<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Can I write multiplication equations that describe dot arrangements? Can I use arrays to model multiplication? Can I determine whether one number is a factor or multiple of another?</td>
<td>5.0A.1; 5.0A.2; 5.NBT.5</td>
<td>MP7: Look for and make use of a structure.</td>
<td>Ongoing Assessment: Observing students at work: Can students view arrays of dots or their figures and write multiplication equations to represent them? Can students identify and examine properties of numbers?</td>
<td>Ten Minute Math: Quick Images Seeing Numbers; Building Arrays; Number Puzzles: 1 Clue</td>
<td>multiplication; division; factor; product; array; dimensions (of an array); unmarked array; multiplication combination; multiple</td>
<td>T1; M13-15; SAB 1-4; SMH p.16-17; color tiles</td>
<td>multiplication arrays division</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Can I identify prime, square, even and odd numbers? Can I determine whether one number is a factor or multiple of another? Can I use arrays to model multiplication?</td>
<td>5.0A.2; 5.NBT.5</td>
<td>MP6: Attend to precision</td>
<td>OA Can students find numbers that share common factors?</td>
<td>Ten Minute Math: Quick Images Seeing Numbers; Primes and Squares; Number Puzzles: 2 Clues; How Many Answers?</td>
<td>even number; odd number; prime number; composite number; square number</td>
<td>SAB 1-7; M15; Color Tiles; SMH p21-22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Can I identify prime, square, even and odd numbers? Can I determine whether one number is a factor or multiple of another? Can I identify and learn multiplication combination (facts) not yet known fluently?</td>
<td>5.0A.2; 5.NBT.5</td>
<td>MP1: Make sense of problems and persevere in solving them.</td>
<td>OA Observing students at work: Can students use reasoning and knowledge of properties of numbers to find a given number? Can students use their knowledge of prime, square, odd, even, factors and multiples to identify a number with certain properties?</td>
<td>Ten Minute Math: Quick Images Seeing Numbers; Introducing Number Puzzles 4 Clues; Solving Number Puzzles 4 Clues; Explaining Homework</td>
<td>T14-16; M16-26; M31; SAB p.8-11; SMH 18-22; color tiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Can I use known multiplication combinations to find equivalent multiplication combinations? Can I use known multiplication combinations to find multiplication combinations for numbers related by place value? Can I find all the ways to multiply numbers with certain properties?</td>
<td>5.0A.1; 5.0A.2; 5.NBT.5</td>
<td>MP1: Make sense of problems and persevere in solving them.</td>
<td>OA Observing students at work: Can students find and organize multiplication combinations for 18 and 180?</td>
<td>Ten Minute Math: Quick Images Seeing Numbers; Finding Multiplication Combinations for 18 and 180</td>
<td>SAB 12-14; SMH 23-24; M27-28; M30</td>
<td>Language Arts: Writing to explain mathematical thinking: Session 1.4, p 49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# 5th Grade Math

