lesson 12A: Model Even and Odd—on-line
- Lesson 13: Even and Odd Numbers—pp. 93–94
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

**Skills**

What skills do I need to have in order to answer the essential questions?

**M.2.C.2** Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

**Chapter 12 Multiplication and Division**

Lesson 1: Multiplication as Repeated Addition—pp. 549–550
Lesson 1A: Use an Array Model—on-line
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Vocabulary: array, column, equal groups, even, factor, hundreds chart; model, multiplication sign, multiply, odd, pair, product, repeated addition, & row.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher's Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —

www.progressinmathematics.com

Grade 2

**TEACHER CENTER** (login required)

**PLANNING**

- MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)

**PRACTICE**

- Vocabulary Activities

**RESOURCES**

- AUDIO GLOSSARY (English and Spanish)

**Student Center/Family Center** (no login required)

**PRACTICE**

- Vocabulary Activities

- AUDIO GLOSSARY (English and Spanish)

- MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

**Content**

*What content do I need to know in order to answer the essential questions?

- **Math Concepts: Knowledge of Addition.**

- **Knowledge of Shapes/Attributes.**

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**
- Lesson 1: Addition Concepts—pp. 3–4
- Lesson 3: Related Addition Facts—pp. 7–8
- Lesson 4: Count On to Add—pp. 9–10
- **Lesson 11A: Add or Subtract to Compare—on-line**
- Lesson 14 Relate Addition and Subtraction—pp. 33–34
- **Lesson 14A: Think Addition to Subtract—on-line**
- Lesson 15 Use Addition to Check—pp. 35–36
- **Lesson 16B: Writing a Number Sentence—on-line**
- Lesson 17: Fact Families—pp. 41–42
- Lesson 18: Missing Addends—pp. 43–44

**CHAPTER 6 GEOMETRY**
- Lesson 3: Explore Plane Figures—pp. 251–252
- **Lesson 4A: Identify and Draw Plane Figures—on-line**
- **Lesson 4B: Attributes of Plane Figures—on-line**
Category: Operations and Algebraic Thinking

Standard M.2.C Work with equal groups of objects to gain foundations for multiplication.

Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

- Art/ELA: Allow students the opportunity to create a classroom floor plan for desks/furniture. Once the designs are completed, students should present their ideas to the class and attempt to persuade their classmates why their design works best in the classroom. Students could vote for their favorite arrangement which would be used in the classroom for a set period of time.

- Religion:

- Science: Use pictures of mammals, reptiles, insects, or spiders when making arrays.

- Social Studies: Students could use their knowledge of arrays to create a community.

CHAPTER 12 MULTIPLICATION AND DIVISION
Lesson 1A: Use an Array Model—on-line
Lesson 6: Multiply Groups of 5 (array)—pp. 559–560

Archdiocese of Philadelphia
Category: Operations and Algebraic Thinking

**Standard M.2.C** Work with equal groups of objects to gain foundations for multiplication.

**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Children’s Literature: Amanda Bean’s Amazing Dream by Cindy Neuschwander; Bats on Parade by Kathi Appelt; Bunches and Bunches of Bunnies by Louise Matthews; Corkscrew Counts: A Story about Multiplication by Donna Jo Napoli & Richard Tchen; The Doorbell Rang by Pat Hutchins; Emma’s Christmas by Irene Trivas; Even Steven, Odd Todd by Kathryn Cristaldi; Hershey’s Milk Chocolate Multiplication Book By Jerry Pallotta & Rob Bolster; Two of Everything by Lily Toy Hong; 2 X 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy

- First in Math Website (http://www.firstinmath.com): Just the Facts: Multiply; Whole Numbers: Multiply Gym

- Manipulatives: connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers

- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee.

- Textbook

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* To access online resources, go to—
  www.progressinmathematics.com

**Grade 2**

**TEACHER CENTER** (login required)

1 PLANNING

LESSON PLANNING
- Scope and Sequence
- Road Maps
- Priority Lessons Table of Contents
- Pacing Guides
- Blackline Masters

PROFESSIONAL DEVELOPMENT
- Chapter Support
- Research Base
- Math Study

MATH ALIVE AT HOME
- Take-Home Activities

MANAGEMENT SYSTEM
- Chapter Records

2 PRACTICE

PRACTICE
- Skills Update
- Math Minutes
- Problem of the Day

--- CONTINUED ON NEXT PAGE ---
Category: Operations and Algebraic Thinking

Standard M.2.C  Work with equal groups of objects to gain foundations for multiplication.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: Amanda Bean’s Amazing Dream by Cindy Neuschwander; Bats on Parade by Kathi Appelt; Bunches and Bunches of Bunnies by Louise Matthews; Corkscrew Counts: A Story about Multiplication by Donna Jo Napoli & Richard Tchen; The Doorbell Rang by Pat Hutchins; Emma’s Christmas by Irene Trivas; Even Steven, Odd Todd by Kathryn Cristaldi; Hershey’s Milk Chocolate Multiplication Book By Jerry Pallotta & Rob Bolster; Two of Everything by Lily Toy Hong; 2 X 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy
- First in Math Website (http://www.firstinmath.com): Just the Facts: Multiply; Whole Numbers: Multiply Gym
- Manipulatives: connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee.
- Textbook

Archdiocese of Philadelphia
Category: Operations and Algebraic Thinking

**Standard M.2.C**  Work with equal groups of objects to gain foundations for multiplication.

### Tools for Learning

**Which tools will I use that will assist me in my learning?**

- **Children’s Literature:** Amanda Bean’s Amazing Dream by Cindy Neuschwander; Bats on Parade by Kathi Appelt; Bunches and Bunches of Bunnies by Louise Matthews; Corkscrew Counts: A Story about Multiplication by Donna Jo Napoli & Richard Tchen; The Doorbell Rang by Pat Hutchins; Emma’s Christmas by Irene Trivas; Even Steven, Odd Todd by Kathryn Cristaldi; Hershey’s Milk Chocolate Multiplication Book by Jerry Pallotta & Rob Bolster; Two of Everything by Lily Toy Hong; 2 X 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy
- **First in Math Website** (http://www.firstinmath.com): Just the Facts: Multiply; Whole Numbers: Multiply Gym
- **Manipulatives:** connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers
- **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee.
- **Textbook**

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**Archdiocese of Philadelphia**

Sadlier *Progress in Mathematics* Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2

45
Category: Operations and Algebraic Thinking

**Standard M.2.C**  
Work with equal groups of objects to gain foundations for multiplication.

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**Tools for Learning**  
*Which tools will I use that will assist me in my learning?*

- Children’s Literature: Amanda Bean’s Amazing Dream by Cindy Neuschwander; Bats on Parade by Kathi Appelt; Bunches and Bunches of Bunnies by Louise Matthews; Corkscrew Counts: A Story about Multiplication by Donna Jo Napoli & Richard Tchen; The Doorbell Rang by Pat Hutchins; Emma’s Christmas by Irene Trivas; Even Steven, Odd Todd by Kathryn Cristaldi; Hershey’s Milk Chocolate Multiplication Book By Jerry Pallotta & Rob Bolster; Two of Everything by Lily Toy Hong; 2 X 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy

- First in Math Website (http://www.firstinmath.com): Just the Facts: Multiply; Whole Numbers: Multiply Gym

- Manipulatives: connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers

- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee.

- Textbook
Category: Number and Operations in Base Ten

Standard M.2.D
Understand place value.
Category: Number and Operations in Base Ten

Standard M.2.D Understand place value.

Essential Questions
What should I be able to answer?
What guides my thinking?

- Why is zero so important to our number system?

- How can I tell if a number is even or odd?

Chapter 1 Addition and Subtraction Facts
Lesson 1: Addition Concepts (zero in facts)—pp. 3–4
Lesson 3: Related Addition Facts (zero in facts)—pp. 7–8
Lesson 7: Doubles Facts (zero in facts)—p. 18
Lesson 8: Doubles + 1, Doubles –1 (zero in facts)—p. 20

Chapter 12 Multiplication and Division
Differentiated Instruction: Inclusion: Zero as a Factor—TE p. 547F

Chapter 2 Place Value to 100
Lesson 12A: Model Even and Odd—on-line
Lesson 13: Even and Odd Numbers—pp. 93–94
Lesson 17: Problem Solving Strategy: Use Logical Reasoning (even)—pp. 101–102
Lesson 18: Problem Solving Applications: Mixed Strategies (odd)—pp. 104

Chapter 3 Data and Graphs: Using Operations
Lesson 9: Line Plots: Do You Remember?—p. 134
Lesson 10: Venn Diagrams: Number Sort (even numbers)—p. 136

Chapter 12 Multiplication and Division
Intervention Suggestions: 6. Identify even and odd numbers—TE p. 547K
Understand place value.

Essential Questions
What should I be able to answer?
What guides my thinking?

- How does place value help me understand numbers?
  - **CHAPTER 2 PLACE VALUE TO 100**
    - Lesson 1: Tens and Ones—pp. 65–66

- How can estimating help me work with large numbers?
  - **CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS**
    - Lesson 7: Estimate Sums—pp. 169–170
  - **CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS**
    - Lesson 7: Estimate Differences—pp. 209–210

- How can I recognize patterns in numbers?
  - **CHAPTER 1 ADDITION AND SUBTRACTION FACTS**
    - Lesson 19: Fact Patterns—pp. 45–46
  - **CHAPTER 2 PLACE VALUE TO 100**
    - Lesson 14: Count by 3s and 4s—pp. 95–96
    - Lesson 15: Counting Patterns—pp. 97–98
  - **CHAPTER 8 PLACE VALUE TO 1000**
    - Lesson 4A: Skip Count to 1000—on-line
    - Lesson 5: Counting Patterns with 3–Digit Numbers—pp. 357–358
Assessment
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

FORMATIVE

- “Base 10 Blocks” – Throughout this unit, students should have daily practice with Base 10 Blocks. Children should form numbers with the blocks and recognize opportunities to make exchanges.

- “Calendar Time” – During Circle Time or Morning Meeting, incorporate place value activities each day. For example, students can count the day using Base 10 Blocks. If the date is the 23rd, students should put 2 rods (groups of 10) and 3 units (1 each) into the Unit, Rod, & Flat cups. Each day this should be done which will lead to exchanges being made on certain days. Also, if the date is the 23rd, students can say that “Today’s date is March 23rd. The number 23 is greater than 20 but less than 30. 23 comes between 22 and 24. There are 2 tens and 3 ones in the number 23. 23 is an odd number. The expanded form for 23 is 20 + 3.”

- “Number Mania” – post a 2-digit or 3-digit number in your classroom each day. Vary the form in which you present the number (i.e. expanded form, visual picture of its place on a number line, number word, ordinal form, etc.) Throughout the day, allow children to give other versions of that number. Students can also discuss what number comes before and after as well as if the number is even or odd.

– CONTINUE ON NEXT PAGE –
Assessment
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

– CONTINUE FROM PREVIOUS PAGE –

• “Place Value Houses” – Give students the opportunity to create their own place value houses (i.e. each house is one period containing 3 spots – ones, tens, & hundreds). After students had ample exposure to Base 10 Blocks, the children should make numbers on their houses and practice saying numbers correctly without using the word “and”.
Category: Number and Operations in Base Ten

Standard M.2.D  Understand place value.

Assessment
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

SUMMATIVE

- “My Number” – students should select a meaningful 2-digit or 3-digit number in their life such as a house number, favorite number, sports team number, etc. Allow children the opportunity to create a poster or use Paint in Computer class to give different representations of the chosen number. Students should use vocabulary words from the unit such as place value, tens and ones, number words, expanded form, ordinals, etc.

CHAPTER 2 PLACE VALUE TO 100
Chapter 2 Test—on-line
Performance Assessment—p. 109

CHAPTER 8 PLACE VALUE TO 1000
Chapter 8 Test—on-line
Performance Assessment—p. 377

* To access online summative assessment, go to—
www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core
Chapter Tests (with Item Analysis)
* See “Problem Solving” on the chapter test.
Post Tests (with Item Analysis)
Category: Number and Operations in Base Ten

Standard M.2.D  Understand place value.

Skills
What skills do I need to have in order to answer the essential questions?

M.2.D.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

a. 100 can be thought of as a bundle of ten tens — called a “hundred.”

b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

Chapter 8 Place Value to 1000

Lesson 1: Hundreds—pp. 349–350
Lesson 1A: Make Hundreds—on-line
Lesson 2: Hundreds, Tens, and Ones—pp. 351–352
Lesson 3: Place Value of Three-Digit Numbers—pp. 353–354
Lesson 4: Expanded Form with Hundreds, Tens, and Ones—pp. 355–356
Understand place value.

Skills

What skills do I need to have in order to answer the essential questions?

**M.2.D.2** Count within 1000; skip-count by 5s, 10s, and 100s.

- **CHAPTER 2 PLACE VALUE TO 100**
  - Lesson 15: Counting Patterns—pp. 97–98

- **CHAPTER 8 PLACE VALUE TO 1000**
  - Lesson 4A: Skip Count to 1000—on-line
  - Lesson 5: Counting Patterns with 3–Digit Numbers—pp. 357–358

- **CHAPTER 9 ADDITION AND SUBTRACTION: THREE-DIGIT NUMBERS**
  - Lesson 2: Count On 1, 10, and 100—pp. 385–386
Category: Number and Operations in Base Ten

Standard M.2.D  Understand place value.

Skills
What skills do I need to have in order to answer the essential questions?

M.2.D.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

CHAPTER 2 PLACE VALUE TO 100
Lesson 3: Number Words Twenty to Forty–Nine—pp. 69–70
Lesson 4: Number Words Fifty to Ninety–Nine—pp. 71–72
Lesson 7: Expanded Form—pp. 77–78

CHAPTER 8 PLACE VALUE TO 1000
Lesson 1: Hundreds—pp. 349–350
Lesson 2: Hundreds, Tens, and Ones—pp. 351–352
Lesson 4: Expanded Form with Hundreds, Tens, and Ones—pp. 355–356
Category: Number and Operations in Base Ten

Standard M.2.D Understand place value.

Skills
What skills do I need to have in order to answer the essential questions?

M.2.D.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

CHAPTER 2 PLACE VALUE TO 100
Lesson 5A: Use Benchmark Numbers to Compare—on-line
Lesson 6: Compare Numbers to 1000—pp. 361–362
Lesson 7: Order to 1000—pp. 363–364
Understand place value.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Vocabulary: after, before, between, equal to, estimate, even numbers, expanded form, flat, greater than >, greatest, halfway, hundreds, least, less than <, number words, odd numbers, ones, ordinal numbers, rod, round, place value chart, standard form, tens, unit, 2-digit number, & 3 digit number.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —
  
  www.progressinmathematics.com

  Grade 2

  **TEACHER CENTER** (login required)
  
  PLANNING
  
  MATH ALIVE AT HOME
  
  Take-Home Activities (Vocabulary)

  PRACTICE
  
  Vocabulary Activities

  RESOURCES
  
  AUDIO GLOSSARY (English and Spanish)

  **Student Center/Family Center** (no login required)
  
  PRACTICE
  
  Vocabulary Activities

  AUDIO GLOSSARY (English and Spanish)

  MATH ALIVE AT HOME
  
  Take-Home Activities (Vocabulary)
Content
What content do I need to know in order to answer the essential questions?

- Math Concepts: M.1.C. Extend the counting sequence.
- M.1.D. Understand place value

**CHAPTER 2 PLACE VALUE TO 100**
Lesson 14: Count by 3s and 4s—pp. 95–96
Lesson 15: Counting Patterns—pp. 97–98

**CHAPTER 8 PLACE VALUE TO 1000**
Lesson 4A: Skip Count to 1000—on-line
Lesson 5: Counting Patterns with 3–Digit Numbers—pp. 357–358

**CHAPTER 2 PLACE VALUE TO 100**
Lesson 1–Lesson 18—pp. 65–104

**CHAPTER 8 PLACE VALUE TO 1000**
Lesson 1–Lesson 11—pp. 349–372
Standard M.2.D Understand place value.

Content
What content do I need to know in order to answer the essential questions?

• M.1.E. Use place value understanding and properties of operations to add and subtract.

CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS
- Lesson 1: Add Ones and Tens—pp. 155–156
- Lesson 3: Regroup Ones as Tens: Use Models—pp. 159–160
- Lesson 5: Regroup Ones as Tens: Model and Record—pp. 163–164
- Lesson 6: Regroup Ones as Tens—pp. 165–166

CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS
- Lesson 1: Subtract Tens and Ones—p. 195
- Lesson 4: Regroup Tens as Ones: Use Models—pp. 201–202
- Lesson 5: Regroup Tens as Ones: Model and Record—pp. 203–204
- Lesson 6: Regroup Tens as Ones—pp. 205–206
Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

- ELA: Since students will be comparing numbers in Math, incorporate compare/contrast writing at this time in ELA. For example, students could read the Frog and Toad books. Students could use a Venn Diagram to compare/contrast the characters Frog & Toad.

- Religion: In the unit on 7 Sacraments, discuss how 7 is an odd number and how Jesus had 12 Apostles which is an even number.
Category: Number and Operations in Base Ten

Standard M.2.D Understand place value.

Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

- Science: Continue the theme of compare/contrast when teaching students the differences between reflection and refraction of light.

- Social Studies: Using toothpicks and gumdrops/marshmallows, students can create 3-D geometric shapes in order to form a neighborhood or community. Students should label the house numbers in their community. Students should be able to explain how even number houses are on one side and odd number houses are on another side. This activity ties in with Standard M.2.J. Reason with Shapes and their Attributes. In addition, students could compare/contrast rural, suburban, and urban communities.

Chapter 2 Place Value to 100

Lesson 12A: Model Even and Odd—on-line
Lesson 13: Even and Odd Numbers—pp. 93–94

Chapter 6 Geometry

Lesson 1: Solid Figures—pp. 247–248
Lesson 2: Faces, Edges, Vertices—pp. 249–250
Lesson 3: Explore Plane Figures—pp. 251–252
Lesson 4: Plane Figures—pp. 253–254
Lesson 4A: Identify and Draw Plane Figures—on-line
Lesson 4B: Attributes of Plane Figures—on-line
Lesson 5: Sort Figures—pp. 255–256
Category: Number and Operations in Base Ten

**Standard M.2.D** Understand place value.

**Tools for Learning**
Which tools will I use that will assist me in my learning?

- Children’s Literature: Amanda Bean’s Amazing Dream by Cindy Neuschwander; Bats on Parade by Kathi Appelt; Bunches and Bunches of Bunnies by Louise Matthews; Corkscrew Counts: A Story about Multiplication by Donna Jo Napoli & Richard Tchen; The Doorbell Rang by Pat Hutchins; Emma’s Christmas by Irene Trivas; Even Steven, Odd Todd by Kathryn Cristaldi; Hershey’s Milk Chocolate Multiplication Book By Jerry Pallota & Rob Bolster; Two of Everything by Lily Toy Hong; 2 X 2 = Boo: A Set of Spooky Multiplication Stories by Loreen Leedy

- First in Math Website (http://www.firstinmath.com): Just the Facts: Multiply; Whole Numbers: Multiply Gym

- Manipulatives: connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers

- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee.

- Textbook

* To access online resources, go to—

www.progressinmathematics.com

Grade 2

**TEACHER CENTER** (login required)

1 PLANNING

- LESSON PLANNING
  - Scope and Sequence
  - Road Maps
  - Priority Lessons Table of Contents
  - Pacing Guides
  - Blackline Masters

PROFESSIONAL DEVELOPMENT

- Chapter Support
- Research Base
- Math Study

MATH ALIVE AT HOME

- Take-Home Activities

MANAGEMENT SYSTEM

- Chapter Records

2 PRACTICE

- PRACTICE
  - Skills Update
  - Math Minutes
  - Problem of the Day

— CONTINUED ON NEXT PAGE —
Tools for Learning
Which tools will I use that will assist me in my learning?

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- Textbook
Category: Number and Operations in Base Ten

Standard M.2.D
Understand place value.

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- Textbook

— CONTINUED FROM PREVIOUS PAGE —

Chapter Tests with Analyses
Cumulative Reviews with Analyses
Post Test with Analyses

5 RESOURCES

AUDIO GLOSSARY
From A to Z (English)
De la A a la Z (Spanish)

ADDITIONAL TEACHER RESOURCES
Authors
National Mathematics Advisory Board

STUDENT CENTER / FAMILY CENTER (no login required)

PRACTICE
Skills Update
Math Minutes
Problem of the Day
Practice Activities
Vocabulary Activities

ALTERNATIVE TEACHING MODELS
Tutorials (animated math lessons)

VIRTUAL MANIPULATIVES
Manipulatives

— CONTINUED ON NEXT PAGE —
Category: Number and Operations in Base Ten

**Standard M.2.D** Understand place value.

### Tools for Learning

*Which tools will I use that will assist me in my learning?*

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- **First in Math Website** (http://www.firstinmath.com): Just the Facts: Multiply; Whole Numbers: Multiply Gym

- **Manipulatives:** connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers

- **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee.

- **Textbook**
Standard M.2.E

Use place value understanding and properties of operations to add and subtract.
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Essential Questions**
* What should I be able to answer?*  
* What guides my thinking?*

- How does learning how to add/subtract large numbers help me in the real world?

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**CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS**  
Chapter Introduction—pp. 153–154

**CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS**  
Chapter Introduction—pp. 193–194

**CHAPTER 9 ADDITION AND SUBTRACTION: THREE-DIGIT NUMBERS**  
Chapter Introduction—pp. 381–382

Category: Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

Essential Questions

What should I be able to answer?
What guides my thinking?

- How does regrouping and understanding place value help me to add and subtract large numbers?

CHAPTER 2 PLACE VALUE TO 100

Lesson 1: Tens and Ones—pp. 65–66
Lesson 2: Place Value—pp. 67–68
Lesson 3: Number Words Twenty to Forty-Nine—pp. 69–70
Lesson 4: Number Words Fifty to Ninety-Nine—pp. 71–72
Lesson 6: Place Value of Two-Digit Numbers—pp. 75–76

CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS

Lesson 3: Regroup Ones as Tens: Use Models—pp. 159–160
Lesson 5: Regroup Ones as Tens: Model and Record—pp. 163–164
Lesson 6: Regroup Ones as Tens—pp. 165–166

CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS

Lesson 1: Subtract Tens and Ones—p. 195
Lesson 4: Regroup Tens as Ones: Use Models—pp. 201–202
Lesson 5: Regroup Tens as Ones: Model and Record—pp. 203–204
Lesson 6: Regroup Tens as Ones—pp. 205–206
Use place value understanding and properties of operations to add and subtract.