## Unit 1: Number Puzzles & Multiple Towers

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 1.5     | ● Can I use known multiplication combinations to find equivalent multiplication combinations?  
         ● Can I use known multiplication combinations to find multiplication combinations for numbers related by place value?  
         ● Can I find all the ways to multiply whole numbers for a given product?  
         ● Can I use properties (even, odd, prime, square) and relationships (factor, multiple) of numbers to solve problems?  
         | 5.OA.2; 5.NBT.5 | MP1: Make sense of problems and persevere in solving them. |  | Ten Minute Math: Quick Images: Seeing Numbers; Introducing Math Workshop; Number Puzzles and Finding Factors; 2A Assessment: Number Puzzles 2B Finding Factors; Solving a Number Puzzle | | M30; M32; M33; M34; SAB p12, 15-17; SMH p25-29 | | multiplication arrays division |
| 1.6     | ● Can I find all the factors of a number?  
         ● Can I find all the ways to multiply whole numbers for a given product?  
         | 5.OA.2, 5.NBT.5 | MP1: Make sense of problems and persevere in solving them. | OA: Can students find as many multiplication combinations as they can, using two or more factors, for given products? | Number Puzzles and Finding Factors, continued-Assessment: Number Puzzles; Finding Factors.  
*Finding all the Factors.  
*Daily Practice and Homework.  
*Ten-Minute Math-Quick Images: Seeing prime factorization. | SAB-19-22; Materials from 1.4 and 1.5 as needed; M24; SH p. 18. | | Language Arts: Writing to explain mathematical thinking:  
● Session 1.6, pp 58 & 59 |
| 1.7     | ● Can I find the prime factorization of a number?  
         ● Can I use known multiplication combinations to find equivalent multiplication combinations (e.g., 18=3x6=3x(2x3))?  
         ● Can I use known multiplication combinations for numbers related by place value (e.g., 3x6=18; 3x6x10=180)? | 5.OA.1, 5.OA.2, 5.NBT.5 | MP1: Make sense of problems and persevere in solving them. | OA Can students find multiplication combinations with two or more factors for given products? | The Longest Multiplication combination; Factors of Larger Numbers; Daily Practice and Homework; Ten Minute Math-Quick Images: Seeing Numbers prime factorization. | SAB, pp. 12,15,19-20,23-24; Calculators(optional); M30; SH, pp.23-24. | | |
## Unit 1: Number Puzzles & Multiple Towers

### Investigation 2: Multiplication Strategies

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 2.1     | Can I solve 2-digit by 2-digit multiplication problems?  
         | Can I describe and compare strategies used to solve multiplication problems?  
         | Can I create a story problem represented by a multiplication or division expression? | 5.OA.2, 5.NBT.5 | MP6: Attend to precision | OA  
         | Can students solve a 2-digit by 2-digit multiplication problem? | *Solving 35x28,  
         | *Naming Strategies.  
         | *Daily Practice and Homework.  
         | *Ten Minute Math-Quick Images: Seeing Numbers | representation | SAB, pp.25-26,  
         | SH pp. 30-32,  
         | M15, 51;  
         | 12” x 18” construction paper;  
         | markers;  
         | color tiles (as needed); connecting cubes (as needed) | multiplication arrays division | |
| 2.2     | Can I represent a multiplication or division problem with a picture or diagram?  
         | Can I use arrays to model multiplication?  
         | Can I solve 2-digit by 2-digit multiplication problems? | 5.NBT.5 | MP2: Reason abstractly and quantitatively. | OA  
         | Can students use reasoning and knowledge of properties of numbers to find a given number? | More Number Puzzles;  
         | Using Arrays to Represent Solutions;  
         | Solving Multiplication Problems;  
         | Daily Practice and Homework;  
         | Ten minute Math-Number Puzzles | distributive property | SAB, pp.27-29,  
         | SH p17;  
         | M15, M35,-43;  
         | Color tiles (as needed); Posters of 35x28. | |
| 2.3     | Can I multiply fluently by multiples of 10?  
         | Can I compare multiplication problems to determine which product is greater? | 5.NBT.2, 5.NBT.5 | MP3: Construct viable arguments and critique the reasoning of others. | OA  
         | Can students compare multiplication problems involving multiples of 10 and decide which product is greater? | Ten Minute Math:  
         | Number Puzzles;  
         | Multiplying by 10s;  
         | Multiplication Compare;  
         | Making Estimates | associative property; less than; greater than | SAB p31-33;  
         | M44-45, 46;  
         | SMH pG11 | Language Arts: Writing to explain mathematical thinking:  
         | ● Session 2.3, p 89 | |
| 2.4     | Can I solve 2 digit by 2 digit multiplication problems?  
         | Can I break up multiplication problems efficiently; multiplying fluently by multiples of 10? | 5.NBT.2, 5.NBT.5 | MP7: Look for and make use of a structure. | OA  
         | Can students solve related multiplication problems?  
         | Can students solve 2 digit by 2 digit multiplication problems in a story context? | Ten Minute Math:  
         | Number Puzzles;  
         | Introducing Multiplication Cluster Problems;  
         | Multiplication Practice 2A Multiplication Cluster Problems;  
         | 2B Multiplication Compare;  
         | 2C Problems about Teams | SAB 35-38;  
         | materials from Session 2.3, Activity 2;  
         | M47; M48-50;  
         | SMH p35, G11 | |