Assessment

What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

FORMATIVE

- “Base 10 Blocks” – Throughout this unit, students should have daily practice with Base 10 Blocks. Children should form numbers with the blocks and recognize opportunities to make exchanges.

- “Calendar Time” – During Circle Time or Morning Meeting, incorporate place value activities each day. For example, students can count the day using Base 10 Blocks. If the date is the 23rd, students should put 2 rods (groups of 10) and 3 units (1 each) into the Unit, Rod, & Flat cups. Each day this should be done which will lead to exchanges being made on certain days. Also, if the date is the 23rd, students can say that “Today’s date is March 23rd. The number 23 is greater than 20 but less than 30. 23 comes between 22 and 24. There are 2 tens and 3 ones in the number 23. 23 is an odd number. The expanded form for 23 is 20 + 3.”

- “Number Mania” – post a 2-digit or 3-digit number in your classroom each day. Vary the form in which you present the number (i.e. expanded form, visual picture of its place on a number line, number word, ordinal form, etc.) Throughout the day, allow children to give other versions of that number. Students can also discuss what number comes before and after as well as if the number is even or odd.

Chapter 4 Addition: Two-Digit Numbers

Check Your Progress: Lessons 1–6B—on-line
Check Your Progress: Lessons 7–9A—on-line
Check Your Progress: Lessons 10–13—on-line

Chapter 5 Subtraction: Two-Digit Numbers

Check Your Progress: Lessons 1–6A—on-line
Check Your Progress: Lessons 7–11—on-line
Check Your Progress: Lessons 12–17—on-line

Chapter 9 Addition and Subtraction: Three-Digit Numbers

Check Your Progress: Lessons 1–6A—on-line
Check Your Progress: Lessons 7–10—on-line
Check Your Progress: Lessons 11–16A—on-line
Check Your Progress: Lessons 17–21—on-line

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—
www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core
Check Your Progress with Analyses
**Category:** Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

– CONTINUE FROM PREVIOUS PAGE –

- “Place Value Houses” – Give students the opportunity to create their own place value houses (i.e. each house is one period containing 3 spots – ones, tens, & hundreds). After students had ample exposure to Base 10 Blocks, the children should make numbers on their houses and practice saying numbers correctly without using the word “and”.

Archdiocese of Philadelphia
Category: Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

Assessment

What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

SUMMATIVE

- “My Number” – students should select a meaningful 2-digit or 3-digit number in their life such as a house number, favorite number, sports team number, etc. Allow children the opportunity to create a poster or use Paint in Computer class to give different representations of the chosen number. Students should use vocabulary words from the unit such as place value, tens and ones, number words, expanded form, ordinals, etc.

CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS

Chapter 4 Test—on-line
Performance Assessment—p. 189

CHAPTER 5 SUBTRACTION: TWO-DIGIT NUMBERS

Chapter 5 Test—on-line
Performance Assessment—p. 237

CHAPTER 9 ADDITION AND SUBTRACTION: THREE-DIGIT NUMBERS

Chapter 9 Test—on-line
Performance Assessment—p. 435

* To access online summative assessment, go to—www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core
Chapter Tests (with Item Analysis)

* See “Problem Solving” on the chapter test.
Post Tests (with Item Analysis)
Category: Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

**Skills**

What skills do I need to have in order to answer the essential questions?

**M.2.E.1** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

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**Chapter 4 Addition: Two-Digit Numbers**

- Lesson 1: Add Ones and Tens—pp. 155–156
- Lesson 2: Mental Math Addition—pp. 157–158
- Lesson 3: Regroup Ones as Tens: Use Models—pp. 159–160
- Lesson 5: Regroup Ones as Tens: Model and Record—pp. 163–164
- Lesson 6: Regroup Ones as Tens—pp. 165–166
- **Lesson 6A**: Mental Math: Add Two-Digit Numbers—on-line
- **Lesson 6B**: Mental Math: Use Comparisons—on-line
- Lesson 7: Estimate Sums—pp. 169–170
- Lesson 8: Rewrite Two–Digit Addition—pp. 171–172
- Lesson 10: Add: Choose the Method—pp. 177–178
- Lesson 11: Addition Practice—pp. 179–180

**Chapter 5 Subtraction: Two-Digit Numbers**

- Lesson 1: Subtract Tens and Ones—p. 195
- Lesson 2: Mental Math Subtraction—pp. 197–198
- Lesson 3: Ways to Make Numbers—pp. 199–200
- Lesson 4: Regroup Tens as Ones: Use Models—pp. 201–202
- Lesson 5: Regroup Tens as Ones: Model and Record—pp. 203–204
- Lesson 6: Regroup Tens as Ones—pp. 205–206
- **Lesson 6A**: Mental Math: Subtract Two-Digit Numbers—on-line

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**Archdiocese of Philadelphia**

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Number and Operations in Base Ten

**Standard M.2.E**  Use place value understanding and properties of operations to add and subtract.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.E.1** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

— CONTINUED FROM PREVIOUS PAGE —

Lesson 7: Estimate Differences—pp. 209–210
Lesson 8: Rewrite Two–Digit Subtraction—pp. 211–212
Lesson 9: Add to Check—pp. 213–214
Lesson 10: Subtraction Practice—pp. 215–216
Lesson 11: Chain Operations—pp. 217–218
Lesson 13: Choose the Method—pp. 223–224
Lesson 14: Mixed Practice—pp. 225–226
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.E.2** Add up to four two-digit numbers using strategies based on place value and properties of operations.

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**CHAPTER 4 ADDITION: TWO-DIGIT NUMBERS**

- Lesson 9A: Four Addends—on-line
- Lesson 10: Add: Choose the Method—pp. 177–178
- Lesson 11: Addition Practice—pp. 179–180
Use place value understanding and properties of operations to add and subtract.

**Skills**

What skills do I need to have in order to answer the essential questions?

**M.2.E.3** Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

**CHAPTER 9 ADDITION AND SUBTRACTION: THREE-DIGIT NUMBERS**

- Lesson 1: Add Hundreds, Tens, and Ones—pp. 383–384
- Lesson 2: Count On 1, 10, and 100—pp. 385–386
- Lesson 3: Add: Regroup Ones as Tens—pp. 387–388
- Lesson 5: Add: Regroup Tens as Hundreds—pp. 391–392
- **Lesson 6A: Using Properties to Add**—on-line
- Lesson 11: Subtract Hundreds, Tens, and Ones—pp. 407–408
- Lesson 12: Count Back 1, 10, and 100—pp. 409–410
- Lesson 13: Subtract: Regroup Tens as Ones—pp. 411–412
- Lesson 14: Regroup Hundreds as Tens Using Models—pp. 413–414
- Lesson 15: Subtract: Regroup Hundreds as Tens—pp. 415–416
- Lesson 16: Subtract: Regroup Twice—pp. 417–418
- **Lesson 16A: Add to Check Subtraction**—on-line
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.E.4** Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

**Chapter 9 Addition and Subtraction: Three-Digit Numbers**

- Lesson 2: Count On 1, 10, and 100—pp. 385–386
- Lesson 5A: Draw Pictures to Add—on-line
- Lesson 12: Count Back 1, 10, and 100—pp. 409–410
- Lesson 14A: Draw Pictures to Subtract—on-line
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.E.5** Explain why addition and subtraction strategies work, using place value and the properties of operations. [Explanations may be supported by drawings or objects.]

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**Chapter 4 Addition: Two-Digit Numbers**

- Lesson 9A: Four Addends—on-line

**Chapter 9 Addition and Subtraction: Three-Digit Numbers**

- Lesson 1: Add Hundreds, Tens, and Ones—pp. 383–384
- Lesson 2: Count On 1, 10, and 100—pp. 385–386
- Lesson 3: Add: Regroup Ones as Tens—pp. 387–388
- Lesson 5: Add: Regroup Tens as Hundreds—pp. 391–392
- Lesson 6A: Using Properties to Add—on-line
- Lesson 11: Subtract Hundreds, Tens, and Ones—pp. 407–408
- Lesson 12: Count Back 1, 10, and 100—pp. 409–410
- Lesson 13: Subtract: Regroup Ones as Tens—pp. 411–412
- Lesson 14: Regroup Hundreds as Tens Using Models—pp. 413–414
- Lesson 15: Subtract: Regroup Hundreds as Tens—pp. 415–416
- Lesson 16: Subtract: Regroup Twice—pp. 417–418
- Lesson 16A: Add to Check Subtraction—on-line
Category: Number and Operations in Base Ten

**Standard M.2.E**  Use place value understanding and properties of operations to add and subtract.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Vocabulary: addend, algorithm, difference, digit, estimate, regroup, round, sum, tens, 3-digit number, 10 ones = 1 ten, 10 tens = 1 hundred, 1 hundred = 10 tens.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources — www.progressinmathematics.com

**Grade 2**

**TEACHER CENTER** (login required)

- **PLANNING**
  - MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)

- **PRACTICE**
  - Vocabulary Activities

- **RESOURCES**
  - AUDIO GLOSSARY (English and Spanish)

**Student Center/Family Center** (no login required)

- **PRACTICE**
  - Vocabulary Activities
  - AUDIO GLOSSARY (English and Spanish)

  - MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)
Category: Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

**Content**

**What content do I need to know in order to answer the essential questions?**

- Math Concepts: Fluency with addition and subtraction facts to 20
- Knowledge of Place Value

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Lesson 1: Addition Concepts—pp. 3–4
- Lesson 3: Related Addition Facts—pp. 7–8
- Lesson 4: Count On to Add—pp. 9–10
- Lesson 5: Extend Facts to 20—pp. 11–12

**CHAPTER 2 PLACE VALUE TO 100**

- Lesson 1–Lesson 18—pp. 65–104

**CHAPTER 8 PLACE VALUE TO 1000**

- Lesson 1–Lesson 11—pp. 349–372
Category: Number and Operations in Base Ten

Standard M.2.E Use place value understanding and properties of operations to add and subtract.

Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

• ELA: Students should use magazines or newspapers to find examples of larger numbers and how they are used in real life.

CHAPTER 8 PLACE VALUE TO 1000
Lesson 1: Hundreds—pp. 349–350
Lesson 1A: Make Hundreds—on-line
Lesson 6: Compare Numbers to 1000—pp. 361–362
Lesson 7: Order to 1000—pp. 363–364
Enrichment: Explore Thousands—p. 378
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Children’s Literature
- First in Math Website (http://www.firstinmath.com)
- Manipulatives: addition frame, Base 10 Blocks, coins/bills, hundred chart, interactive white board, number line, money addition/subtraction frames, place value mat, subtraction frame, 3-digit number cards.
- Textbook

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www.progressinmathematics.com

Grade 2

**TEACHER CENTER** (login required)

1 PLANNING
- LESSON PLANNING
  - Scope and Sequence
  - Road Maps
  - Priority Lessons Table of Contents
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  - Blackline Masters

**PROFESSIONAL DEVELOPMENT**
- Chapter Support
- Research Base
- Math Study
- MATH ALIVE AT HOME
  - Take-Home Activities
- MANAGEMENT SYSTEM
  - Chapter Records

2 PRACTICE
- PRACTICE
  - Skills Update
  - Math Minutes
  - Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Number and Operations in Base Ten

Standard M.2.E  Use place value understanding and properties of operations to add and subtract.