Unit 1  Page 3
# 5th Grade Math

## Session | Essential Questions | Content Standards | Practices | Assessments | Sample Lessons/Activities | Vocabulary | Resources | Interdisciplinary Connections | Prior Knowledges
---|---|---|---|---|---|---|---|---|---
### Unit 1: Number Puzzles & Multiple Towers

#### 2.5
- Can I solve 2 digit by 2 digit multiplication problems?
- Can I break up multiplication problems efficiently?
- Can I multiply fluently by multiples of 10?
- Can I use clear and concise notation?

<table>
<thead>
<tr>
<th>5.NBT.2, 5.NBT.5</th>
<th>MP7: Look for and make use of a structure.</th>
<th>OA Can students study ways to begin multiplication problems as a way to develop efficiency and fluency?</th>
<th>Ten Minute Math: Number Puzzles; Multiplication Clusters; More Multiplication Practice: 2A Multiplication Cluster Problems, 2B Multiplication Compare, 2C Problems Involving Teams</th>
<th>SAB p35, 36, 39, 40; SMH p35; G11; materials from 2.3</th>
</tr>
</thead>
</table>

#### 2.6
- Can I solve 2 digit by 2 digit multiplication problems?
- Can I break up multiplication problems efficiently?
- Can I use clear and concise notation?

<table>
<thead>
<tr>
<th>5.NBT.5</th>
<th>MP3: Construct viable arguments and critique the reasoning of the others; MP6: Attend to precision</th>
<th>OA Can students study ways to begin multiplication problems as a way to develop efficiency and fluency?</th>
<th>Ten Minute Math: Number Puzzles; Starter Problems; Multiplication Strategies</th>
<th>SAB p41-43; SMH p30-32;</th>
</tr>
</thead>
</table>

#### 2.7
- Can I solve 2 digit by 2 digit multiplication problems?
- Can I break up multiplication problems efficiently?

<table>
<thead>
<tr>
<th>5.NBT.5</th>
<th>MP1: Make sense of problems and persevere in solving them.</th>
<th>OA Can students solve multiplication problems by using a given first step? Can students use knowledge of multiplication to solve a multiplication problem? M51 Unit Assessment</th>
<th>Ten Minute Math: Quick Images: Seeing Numbers; More Starter Problems; What is the Answer?</th>
<th>SAB p44-46; SMH p30-32; M51</th>
</tr>
</thead>
</table>

### Investigation 3: Division Strategies

#### 3.1
- Can I represent a multiplication or division problem with a picture or diagram?
- Can I create a story problem represented by a multiplication or division expression?
- Can I describe and compare strategies used to solve division problems?

| 5.NBT.5; 5.NBT.6 | MP2: Reason abstractly and quantitatively. | OA Can students solve a division problem with a 3 digit dividend and a 2 digit divisor? | Ten Minute Math: Quick Images: Seeing Numbers; Solving a Division Problem; Naming Strategies | M15; M31; color tiles; connecting cubes; SAB 47-48; SMH p14, 37 |
## 5th Grade Math