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- Textbook

Archdiocese of Philadelphia

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

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- Children’s Literature
- First in Math Website (http://www.firstinmath.com)
- Manipulatives: addition frame, Base 10 Blocks, coins/bills, hundred chart, interactive white board, number line, money addition/subtraction frames, place value mat, subtraction frame, 3-digit number cards.
- Textbook

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**5 RESOURCES**

**AUDIO GLOSSARY**

- From A to Z (English)
- De la A a la Z (Spanish)

**ADDITIONAL TEACHER RESOURCES**

- Authors
- National Mathematics Advisory Board

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**STUDENT CENTER / FAMILY CENTER** (no login required)

**PRACTICE**

- Skills Update
- Math Minutes
- Problem of the Day
- Practice Activities
- Vocabulary Activities

**ALTERNATIVE TEACHING MODELS**

- Tutorials (animated math lessons)

**VIRTUAL MANIPULATIVES**

- Manipulatives

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Archdiocese of Philadelphia
Category: Number and Operations in Base Ten

**Standard M.2.E** Use place value understanding and properties of operations to add and subtract.

**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Children’s Literature
- First in Math Website (http://www.firstinmath.com)
- Manipulatives: addition frame, Base 10 Blocks, coins/bills, hundred chart, interactive white board, number line, money addition/subtraction frames, place value mat, subtraction frame, 3-digit number cards.
- Textbook

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**AUDIO GLOSSARY**

- From A to Z: Grade 2 Glossary (English)
- De la A a la Z: Grade 2 Glossary (Spanish)

**ENRICHMENT**

- Flash Activities

**MATH ALIVE AT HOME**

- Take-Home Activities
Category: Measurement and Data

Standard M.2.F
Measure and estimate lengths in standard units.
Category: Measurement and Data

**Standard M.2.F** Measure and estimate lengths in standard units.

**Essential Questions**

*What should I be able to answer?*

*What guides my thinking?*

- Why do we need to learn how to measure in everyday life?
- Why is it important to measure using a standard tool?

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**CHAPTER 11 MEASUREMENT**

- Lesson 1: Nonstandard Units—pp. 491–492
- Lesson 2: Inches—pp. 493–494
- Lesson 3: Half Inch—pp. 495–496
- Lesson 4: Feet and Yards—pp. 497–498
- **Lesson 4A: Measure Length—on-line**
- **Lesson 4B: Relate Addition and Subtraction to Length—on-line**
- Lesson 5: Cups, Pints, and Quarts—pp. 501–502
- Lesson 7: Gallons—pp. 505–506
- Lesson 8: Ounces and Pounds—pp. 507–508
- Lesson 9: Centimeters—pp. 511–512
- Lesson 10: Meters—pp. 513–514
- Lesson 13: Grams and Kilograms—pp. 519–520
- Lesson 14: Liters—pp. 521–522
- Lesson 16: Temperature—pp. 527–528
- Lesson 17: Choose Tools and Units of Measure—pp. 529–530
Measure and estimate lengths in standard units.

Assessment

What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

FORMATIVE

- Allow students the opportunity to measure various classroom and home objects using a nonstandard tool (i.e. counting cube, each student’s footprint, paper clip, pencil, etc.) Have students compare measurements. At the end of the lesson, have students write on an Exit Card why it is important to have a standard unit of measurement.

- “Which tool should I use?” – Give students different examples of items to measure. Have students decide what is the best tool to use – measuring tape, meter stick, ruler, or yard stick.

- “Long Jump” – Tape 2 meter sticks end to end on the floor. Mark a starting place with masking tape. Students can estimate how far they think they can jump. After the estimates are recorded, students should jump and compare their estimates with the exact measurements. Students can calculate the difference.

- “Let’s Race” – Using pull back cars, students can record the distance traveled by the cars. First, students can estimate how far the cars will travel in inches and centimeters. Then, the cars will race. Students can record the distances in both the Customary & Metric Systems. The children can calculate the differences between their estimates and actual measurements.

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—
www.progressinmathematics.com

GRADE 2 > TEACHER CENTER (login required) > COMMON CORE
Check Your Progress with Analyses
Category: Measurement and Data

Standard M.2.F: Measure and estimate lengths in standard units.

Assessment

What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

SUMMATIVE

- “Metric Olympics” – see lesson at http://www2.scholastic.com/browse/article.jsp?id=7516. Focus only on the events where students will measure in centimeters and meters.
- “Measure This...” – In their Math Journals, students can create a Venn Diagram that shows the similarities and differences between the Customary System & Metric System. Afterwards, students can give examples of when it would be appropriate to use a centimeter, meter, inch, foot, or yard.

CHAPTER 11 MEASUREMENT

Chapter 11 Test—on-line
Performance Assessment—p. 539

* To access online summative assessment, go to—www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core
Chapter Tests (with Item Analysis)

* See “Problem Solving” on the chapter test.
Post Tests (with Item Analysis)
Category: Measurement and Data

Standard M.2.F  Measure and estimate lengths in standard units.

Skills

What skills do I need to have in order to answer the essential questions?

M.2.F.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

CHAPTER 11 MEASUREMENT
Lesson 2: Inches—pp. 493–494
Lesson 3: Half Inch—pp. 495–496
Lesson 4: Feet and Yards—pp. 497–498
Lesson 9: Centimeters—pp. 511–512
Lesson 10: Meters—pp. 513–514
Lesson 17: Choose Tools and Units of Measure—pp. 529–530

Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.F**  Measure and estimate lengths in standard units.

**Skills**

What skills do I need to have in order to answer the essential questions?

**M.2.F.2** Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
Category: Measurement and Data

**Standard M.2.F**  Measure and estimate lengths in standard units.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.F.3** Estimate lengths using units of inches, feet, centimeters, and meters.

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**CHAPTER 11 MEASUREMENT**

- Lesson 2: Inches—pp. 493–494
- Lesson 3: Half Inch—pp. 495–496
- Lesson 4: Feet and Yards—pp. 497–498
- Lesson 9: Centimeters—pp. 511–512
- Lesson 10: Meters—pp. 513–514

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Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.F** Measure and estimate lengths in standard units.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.F.4** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

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*Sadlier Progress in Mathematics Grade 2*

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*CHAPTER 11 MEASUREMENT*

*Lesson 4A: Measure Length—on-line*
Category: Measurement and Data

**Standard M.2.F**  Measure and estimate lengths in standard units.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Vocabulary: centimeter, Customary System, difference, estimate, half inch, feet, foot, length, meter, Metric System, unit of measure, & yard.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources — www.progressinmathematics.com

**TEACHER CENTER** (login required)

**PLANNING**
- MATH ALIVE AT HOME
- Take-Home Activities (Vocabulary)

**PRACTICE**
- Vocabulary Activities

**RESOURCES**
- AUDIO GLOSSARY (English and Spanish)

**Student Center/Family Center** (no login required)

**PRACTICE**
- Vocabulary Activities
- AUDIO GLOSSARY (English and Spanish)
- MATH ALIVE AT HOME
- Take-Home Activities (Vocabulary)
Category: Measurement and Data

Standard M.2.F  Measure and estimate lengths in standard units.

Content
What content do I need to know in order to answer the essential questions?

Math Concepts: M.1.F. Measure lengths indirectly and by iterating length units.

CHAPTER 11 MEASUREMENT
Lesson 1: Nonstandard Units—pp. 491–492
Measure and estimate lengths in standard units.

Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

- ELA: Students should look through various magazines to cut out pictures of items that have measurements in meters, feet, or yards.
- Religion: Allow students to create a diorama of the inside of a Church to display the altar and sacramentals. Students will need to use their knowledge of measurement to position objects within their diorama.
- Science: During a unit on life science, students can plant their own seed in a container with potting soil. The class can chart the growth of the plants by keeping a journal of the plant’s measurements as they grow.
- Social Studies: Using rulers, graph paper, and furniture catalogs, invite children to design a bookcase for a dollhouse after first examining a bookcase in a furniture catalog. Children can draw their bookcase and shelves on graph paper. When finished, students can label the height and width of the bookcase.
Category: Measurement and Data

**Standard M.2.F**  Measure and estimate lengths in standard units.

## Tools for Learning

*Which tools will I use that will assist me in my learning?*

- **Children’s Literature:** The Biggest Fish by Shelia Keenan; How Big is a Foot?; Inch by Inch by Leo Lionni; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower
- **First in Math Website** (http://www.firstinmath.com):
- **Manipulatives:** centimeter grid paper, connecting cubes, graph paper, inch grid paper, interactive white board, measuring tape, meter stick, objects to measure, ruler, yard stick,
- **Technology:** Please see the recommended websites from the Technology Committee.
- **Textbook**

* To access online resources, go to—
  [www.progressinmathematics.com](http://www.progressinmathematics.com)

**Grade 2**

**TEACHER CENTER** (login required)

1 PLANNING

- **LESSON PLANNING**
  - Scope and Sequence
  - Road Maps
  - Priority Lessons Table of Contents
  - Pacing Guides
  - Blackline Masters

**PROFESSIONAL DEVELOPMENT**

- Chapter Support
- Research Base
- Math Study
- MATH ALIVE AT HOME
  - Take-Home Activities
- MANAGEMENT SYSTEM
  - Chapter Records

2 PRACTICE

**PRACTICE**

- Skills Update
- Math Minutes
- Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Measurement and Data

Measure and estimate lengths in standard units.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: The Biggest Fish by Shelia Keenan; How Big is a Foot?; Inch by Inch by Leo Lionni; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower
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- Technology: Please see the recommended websites from the Technology Committee.
- Textbook

Sadlier Progress in Mathematics Grade 2

Tools for Learning
Which tools will I use that will assist me in my learning?

- Practice Activities
- Vocabulary Activities
- VIRTUAL MANIPULATIVES
  - Manipulatives
- ENRICHMENT
  - Flash Activities
- ALTERNATIVE TEACHING MODELS
  - Tutorials

3 ASSESSMENT

ASSESSMENT

- Benchmark Tests
- Check Your Progress
- Lessons for Priority Lessons Assessments

4 COMMON CORE

PLANNING & PACING

- Correlations
- Chapter Pacing Guides
- Teacher Lesson Plans

INSTRUCTION

- Student Lessons

ASSESSMENT

- Check Your Progress with Analyses

Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.F** Measure and estimate lengths in standard units.

**Tools for Learning**
Which tools will I use that will assist me in my learning?

- **Children’s Literature:** The Biggest Fish by Shelia Keenan; How Big Is a Foot?; Inch by Inch by Leo Lionni; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower
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- **Technology:** Please see the recommended websites from the Technology Committee.
- **Textbook**

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**5 RESOURCES**

**AUDIO GLOSSARY**
- From A to Z (English)
- De la A a la Z (Spanish)

**ADDITIONAL TEACHER RESOURCES**
- Authors
- National Mathematics Advisory Board

**STUDENT CENTER / FAMILY CENTER** (no login required)

**PRACTICE**
- Skills Update
- Math Minutes
- Problem of the Day
- Practice Activities
- Vocabulary Activities

**ALTERNATIVE TEACHING MODELS**
- Tutorials (animated math lessons)

**VIRTUAL MANIPULATIVES**
- Manipulatives

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Archdiocese of Philadelphia
Category: Measurement and Data

**Measure and estimate lengths in standard units.**

**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Children’s Literature: The Biggest Fish by Shelia Keenan; How Big is a Foot?; Inch by Inch by Leo Lionni; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower

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- Manipulatives: centimeter grid paper, connecting cubes, graph paper, inch grid paper, interactive white board, measuring tape, meter stick, objects to measure, ruler, yard stick,

- Technology: Please see the recommended websites from the Technology Committee.