### Unit 1: Number Puzzles & Multiple Towers

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3.2     | ● Can I use knowledge of multiples of 10 to solve division problems?  
● Can I use and interpret notation that represents division and multiple towers?  
● Can I use and interpret notation that represents division and relate division and multiplication notations?  
● Can I use knowledge of multiples of 10 to solve division problems?  
● Can I solve division problems with 2 digit divisors?  
● Can I make sense of remainders in terms of problem contexts?  
| 5.NBT.2;  
5.NBT.5;  
5.NBT.6; | MP7: Look for and make use of a structure.  
OA  
Can students solve multiplication and division problems, using knowledge of the multiples of 21?  
| Ten Minute Math: Quick Images: Seeing Numbers;  
Counting by 21s;  
Introducing Multiple Towers;  
Using Multiple Towers | multiple | List of multiples of 21;  
SAB p49-52;  
SMH p20 | multiplication  
arrays  
division |
| 3.3     | ● Can I describe and compare strategies used to solve division problems?  
● Can I use knowledge of multiples of 10 to solve division problems?  
● Can I solve division problems with 2 digit divisors?  
● Can I make sense of remainders in terms of problem contexts?  
| 5.NBT.2;  
5.NBT.5;  
5.NBT.6; | MP2: Reason abstractly and quantitatively.  
OA  
Can students solve division problems?  
| Ten Minute Math: Quick Images: Seeing Numbers;  
Division Problems;  
Division Strategies | SAB p53-54;  
SMH p38-39 | |
| 3.4     | ● Can I use and interpret notation that represents division and relating division and multiplication notations?  
● Can I solve division problems with 2 digit divisors?  
● Can I use clear and concise notation?  
| 5.NBT.6 | MP6: Attend to precision  
OA  
Can students solve division problems by breaking the problem into manageable parts?  
| Ten Minute Math:  
Number Puzzles;  
Numbers off the Tower;  
Division Notation | SAB p55-58;  
Multiple Tower for 21 (from Session 2.2);  
SMH p20 | |
| 3.5     | ● Can I solve division problems with 2 digit divisors?  
● Can I use and interpret notation that represents division and relate division and multiplication notations?  
● Can I solve a division problem by breaking the dividend into parts?  
| 5.NBT.6 | MP7: Look for and make use of a structure.  
OA  
Can students solve division problems by using related problems?  
| Ten Minute Math:  
Number Puzzles;  
Division Cluster Problems;  
Breaking Up Numbers | SAB p59-62;  
SMH p35 | |
# 5th Grade Math

## Unit 1: Number Puzzles & Multiple Towers

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3.6     | - Can I solve division problems with 2 digit divisors?  
         |                    | S.NBT.6        | MP2: Reason abstractly and quantitatively. | OA          | Can students compare quotients of two division problems to decide which is greater?; Can students solve division word problems? | Ten Minute Math: Number Puzzles; Introducing Division Compare; Practicing Division Strategies: 2A Division Cluster Problems, 2B Division Compare, 2C Solving Division Problems; Reasoning about Division Compare | M44-45; M52; M53; M48-M50; SAB p59-60, p63-66; SMH pG6, 38-39 | Language Arts: Writing to explain mathematical thinking: - Session 3.6, p 146 |
| 3.7     | - Can I solve division problems with 2 digit divisors?  
         |                    | S.NBT.6        | MP2: Reason abstractly and quantitatively. | OA          | Can students compare quotients of two division problems to decide which is greater?; Can students solve division word problems? | Ten Minute Math: Number Puzzles; Practicing Division Strategies 1A Division Cluster Problems, 1B Division Compare, 1C Solving Division Problems; Division Strategies | SAB p59-60, 65-66, 71; SMH 38-39; Materials from session 3.6, Activity 2B |
| 3.8     | - Can I solve 2 digit by 2 digit multiplication problems?  
         |                    | S.NBT.5; S.NBT.6 | MP1: Make sense of problems and persevere in solving them. MP2: Reason abstractly and quantitatively. | OA          | Can students use their knowledge of multiplication and division to solve three problems on the end of the unit assessment?; End of Unit Assessment: M54-55 | Ten Minute Math: Number Puzzles; End of Unit Assessment | M54-55; SAB p72; SMH p15 | |

- **OA** Can students use their knowledge of multiplication and division to solve three problems on the end of the unit assessment?; End of Unit Assessment: M54-55
- **MP1** Make sense of problems and persevere in solving them.
- **MP2** Reason abstractly and quantitatively.
## 5th Grade Math