- Textbook

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**Sadlier Progress in Mathematics Grade 2**

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**Audio Glossary**

- From A to Z: Grade 2 Glossary (English)
- De la A a la Z: Grade 2 Glossary (Spanish)

**Enrichment**

- Flash Activities

**Math Alive at Home**

- Take-Home Activities
Standard M.2.G
Relate addition and subtraction to length.
Category: Measurement and Data

**Standard M.2.G** Relate addition and subtraction to length.

**Essential Questions**

*What should I be able to answer?*

*What guides my thinking?*

- Why do we need to learn how to measure in everyday life?

- Why is it important to measure using a standard tool?

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**CHAPTER 11 MEASUREMENT**

Chapter Opener—TE pp. 489–490

* See also lesson introduction and problem solving exercises—pp. 492–498, 501–508, 511–514, 519–522, 527–534, 536

**CHAPTER 11 MEASUREMENT**

Differentiated Instruction: At Risk: Tools and Units of Measure—TE p. 489F

Lesson 17: Choose Tools and Units of Measure—pp. 529–530
Category: Measurement and Data

Standard M.2.G  Relate addition and subtraction to length.

Essential Questions
What should I be able to answer?
What guides my thinking?

• What are different ways to count?

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</table>

Intervention Suggestions:
1. Skip count forward by 2s and 5s;
2. Count back by 4s.
3. Count by 3s—TE p. 547K

Sadlier Progress in Mathematics Grade 2

Archdiocese of Philadelphia

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2 102
Category: Measurement and Data

**Standard M.2.G** Relate addition and subtraction to length.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

- Allow students the opportunity to measure various classroom and home objects using a nonstandard tool (i.e., counting cube, each student’s footprint, paper clip, pencil, etc.) Have students compare measurements. At the end of the lesson, have students write on an Exit Card why it is important to have a standard unit of measurement.

- “Which tool should I use?” – Give students different examples of items to measure. Have students decide what is the best tool to use – measuring tape, meter stick, ruler, or yard stick.

- “Long Jump” – Tape 2 meter sticks end to end on the floor. Mark a starting place with masking tape. Students can estimate how far they think they can jump. After the estimates are recorded, students should jump and compare their estimates with the exact measurements. Students can calculate the difference.

- “Let’s Race” – Using pull back cars, students can record the distance traveled by the cars. First, students can estimate how far the cars will travel in inches and centimeters. Then, the cars will race. Students can record the distances in both the Customary & Metric Systems. The children can calculate the differences between their estimates and actual measurements.

**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Check Your Progress: Lessons 1–5—on-line
- Check Your Progress: Lessons 16–21—on-line

**CHAPTER 11 MEASUREMENT**

- Check Your Progress: Lessons 1–4B—on-line
- Check Your Progress: Lessons 5–8—on-line
- Check Your Progress: Lessons 9–14—on-line
- Check Your Progress: Lessons 15–19—on-line

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—

www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core

Check Your Progress with Analyses
Category: Measurement and Data

**Standard M.2.G**  Relate addition and subtraction to length.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**SUMMATIVE**

- “Metric Olympics” – see lesson at http://www2.scholastic.com/browse/article.jsp?id=7516. Focus only on the events where students will measure in centimeters and meters.

- “Measure This...” – In their Math Journals, students can create a Venn Diagram that shows the similarities and differences between the Customary System & Metric System. Afterwards, students can give examples of when it would be appropriate to use a centimeter, meter, inch, foot, or yard.

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**CHAPTER 11 MEASUREMENT**

- Chapter 11 Test—on-line
- Performance Assessment—p. 539

* To access online summative assessment, go to—
  www.progressinmathematics.com

**Sadlier**

**Progress in Mathematics Grade 2**

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**Archdiocese of Philadelphia**
Category: Measurement and Data

**Standard M.2.G** Relate addition and subtraction to length.

### Skills

**What skills do I need to have in order to answer the essential questions?**

**M.2.G.1** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

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**Chapter 11 Measurement**

Lesson 3: Half Inch—pp. 495–496
Lesson 4B: Relate Addition and Subtraction to Length—on-line
Lesson 9: Centimeters—pp. 511–512
Lesson 10: Meters—pp. 513–514
Lesson 19: Problem Solving Applications: Mixed Strategies—pp. 533–534
Category: Measurement and Data

**Standard M.2.G** Relate addition and subtraction to length.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

M.2.G.2 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

**Chapter 1 Addition and Subtraction Facts**

- Lesson 3: Related Addition Facts: Critical Thinking—p. 8
- Lesson 4: Count On to Add—p. 9
- Lesson 5: Extend Facts to 20—pp. 11–12
- Lesson 12 Count Back to Subtract—pp. 29–30
- Lesson 16: Count Up to Subtract—pp. 39–40

**Chapter 10 Fractions and Probability**

- Lesson 2A: Whole Numbers and the Number Line—on-line
Category: Measurement and Data

**Standard M.2.G** Relate addition and subtraction to length.

**Content**

* What content do I need to know in order to answer the essential questions?

- Math Vocabulary: centimeter, Customary System, difference, estimate, feet, foot, half inch, interactive white board, length, meter, Metric System, unit of measure, & yard.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —

  www.progressinmathematics.com

**Grade 2**

**TEACHER CENTER** (login required)

**PLANNING**
- MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)

**PRACTICE**
- Vocabulary Activities

**RESOURCES**
- AUDIO GLOSSARY (English and Spanish)

**Student Center/Family Center** (no login required)

**PRACTICE**
- Vocabulary Activities
- AUDIO GLOSSARY (English and Spanish)

**MATH ALIVE AT HOME**
- Take-Home Activities (Vocabulary)
Category: Measurement and Data

Standard M.2.G  Relate addition and subtraction to length.

Content

What content do I need to know in order to answer the essential questions?

- Math Concepts: M.1.F. Measure lengths indirectly and by iterating length units

CHAPTER 11 MEASUREMENT

Lesson 1: Nonstandard Units—pp. 491–492
Lesson 2: Inches—pp. 493–494
Lesson 3: Half Inch—pp. 495–496
Lesson 4: Feet and Yards—pp. 497–498
Lesson 4A: Measure Length—on-line
Lesson 4B: Relate Addition and Subtraction to Length—on-line
Lesson 9: Centimeters—pp. 511–512
Lesson 10: Meters—pp. 513–514
Category: Measurement and Data

**Standard M.2.G** Relate addition and subtraction to length.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Knowledge of Addition & Subtraction
- Fluency of facts to 20

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**CHAPTER 1 ADDITION AND SUBTRACTION FACTS**

- Lesson 1: Addition Concepts—pp. 3–4
- Lesson 3: Related Addition Facts—pp. 7–8
- Lesson 4: Count On to Add—pp. 9–10
- Lesson 5: Extend Facts to 20—pp. 11–12
- Lesson 6: Make 10 to Add—pp. 15–16
- Lesson 7: Doubles Facts—pp. 17–18
- Lesson 8: Doubles + 1, Doubles –1—pp. 19–20
- Lesson 9: Three Addends—pp. 21–22
- Lesson 10: Four Addends—pp. 23–24
- Lesson 11: Subtraction Concepts—pp. 27–28
- **Lesson 11A: Add or Subtract to Compare**—on-line
- Lesson 12 Count Back to Subtract—pp. 29–30
- Lesson 13 Related Subtraction Facts—pp. 31–32
- Lesson 14 Relate Addition and Subtraction—pp. 33–34
- **Lesson 14A: Think Addition to Subtract**—on-line
- Lesson 15 Use Addition to Check—pp. 35–36
- Lesson 16: Count Up to Subtract—pp. 39–40
- **Lesson 16B: Writing a Number Sentence**—on-line
- Lesson 17: Fact Families—pp. 41–42
- Lesson 18: Missing Addends—pp. 43–44
Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

• ELA:
• Religion:
• Science:
• Social Studies:
Category: Measurement and Data

Standard M.2.G Relate addition and subtraction to length.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature:
- First in Math Website (http://www.firstinmath.com):
- Manipulatives:
- Technology: Ed-U-Smart (); Please see the recommended websites from the Technology Committee.
- Textbook

* To access online resources, go to—
www.progressinmathematics.com
Grade 2

TEACHER CENTER (login required)

1 PLANNING
LESSON PLANNING
Scope and Sequence
Road Maps
Priority Lessons Table of Contents
Pacing Guides
Blackline Masters

PROFESSIONAL DEVELOPMENT
Chapter Support
Research Base
Math Study

MATH ALIVE AT HOME
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MANAGEMENT SYSTEM
Chapter Records

2 PRACTICE
PRACTICE
Skills Update
Math Minutes
Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Measurement and Data

Standard M.2.G: Relate addition and subtraction to length.

Tools for Learning

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- Technology: Ed-U-Smart (); Please see the recommended websites from the Technology Committee.
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Progress in Mathematics Grade 2

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Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature:
- First in Math Website (http://www.firstinmath.com):
- Manipulatives:
- Technology: Ed-U-Smart (); Please see the recommended websites from the Technology Committee.
- Textbook

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Chapter Tests with Analyses
Cumulative Reviews with Analyses
Post Test with Analyses

5 RESOURCES
AUDIO GLOSSARY
From A to Z (English)
De la A a la Z (Spanish)

ADDITIONAL TEACHER RESOURCES
Authors
National Mathematics Advisory Board

STUDENT CENTER / FAMILY CENTER (no login required)

PRACTICE
Skills Update
Math Minutes
Problem of the Day
Practice Activities
Vocabulary Activities

ALTERNATIVE TEACHING MODELS
Tutorials (animated math lessons)

VIRTUAL MANIPULATIVES
Manipulatives

– CONTINUED ON NEXT PAGE –
Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature:
- First in Math Website (http://www.firstinmath.com):
- Manipulatives:
- Technology: Ed-U-Smart (); Please see the recommended websites from the Technology Committee.
- Textbook

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AUDIO GLOSSARY
- From A to Z: Grade 2 Glossary (English)
- De la A a la Z: Grade 2 Glossary (Spanish)

ENRICHMENT
- Flash Activities

MATH ALIVE AT HOME
- Take-Home Activities
Category: Measurement and Data

Standard M.2.H
Work with time and money.
category: Measurement and Data

**Standard M.2.H** Work with time and money.

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**Essential Questions**

*What should I be able to answer?*

*What guides my thinking?*

- Why do I need to tell time in daily life?

- What is the relationship between analog and digital clocks?

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**Skills Update—Review of Grade 1 Skills**

Clock Sense: Hours—p. J

**Chapter 7 Money and Time**

Lesson 10: Hour and Half Hour—pp. 313–314
Lesson 11: Five Minutes—pp. 315–316
Lesson 12: Quarter Hour—pp. 317–318
Lesson 13: Before the Hour—pp. 319–320
Lesson 13A: A.M. and P.M.—on-line

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**Skills Update—Review of Grade 1 Skills**

Clock Sense: Hours—p. J

**Chapter 7 Money and Time**

Lesson 10: Hour and Half Hour—pp. 313–314
Lesson 12: Quarter Hour—pp. 317–318
Lesson 14: Elapsed Time—pp. 323–324

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Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.H** Work with time and money.

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**Essential Questions**

What should I be able to answer?

What guides my thinking?

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- How does recognizing coins and bills help me in real life?

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**Skills Update—Review of Grade 1 Skills**

- Penny, Nickel, Dime—p. 1

**Chapter 7 Money and Time**

- Lesson 1: Pennies, Nickels, and Dimes—pp. 291–292
- Lesson 2: Quarters—pp. 293–294
- Lesson 6: Make Change—pp. 303–304
- Lesson 7: Add and Subtract Money—pp. 305–306
- Lesson 8: One Dollar—pp. 307–308
- Lesson 9: Dollars and Cents—pp. 309–310
- Lesson 9A: Money Problems—on-line

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- How does skip counting help me to count money and tell time?

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**Chapter 2 Place Value to 100**

- Lesson 14: Count by 3s and 4s—pp. 95–96

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**Chapter 7 Money and Time**

- Lesson 1: Pennies, Nickels, and Dimes—pp. 291–292
- Lesson 2: Quarters—pp. 293–294
Category: Measurement and Data

**Standard M.2.H**  Work with time and money.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

- **“Calendar Time”** – During Circle Time or Morning Meeting, incorporate money and time activities each day. For example, students can count the day with money. If the date is the 24th, students should place 2 dimes and 4 pennies in the Penny, Nickel, Dime, Quarter, Half Dollar, & Dollar cups. Exchanges will arise on different days. For time, ask students throughout the day what time it is when beginning or ending certain activities.

- **“Classroom Piggy Banks”** – Create a large piggy bank on pink paper and laminate for each student. Throughout the unit on money, students can use coins to form various amounts and make change on the piggy bank mat. Students should be given multiple opportunities to form equivalent amounts using coins and bills. (Example: 76 cents – 3 quarters & 1 penny; 7 dimes, 1 nickel, & 1 penny; 76 pennies; 15 nickels & 1 penny, etc.)

- **“Class Store”** – See Integration of Learning below for description.

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**CHAPTER 7 MONEY AND TIME**

- Check Your Progress: Lessons 1–3—on-line
- Check Your Progress: Lessons 4–9—on-line
- Check Your Progress: Lessons 10–13—on-line
- Check Your Progress: Lessons 14–19—on-line

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—

  [www.progressinmathematics.com](http://www.progressinmathematics.com)

  **Grade 2 > Teacher Center (login required) > Common Core**

  Check Your Progress with Analyses

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*CONTINUED ON NEXT PAGE*
Work with time and money.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

– CONTINUED FROM PREVIOUS PAGE –

- “Human Clock” — create a “Human Clock” in your classroom using students. Twelve students should be given a number from 1 – 12 to wear on their chest. Evenly space these students in a circle to create a clock. Place 2 additional students in the center of the clock to act as the hour and minute hand. The clock hand students should be given a time to form on the clock. Other students in the classroom can form the time on individual Judy clocks. Students can be rotated so they can be both a clock number and clock hand.

- “Quick Write” — Provide students with a large sticky note, an index card, or half sheet of paper. Pose a question to the students from the time and money unit. Students can write their reflections.

Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.H**  Work with time and money.

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**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

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**SUMMATIVE**

- “Let’s Go Shopping” – Given a circular for a store, give students a budget to buy items. Students will have to select their items to purchase and choose how they will pay for items with bills and coins. Students can also calculate if they were under or over budget.

- “Geometry Money” – Allow students the opportunity to create a picture with pattern blocks or draw a picture using circles, squares, triangles, and rectangles. Assign a monetary value (1 cent, 5 cents, 10 cents, 25 cents, etc.) and ask the students to calculate how much their pictures are worth.

- “It’s About Time” – Create a Flipbook where students can chart an entire day with their activities and the time they completed the activity. Students should begin with the time they wake until the time when they go to bed. All activities should be charted. Each page in the Flipbook should represent a different time and activity. Students should form the time on an analog clock on each page and draw a picture of the activity. In addition, students should include 1 – 2 sentences that describe the activity. Emphasize the two cycles of 12 hours in a day – A.M./P.M.

- “Time Flies..” - In their Math Journals, have students write about three activities in our world that would be very different if we had no way of telling time.

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**CHAPTER 7 MONEY AND TIME**

**Chapter 7 Test—on-line**

Performance Assessment—p. 339

* To access online summative assessment, go to—

www.progressinmathematics.com

Grade 2 > Teacher Center (login required) > Common Core

Chapter Tests (with Item Analysis)

* See “Problem Solving” on the chapter test.

Post Tests (with Item Analysis)

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Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Measurement and Data

**Standard M.2.H** Work with time and money.

### Skills

*What skills do I need to have in order to answer the essential questions?*

**M.2.H.1** Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

### Chapter 7 Money and Time

- **Lesson 10:** Hour and Half Hour—pp. 313–314
- **Lesson 11:** Five Minutes—pp. 315–316
- **Lesson 12:** Quarter Hour—pp. 317–318
- **Lesson 13:** Before the Hour—pp. 319–320
- **Lesson 13A:** A.M. and P.M.—on-line
- **Lesson 14:** Elapsed Time—pp. 323–324
Category: Measurement and Data

**Standard M.2.H**  Work with time and money.

**Skills**

What skills do I need to have in order to answer the essential questions?

**M.2.H.2** Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

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**Chapter 7 Money and Time**

- Lesson 5: Compare Money—pp. 301–302
- Lesson 6: Make Change—pp. 303–304
- Lesson 7: Add and Subtract Money—pp. 305–306
- Lesson 9: Dollars and Cents—pp. 309–310
- **Lesson 9A: Money Problems—on-line**
- Lesson 18: Problem Solving Strategy: Guess and Test—pp. 331–332

**Chapter 9 Addition and Subtraction: Three-Digit Numbers**

- Lesson 7: Add Money: No Regrouping—pp. 397–398
- Lesson 9: Add Money: Regroup Dimes or Pennies—pp. 401–402
- Lesson 17: Subtract Money: Regroup Dollars or Dimes—pp. 421–422

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Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.H** Work with time and money.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Vocabulary: A.M., analog clock, cent symbol, change, decimal point, digital clock, dime, dollar, dollar sign, equal amounts, half hour, half past, hour, hour hand, minute, minute hand, nickel, P.M., penny, quarter, quarter hour, second, & total.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —
  www.progressinmathematics.com

**Grade 2**

**TEACHER CENTER** (login required)

- PLANNING
  - MATH ALIVE AT HOME
    - Take-Home Activities (Vocabulary)

- PRACTICE
  - Vocabulary Activities

- RESOURCES
  - AUDIO GLOSSARY (English and Spanish)

**Student Center/Family Center** (no login required)

- PRACTICE
  - Vocabulary Activities
  - AUDIO GLOSSARY (English and Spanish)
  - MATH ALIVE AT HOME
    - Take-Home Activities (Vocabulary)
Category: Measurement and Data

**Standard M.2.H** Work with time and money.

## Content

**What content do I need to know in order to answer the essential questions?**


### Chapter 1 Addition and Subtraction Facts

Lesson 1: Addition Concepts—pp. 3–4
Lesson 3: Related Addition Facts—pp. 7–8
Lesson 4: Count On to Add—pp. 9–10
Lesson 11: Subtraction Concepts—pp. 27–28

**Lesson 11A: Add or Subtract to Compare**—on-line
Lesson 12 Count Back to Subtract—pp. 29–30
Lesson 14 Relate Addition and Subtraction—pp. 33–34

**Lesson 14A: Think Addition to Subtract**—on-line
Lesson 15 Use Addition to Check—pp. 35–36
Lesson 16: Count Up to Subtract—pp. 39–40
Lesson 16B: Writing a Number Sentence—on-line
Lesson 17: Fact Families—pp. 41–42
Lesson 18: Missing Addends—pp. 43–44
Work with time and money.

Category: Measurement and Data

Standard M.2.H

Content

What content do I need to know in order to answer the essential questions?

- Problem Solving Strategies

* See problem solving strategies—
   Act It Out—pp. 103–104, 533
   Guess and Test—pp. 90, 206, 304, 331–332, 333–334, 352, 368, 372, 590
   Make a Table—pp. 229–230, 231, 304, 333, 371
   Make an Organized List—pp. 68, 76, 369–370, 371, 388, 430, 534
   Use a Map—pp. 531–532, 533
   Use a Pattern—pp. 277–278, 279, 294, 302, 429, 589
   Write a Number Sentence—pp. 4, 8, 10, 12, 16, 17, 20, 22, 23–24, 30, 33–34, 35–36, 103–104, 137, 139, 140, 384, 388, 407–408, 411–412, 424
Category: Measurement and Data

| Standard M.2.H | Work with time and money. |

**Content**

What content do I need to know in order to answer the essential questions?

- **Skip Counting**

**CHAPTER 8 PLACE VALUE TO 1000**

Lesson 4A: Skip Count to 1000—on-line

**CHAPTER 12 MULTIPLICATION AND DIVISION**

Differentiated Instruction: Gifted and Talented: Skip Counting and Multiplication—TE p. 547F

Intervention Suggestions: 1. Skip count forward by 2s and 5s; 4. Count back by 4s. 5. Count by 3s—TE p. 547K

**CHAPTER 7 MONEY AND TIME**

Lesson 10: Hour and Half Hour—pp. 313–314

Lesson 11: Five Minutes—pp. 315–316

Lesson 12: Quarter Hour—pp. 317–318

Lesson 13: Before the Hour—pp. 319–320

- Students need practice with common time phrases such as quarter till, quarter after, ten till, ten after, and half past.

Archdiocese of Philadelphia

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Measurement and Data

Standard M.2.H Work with time and money.

Integration of Learning

What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

- ELA: Have students brainstorm places to travel for a class trip. Once a destination is chosen, have students create an itinerary with specific times for activities on the field trip. After the trip, have students write about if they were able to follow the schedule and if enough time was given for activities on the trip.

- Religion: Read the book, Alexander, Who Used to be Rich Last Sunday. Discuss the concepts of saving and spending money. Students can create a chart with three columns (Spend, Save, & Donate). Students can create this chart in Microsoft Word or on large chart paper. In the Spend & Save columns, students can write or draw pictures of things they would like to buy or things they would like to save their money. In the Donate column, students should brainstorm activities of how they can help the less fortunate. The class could choose student ideas for a class Service Project.

- Science: Read the book, The Grouchy Ladybug. Each student can choose an animal from the story to research.

- Social Studies: Create a class store where students can serve as customers/cashiers in order to practice using money and making change; discuss the terms producers/consumers; introduce students to the concept of credit/debit cards as well as checking/savings accounts.

CHAPTER 7 MONEY AND TIME

Chapter Opener (Literature Connection, Math Connection, Books to Read)/Math Alive at Home—TE pp. 289–290


Archdiocese of Philadelphia
Work with time and money.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: Alexander, Who Used to Be Rich Last Sunday by Judith Viorst; Benny’s Pennies by Pat Brisson; A Chair for My Mother by Vera Williams; The Grouchy Ladybug by Eric Carle; How the Second Grade Got $8,205.50 to Visit the Statue of Liberty by Nathan Zimmelman; If You Made a Million by David M. Schwartz.
- Manipulatives: coins/bills, interactive white board, Judy Clocks.
- Technology: United States Mint - http://www.usmint.gov/kids; Please see the recommended websites from the Technology Committee.
- Textbook

* To access online resources, go to—
www.progressinmathematics.com

Grade 2

TEACHER CENTER (login required)

1 PLANNING
- LESSON PLANNING
  - Scope and Sequence
  - Road Maps
  - Priority Lessons Table of Contents
  - Pacing Guides
  - Blackline Masters

PROFESSIONAL DEVELOPMENT
- Chapter Support
- Research Base
- Math Study
- MATH ALIVE AT HOME
  - Take-Home Activities
- MANAGEMENT SYSTEM
  - Chapter Records

2 PRACTICE
- PRACTICE
  - Skills Update
  - Math Minutes
  - Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Measurement and Data

**Standard M.2.H** Work with time and money.

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**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- Children’s Literature: Alexander, Who Used to Be Rich Last Sunday by Judith Viorst; Benny’s Pennies by Pat Brisson; A Chair for My Mother by Vera Williams; The Grouchy Ladybug by Eric Carle; How the Second Grade Got $8,205.50 to Visit the Statue of Liberty by Nathan Zilmelman; If You Made a Million by David M. Schwartz.