### Unit 2: Prisms & Pyramids

#### Investigation 1: Finding the Volume of Boxes

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Can I decompose 3-D shapes and then recombine them to make a given building? Can I determine the number of cubes that will fit into the box made by a given pattern? Can I develop a strategy for determining the volume of rectangular prisms?</td>
<td>5.MD.3.a 5.MD.3.b 5.MD.4</td>
<td>MP1: Make sense of problems and perseverance MPB: Look for and express regularity in repeated reasoning</td>
<td>Ongoing Assessment: Can students find the volume of given boxes?</td>
<td>1. Introducing Quick Images: 3-D 2. Introducing How Many Cubes? 3. How Many Cubes? 4. 10-Minute Math: Quick Images: 3-D</td>
<td>● volume</td>
<td>• IWB: 2.1.1.  • Family letter M7-M8  • Connecting Cubes (20 per student)  • Three-Quarter-Inch Grid Paper (M11)  • T30 Packaging Factory  • SAB: p 1-3, 4-5  • SH: page 105</td>
<td>Language Arts: Writing to explain mathematical thinking:  • Session 1.1, p 29</td>
<td>● prisms and pyramids ● volume ● 3-D and 2-D figures</td>
</tr>
<tr>
<td>1.3</td>
<td>Can I find volume of rectangular prisms? Do I understand how the dimensions of a box change when the volume is changed (doubled, halved, or tripled)?</td>
<td>5.MD.5.a</td>
<td>MP1: Make sense of problems and perseverance MPB: Look for and express regularity in repeated reasoning</td>
<td>1. Ongoing Assessment: Observing Students at Work: Can students explore the relationship between the dimension of a box and doubling the number of cubes in the box? 2. What Are the Dimensions? 3. 10-Minute Math: Quick Images: 3-D</td>
<td>1. Doubling the Cubes 2. What Are the Dimensions? 3. 10-Minute Math: Quick Images: 3-D</td>
<td></td>
<td>• IWB: 2.1.3.  • Connecting Cubes (20 per student)  • Three-Quarter-Inch Grid Paper (M11)  • SAB: pages 11, 12-14  • SH: page 108</td>
<td>Language Arts: Writing to explain mathematical thinking:  • Session 1.3, p 37</td>
<td></td>
</tr>
</tbody>
</table>
# 5th Grade Math