- Manipulatives: coins/bills, interactive white board, Judy Clocks.

- Technology: United States Mint - http://www.usmint.gov/kids; Please see the recommended websites from the Technology Committee.

- Textbook

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<--- CONTINUED FROM PREVIOUS PAGE ---

- Practice Activities
- Vocabulary Activities
- VIRTUAL MANIPULATIVES
- Manipulatives
- ENRICHMENT
- Flash Activities
- ALTERNATIVE TEACHING MODELS
- Tutorials

3 ASSESSMENT

- ASSESSMENT
- Benchmark Tests
- Check Your Progress
- Lessons for Priority Lessons Assessments

4 COMMON CORE

- PLANNING & PACING
- Correlations
- Chapter Pacing Guides
- Teacher Lesson Plans

INSTRUCTION

- Student Lessons

ASSESSMENT

- Check Your Progress with Analyses

<--- CONTINUED ON NEXT PAGE ---
Category: Measurement and Data

**Standard M.2.H**  Work with time and money.

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**Tools for Learning**

*Which tools will I use that will assist me in my learning?*

- **Children’s Literature:** Alexander, Who Used to Be Rich Last Sunday by Judith Viorst; Benny’s Pennies by Pat Brisson; A Chair for My Mother by Vera Williams; The Grouchy Ladybug by Eric Carle; How the Second Grade Got $8,205.50 to Visit the Statue of Liberty by Nathan Zilmerman; If You Made a Million by David M. Schwartz.


- **Manipulatives:** coins/bills, interactive white board, Judy Clocks.

- **Technology:** United States Mint - http://www.usmint.gov/kids; Please see the recommended websites from the Technology Committee.

- **Textbook**

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**Archdiocese of Philadelphia**

Sadlier *Progress in Mathematics* Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Measurement and Data

Standard M.2.H  Work with time and money.

Tools for Learning
Which tools will I use that will assist me in my learning?

• Children’s Literature: Alexander, Who Used to Be Rich Last Sunday by Judith Viorst; Benny’s Pennies by Pat Brisson; A Chair for My Mother by Vera Williams; The Grouchy Ladybug by Eric Carle; How the Second Grade Got $8,205.50 to Visit the Statue of Liberty by Nathan Zillemel; If You Made a Million by David M. Schwartz.


• Manipulatives: coins/bills, interactive white board, Judy Clocks.

• Technology: United States Mint - http://www.usmint.gov/kids; Please see the recommended websites from the Technology Committee.

• Textbook

— CONTINUED FROM PREVIOUS PAGE —

AUDIO GLOSSARY
From A to Z: Grade 2 Glossary (English)
De la A a la Z: Grade 2 Glossary (Spanish)

ENRICHMENT
Flash Activities
MATH ALIVE AT HOME
Take-Home Activities

Archdiocese of Philadelphia
Category: Measurement and Data

Standard M.2.I
Represent and interpret data.
Essential Questions
What should I be able to answer?
What guides my thinking?

- Why do we need to learn how to measure in everyday life?
- Why is it important to measure using a standard tool?
- How do I ask appropriate questions to find out specific data?
- How can we collect data to learn about each other?
- How do tally marks help us to organize data?
Essential Questions
What should I be able to answer?  
What guides my thinking?

- How can I organize large amounts of data using a pictograph or bar graph?

Chapter 3 Data and Graphs: Using Operations

Math Centers: Calendar Project: Weather Watch (make a bar graph)—TE p. 113H
Intervention Suggestions: 3. Make a pictograph from the data in the tally chart; 4. Interpret data in a pictograph—TE p. 113K
Lesson 2: Pictographs—pp. 117–118
Lesson 3: Bar Graphs—pp. 119–120
Category: Measurement and Data

**Standard M.2.1** Represent and interpret data.

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

- Create a “Measurement Station” in your classroom. In this area, have a “Question of the Day” where students can answer via tally mark or by adding his/her name square to create a bar graph or pictograph. In addition, in this measurement station have a weekly item that students can measure and a monthly item where students can estimate the number of items in a container.

- Allow students the opportunity to measure various classroom and home objects using a nonstandard tool (i.e. counting cube, each student’s footprint, paper clip, pencil, etc.) Have students compare measurements. At the end of the lesson, have students write on an Exit Card why it is important to have a standard unit of measurement.

**CHAPTER 3 DATA AND GRAPHS: USING OPERATIONS**

- Check Your Progress: Lessons 1–6—on-line
- Check Your Progress: Lessons 7–12—on-line

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—
  www.progressinmathematics.com

  Grade 2 > Teacher Center (login required) > Common Core
  Check Your Progress with Analyses
Represent and interpret data.

**Category:** Measurement and Data

**Standard M.2.I**

**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**SUMMATIVE**

- “Graphing Guru” – Have students create a question which they will use to survey classmates and members of their families. Once the question is formulated, students should survey a given number of people and collect data using tally marks. Afterwards, the students should create a pictograph and bar graph to represent the data. Students should be exposed to both horizontal and vertical bar graphs.

- “Picture This...” – In their Math Journals, students can create a Venn Diagram that shows the similarities and differences between a pictograph and bar graph. Afterwards, students can give examples of when it would be appropriate to create a pictograph and when it would appropriate to create a bar graph.

**CHAPTER 3 DATA AND GRAPHS: USING OPERATIONS**

**Chapter 3 Test—on-line**

* To access online summative assessment, go to—
  www.progressinmathematics.com

**Grade 2 > Teacher Center** (login required) > **Common Core**

Chapter Tests (with Item Analysis)

* See “Problem Solving” on the chapter test.

Post Tests (with Item Analysis)
Category: Measurement and Data

**Standard M.2.I**
Represent and interpret data.

**Skills**
What skills do I need to have in order to answer the essential questions?

**M.2.I.1** Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

**Chapter 3 Data and Graphs: Using Operations**
Lesson 9: Line Plots—pp. 133–134

**Chapter 11 Measurement**
Lesson 17A: Measurement and Data—on-line
Category: Measurement and Data

**Standard M.2.1** Represent and interpret data.

**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.1.2** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

**Chapter 3 Data and Graphs: Using Operations**

- Lesson 2: Pictographs—pp. 117–118
- Lesson 3: Bar Graphs—pp. 119–120
- Lesson 4: Surveys—pp. 121–122
- Lesson 5: Range, Mode, and Median—pp. 123–124
- Lesson 6: Understand Data—pp. 125–126
- Lesson 7: Compare Data—pp. 129–130
- Lesson 12: Problem Solving Applications: Mixed Strategies—pp. 139–140
Category: Measurement and Data

**Standard M.2.1** Represent and interpret data.

## Content

**What content do I need to know in order to answer the essential questions?**

- Math Vocabulary: bar graph, data, horizontal, key, length, line plot, pictograph, symbol, survey, tally chart, & vertical.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —
  [www.progressinmathematics.com](http://www.progressinmathematics.com)

Grade 2

**TEACHER CENTER** (login required)

- **PLANNING**
  - MATH ALIVE AT HOME
  - Take-Home Activities (Vocabulary)

- **PRACTICE**
  - Vocabulary Activities

**RESOURCES**

- **AUDIO GLOSSARY** (English and Spanish)

**Student Center/Family Center** (no login required)

- **PRACTICE**
  - Vocabulary Activities

- **AUDIO GLOSSARY** (English and Spanish)

- **MATH ALIVE AT HOME**
  - Take-Home Activities (Vocabulary)
Category: Measurement and Data

Standard M.2.I Represent and interpret data.

Content
What content do I need to know in order to answer the essential questions?

- Math Concepts: Knowledge of Addition & Subtraction

<table>
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<tr>
<th>Chapter</th>
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<th>Lessons</th>
<th>Pages</th>
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<tbody>
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<td>Subtraction: Two-Digit Numbers</td>
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Archdiocese of Philadelphia

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2 140
Category: Measurement and Data

**Standard M.2.I** Represent and interpret data.

**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Concepts: Problem solving strategies

* See problem solving strategies—
  - Act It Out—pp. 103–104, 533
  - Make a Table—pp. 229–230, 231, 304, 333, 371
  - Make an Organized List—pp. 68, 76, 369–370, 371, 388, 430, 534
  - Use a Map—pp. 531–532, 533
  - Use a Pattern—pp. 277–278, 279, 294, 302, 429, 589
  - Write a Number Sentence—pp. 4, 8, 10, 12, 16, 17, 20, 22, 23–24, 30, 33–34, 35–36, 103–104, 137, 139, 140, 384, 388, 407–408, 411–412, 424
**Integration of Learning**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

- **ELA:** Create a bar graph/pictograph to demonstrate the number of books read or favorite genre.
- **Religion:** Create a bar graph/pictograph to display the students’ favorite story of forgiveness.
- **Science:** Create a bar graph/pictograph to show local weather patterns for a specified time; Have students create a chart showing the basic food groups. Each student should tally how many servings of each food group he/she eats in one day. Then, the results could be graphed. As ELA extension, students could write about if he/she is eating in a healthy way.
- **Social Studies:** Create a personal timeline of important events in a student’s life.

**CHAPTER 3 DATA AND GRAPHS: USING OPERATIONS**

- **Math Centers:** Calendar Project: Weather Watch (make a bar graph)—TE p. 113H
- **Intervention Suggestions:** 3. Make a pictograph from the data in the tally chart; 4. Interpret data in a pictograph—TE p. 113K
- **Lesson 2:** Pictographs—pp. 117–118
- **Lesson 3:** Bar Graphs—pp. 119–120

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Archdiocese of Philadelphia
Category: Measurement and Data

Standard M.2.1 Represent and interpret data.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: The Biggest Fish by Shelia Keenan; How Big is a Foot?; Inch by Inch by Leo Lionni; Lemonade for Sale by Stuart J. Murphy; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower
- First in Math Website (http://www.firstinmath.com): Know & Show 3 (“Picture This”)
- Manipulatives: classroom objects to measure, graphing materials (crayons, colored pencils, graph paper, interactive white board, markers, paper, stickers/symbols for pictograph, tally chart, etc.), meter stick, yard stick, ruler
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndGradeData.aspx); Microsoft Excel (Bar Graphs); Please see the recommended websites from the Technology Committee.
- Textbook

* To access online resources, go to—

www.progressinmathematics.com

Grade 2

TEACHER CENTER (login required)

1 PLANNING

LESSON PLANNING
Scope and Sequence
Road Maps
Priority Lessons Table of Contents
Pacing Guides
Blackline Masters

PROFESSIONAL DEVELOPMENT
Chapter Support
Research Base
Math Study

MATH ALIVE AT HOME
Take-Home Activities

MANAGEMENT SYSTEM
Chapter Records

2 PRACTICE

PRACTICE
Skills Update
Math Minutes
Problem of the Day

— CONTINUED ON NEXT PAGE —
Standard M.2.1  Represent and interpret data.

Tools for Learning

Which tools will I use that will assist me in my learning?

- Children’s Literature: The Biggest Fish by Shelia Keenan; How Big is a Foot?; Inch by Inch by Leo Lionni; Lemonade for Sale by Stuart J. Murphy; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower
- First in Math Website (http://www.firstinmath.com): Know & Show 3 (“Picture This”)
- Manipulatives: classroom objects to measure, graphing materials (crayons, colored pencils, graph paper, interactive white board, markers, paper, stickers/symbols for pictograph, tally chart, etc.), meter stick, yard stick, ruler
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndGradeData.aspx); Microsoft Excel (Bar Graphs); Please see the recommended websites from the Technology Committee.
- Textbook

Sadlier Progress in Mathematics Grade 2

Archdiocese of Philadelphia
Category: Measurement and Data

Standard M.2.1 Represent and interpret data.

Tools for Learning
Which tools will I use that will assist me in my learning?

- Children’s Literature: The Biggest Fish by Shelia Keenan; How Big is a Foot?; Inch by Inch by Leo Lionni; Lemonade for Sale by Stuart J. Murphy; Moira’s Birthday by Robert Munsch; Ten Beads Tall by Pam Adams; & Twelve Snails to One Lizard by Susan Hightower
- First in Math Website (http://www.firstinmath.com): Know & Show 3 (“Picture This”)
- Manipulatives: classroom objects to measure, graphing materials (crayons, colored pencils, graph paper, interactive white board, markers, paper, stickers/symbols for pictograph, tally chart, etc.), meter stick, yard stick, ruler
- Technology: Ed-U-Smart (http://ed-u-smart.com/2ndGradeData.aspx); Microsoft Excel (Bar Graphs); Please see the recommended websites from the Technology Committee.
- Textbook

Archdiocese of Philadelphia
Category: Measurement and Data

**Standard M.2.I** Represent and interpret data.

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Archdiocese of Philadelphia

Sadlier *Progress in Mathematics* Grade 2

Sadlier *Progress in Mathematics* Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Category: Geometry

Standard M.2.J
Reason with shapes and their attributes.
Category: Geometry


**Essential Questions**

*What should I be able to answer?*

*What guides my thinking?*

- How are shapes represented in our world? What are the differences between two and three dimensional shapes?

- How can recognizing patterns help me solve problems?

- How can I find smaller shapes in a larger picture?
- How can I create new shapes from other shapes?

- How can I divide a shape into equal parts?

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**Chapter 6 Geometry**

Lesson 1: Solid Figures—pp. 247–248
Lesson 2: Faces, Edges, Vertices—pp. 249–250
Lesson 3: Explore Plane Figures—pp. 251–252
Lesson 4: Plane Figures—pp. 253–254
Lesson 4A: Identify and Draw Plane Figures—on-line
Lesson 4B: Attributes of Plane Figures—on-line

Lesson 10: Find a Pattern—pp. 269–270

Lesson 11: Ways to Make Figures—pp. 271–272
Connection: Math and the Real World: Quilt Patterns—p. 282

Lesson 7: Lines of Symmetry—pp. 261–262
Category: Geometry


**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**FORMATIVE**

- **“Shape Sorter”** – Cut basic shapes in various sizes from cardboard or foam. Place the shapes in a bag. Have students place their hands in the bag and choose a shape. Before pulling the shape out of the bag, have the student describe as many characteristics/properties as possible. If possible, the student should attempt to name the shape.

- **“Geometric War”** – Provide each small group of students with a deck of geometric shape cards. Player #1 draws a card and describes the shape to the group. The first child to correctly identify the shape takes the card and adds it to his/her pile. This procedure continues until all cards have been used. The winner of the game will be the student with the most cards.

- **“Scavenger Hunt”** – Students should locate various shapes in school and at home. Students can compare the objects that they found. Afterwards, students can form these shapes using a geoboard.

- **“Fraction Frenzy”** – Drop a handful of pennies or other coins on a table. Have students observe how many coins landed heads-up and how many landed tails-up. Students could determine the fraction of coins that is head-up and the fraction of coins that is tails-up. This activity can also be used with M&Ms or Skittles. Students can estimate what fractions of the candies are red, yellow, green, orange, brown, etc.

**Chapter 6 Geometry**

- Check Your Progress: Lessons 1–5—on-line
- Check Your Progress: Lessons 6–9—on-line
- Check Your Progress: Lessons 10–15—on-line

* See Write About It/Math Journal and Talk It Over activities in the TE Lesson Plan, also Step 4: Summarize/Assess.

* To access online formative assessment, go to—
  www.progressinmathematics.com

  Grade 2 > Teacher Center (login required) > Common Core
  Check Your Progress with Analyses
Category: Geometry


**Assessment**

*What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*

**SUMMATIVE**

- “Baking with Fractions” – In the kitchen at school or at home, allow students the opportunity to make a recipe and do the measuring. For example, if the class makes brownies allow the children to determine how the brownies would be cut so each student gets an equal share.

- “The Riddler” – Have students create riddles about real life solid shapes. Compile these riddles into a class booklet.

- “Geometry in Our World” – Have students in your class create a booklet or PowerPoint with pictures of real world items with different shapes. Students can find pictures using the Internet or taking their own pictures with a camera.

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**Chapter 6 Geometry**

**Chapter 6 Test—on-line**

* To access online summative assessment, go to—
  www.progressinmathematics.com

**Grade 2 > Teacher Center** (login required) > **Common Core**

  * Chapter Tests (with Item Analysis)
  * See “Problem Solving” on the chapter test.
  * Post Tests (with Item Analysis)
Category: Geometry


**Skills**

*What skills do I need to have in order to answer the essential questions?*

**M.2.J.1** Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. *Sizes are compared directly or visually, not compared by measuring.* Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

**CHAPTER 6 GEOMETRY**

- Lesson 3: Explore Plane Figures—pp. 251–252
- Lesson 4A: Identify and Draw Plane Figures—on-line
- Lesson 4B: Attributes of Plane Figures—on-line
- Lesson 5: Sort Figures—pp. 255–256
- Lesson 11: Ways to Make Figures—pp. 271–272
- Lesson 15: Problem Solving Applications: Mixed Strategies—pp. 279–280

Archdiocese of Philadelphia

Sadlier Progress in Mathematics Correlated to the Archdiocese of Philadelphia Mathematics Standards for Grade 2
Skills
What skills do I need to have in order to answer the essential questions?

M.2.J.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
**Category: Geometry**


**Skills**

What skills do I need to have in order to answer the essential questions?

**M.2.J.3** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

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**Chapter 10 Fractions and Probability**

- Lesson 1: Fractions: 1/2, 1/4, 1/8—p. 445
- Lesson 1A: Fractions: 1/2, 1/3, 1/4—online
- Lesson 2: More Fractions—pp. 447–448
- Lesson 3: Compare Fractions—pp. 449–450
- Lesson 4: Order Fractions—pp. 451–452
- Lesson 5: Other Fractions—pp. 453–454
- Lesson 6: Fractions Equal to 1—pp. 457–458
Category: Geometry


Content
What content do I need to know in order to answer the essential questions?

- Math Vocabulary: angle, attribute, circle, corner, cube, edge, equal share, face, flat surface, fraction, fourths, half, halves, hexagon, partition, pentagon, quadrilateral, rectangle, thirds, triangle, & vertex/vertices.

* New vocabulary is highlighted in yellow and defined in context in each lesson, also highlighted in yellow and presented in the Lesson Plan in the Teacher’s Edition.

Following “Overview” at the beginning of each chapter in the TE is “Math Vocabulary.” It includes Vocabulary Review, Math Word Wall, Vocabulary Project, and Chapter Words. Included is the recommendation that children add vocabulary words to their Math Journals.

* See also the following online resources —
www.progressinmathematics.com
Grade 2

TEACHER CENTER (login required)
PLANNING
MATH ALIVE AT HOME
Take-Home Activities (Vocabulary)
PRACTICE
Vocabulary Activities
RESOURCES
AUDIO GLOSSARY (English and Spanish)

Student Center/Family Center (no login required)
PRACTICE
Vocabulary Activities
AUDIO GLOSSARY (English and Spanish)
MATH ALIVE AT HOME
Take-Home Activities (Vocabulary)
Category: Geometry


**Content**

*What content do I need to know in order to answer the essential questions?*

- Math Concepts: Ability to differentiate between defining attributes and non-defining attributes
- Knowledge of two & three dimensional shapes

**CHAPTER 6 GEOMETRY**

| Lesson 1: Solid Figures—pp. 247–248 |
| Lesson 2: Faces, Edges, Vertices—pp. 249–250 |
| Lesson 3: Explore Plane Figures—pp. 251–252 |
| Lesson 4: Plane Figures—pp. 253–254 |
| Lesson 4A: Identify and Draw Plane Figures—on-line |
| Lesson 4B: Attributes of Plane Figures—on-line |

- Knowledge of halves and quarters

**CHAPTER 10 FRACTIONS AND PROBABILITY**

| Lesson 1: Fractions: 1/2, 1/4, 1/8—p. 445 |
| Lesson 1A: Fractions: 1/2, 1/3, 1/4—on-line |
Category: Geometry


Integration of Learning
What will I be expected to know, understand, and be able to do in order to demonstrate my learning?

- ELA:
- Religion: Use the book 3 in 1: A Picture Book of God by Joanne Markhausen to teach about the Holy Trinity; Have students create a liturgical calendar that demonstrates the seasons of the Church year.
- Science: Using Oreo cookies, allow children to create the phases of the moon. By creating the phases of the moon on the cookies, students practice working with fractions.
- Social Studies: Using toothpicks and gumdrops/marshmallows, students can create 3-D geometric shapes in order to form a neighborhood or community. Students should label the house numbers in their community. Students should be able to explain how even number houses are on one side and odd number houses are on another side. This activity ties in with Standard M.2.D. Understand Place Value.

Chapter 6 Geometry
Chapter Opener—TE pp. 245–246

* See also lesson introduction and problem solving exercises—pp. 247–254, 259–266, 269–274, 277–280, 282

Chapter 2 Place Value to 100
Lesson 12A: Model Even and Odd—on-line
Lesson 13: Even and Odd Numbers—pp. 93–94
Lesson 17: Problem Solving Strategy: Use Logical Reasoning (even)—pp. 101–102
Lesson 18: Problem Solving Applications: Mixed Strategies (odd)—pp. 104

Chapter 3 Data and Graphs: Using Operations
Lesson 9: Line Plots: Do You Remember?—p. 134
Lesson 10: Venn Diagrams: Number Sort (even numbers)—p. 136

Chapter 12 Multiplication and Division
Intervention Suggestions: 6. Identify even and odd numbers—TE p. 547K
Category: Geometry


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- First in Math Website (http://www.firstinmath.com): K2 Pundi’s Puzzle & Triplets, Shape Shuffle, Speed Shuffle
- Manipulatives: fraction bars/circles, geoboards, interactive white board, pattern blocks
- Technology: Ed-U-Smart (http://ed-u-smart.comm/2ndGradeGeometry.aspx; http://ed-u-smart.com/2ndFract.aspx); Please see the recommended websites from the Technology Committee.
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Grade 2

TEACHER CENTER (login required)
1 PLANNING
LESSON PLANNING
Scope and Sequence
Road Maps
Priority Lessons Table of Contents
Pacing Guides
Blackline Masters
PROFESSIONAL DEVELOPMENT
Chapter Support
Research Base
Math Study
MATH ALIVE AT HOME
Take-Home Activities
MANAGEMENT SYSTEM
Chapter Records
2 PRACTICE
PRACTICE
Skills Update
Math Minutes
Problem of the Day

— CONTINUED ON NEXT PAGE —
Category: Geometry


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