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 2: Prisms &amp; Pyramids</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **1.5A** | ● Can I use formulas to find the volume of rectangular prisms?  
● Can I find the volume of a solid composed of two rectangular prisms? | S.GA.1  
S.MD.3.a  
S.MD.3b  
S.MD.5.b  
S.MD.5.c | MP1: Make sense of problems and persevere  
MP4: Model with mathematics | 1. Ongoing Assessment: Observing Students at Work:  
● Can students find the volume of each rectangular prism in the solid and add the volumes?  
● Can students divide the solid into rectangular prisms?  
● Can students find the volume of each of the prisms? | 1. Volume Formulas  
2. Combining Volumes  
3. 10-Minute-Math: Order of Operations | cubic feet  
• cubic inches | Common Core Book: Pages CC14-CC18  
IWB: 2.1.5  
Connecting Cubes  
SAB: pages 19A, 19B, 19C, 19D  
SH: page 105-107, 109-110 | prisms and pyramids  
• volume  
• 3-D and 2-D figures |
| **1.5** | ● Can I find the volume of rectangular prisms?  
● Can I organize rectangular packages to fit in rectangular boxes?  
● Do I understand how the dimensions of a box change when the volume is changed (doubled, halved, or tripled)? | S.NBT.5  
S.MD.5.a | MP1: Make sense of problems and persevere  
MP4: Model with mathematics | 1. Assessment: Finding the Volume of Rectangular Prisms  
2. Ongoing Assessment: Observing Students at Work:  
● Can students find the volume and draw box patterns for rectangular prisms?  
● Can students explore the relationship between the dimensions of a box and doubling or halving the number of cubes in a box?  
● Are students able to draw the box pattern?  
2. Finding the Volume of Rectangular Prisms  
3. Counting Packages  
4. 10-Minute-Math: Estimation & Number Sense |  
IWB: 2.1.5  
Connecting Cubes (70 per pair)  
Connecting Cubes (70 per pair)  
Three-Quarter-Inch Grid Paper (M11)  
M19-M20 Assessment  
M18 Centimeter Grid Paper  
SAB: p 15; 19-21; 22  
SH: p 105, 106-107 | Language Arts: Writing to explain mathematical thinking:  
Session 1.5, pp 50-51 |
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 1.6     | ● Can I find the volume of rectangular prisms?  
● Can I organize rectangular packages to fit in rectangular boxes?  
● Do I understand how the dimensions of a box change when the volume is changed (coupled, halved, or tripled)? | 5.NBT.5  
5.NBT.6 | MP1: Make sense of problems and persevere | Ongoing Assessment: Observing Students at Work:  
● Can students design a box that can be completely filled with each of flour or five differently shaped packages? | 1. Finding Volume  
2. Changing Dimensions  
3. 10-Minute Math: Quick Images: 3-D | ● IWB: 2.1.6  
● Connecting Cubes (70 per pair)  
● Box 1  
● M21 How Many Packages?  
● Connecting Cubes (70 per pair)  
● Three-Quarter-Inch Grid Paper (M11)  
● M18 Centimeter Grid Paper  
● SAB: p 19-21; 23-26  
● SH: p 108 | ● prisms and pyramids  
● volume  
● 3-D and 2-D figures |
| 1.7     | ● Can I design a box that can be completely filled with several differently shaped rectangular packages? | 5.MD.5.a | MP1: Make sense of problems and persevere | 1. Ongoing Assessment: Observing Students at Work:  
● Can students design a box that can be completely filled with four or five differently shaped packages? | 1. Design a box  
2. Boxes That Work  
3. 10-Minute Math: Quick Images: 3-D | ● IWB: 2.1.7  
● Connecting Cubes (70 per pair)  
● Three-Quarter-Inch Grid Paper (M11)  
● M18 Centimeter Grid Paper  
● Connecting Cubes (70 per pair)  
● SAB: p 27; 28-30  
● SH: p 105, 106-107 | ● prisms and pyramids  
● volume  
● 3-D and 2-D figures |
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3</td>
<td>● Can I find the volume of a large space, such as the classroom, using cubic meters? ● Can I describe and defend measurement methods?</td>
<td>5.NBT.6 5.MD.4 5.MD.5.a 5.MD.5.b</td>
<td>MPS: Use appropriate tools strategically</td>
<td>Ongoing Assessment: Observing Students at Work: ● Can students determine the volume of their classroom in cubic meters?</td>
<td>1. How Many Cubic Meters in Our Classroom? 2. How We Measured 3. 10-Minute Math: Estimation and Number Sense</td>
<td>● length ● width ● height</td>
<td>IWB: 2.2.3 M11 3/4&quot; grid paper Connecting Cubes Meter sticks (1 per pair) Cubic meter (constructed in Session 2.2) SAB: pages 35 SH: p 105, 106-107</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# 5th Grade Math

## Unit 2: Prisms & Pyramids

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4A</td>
<td>● Can I determine the volume, in cubic centimeters, of a small prism? ● Can I understand how the dimensions of a box change when the volume is changed (doubled, halved, or tripled)?</td>
<td>5.NBT.5 5.OA.1 5.MD.3.a 5.MD.3.b 5.MD.4 5.MD.5.a 5.MD.5.b</td>
<td>MP1: Make sense of problems and persevere MP2: Reason abstractly and quantitatively MP5: Use appropriate tools strategically</td>
<td>1. Ongoing Assessment: Observing Students at Work: ● Can students explore the relationship between the dimensions of a box and doubling or halving the number of centimeter cubes in the box? 2. End-of-Unit Assessment</td>
<td>1. End-of-Unit Assessment 2. Boxes for Centimeter Cubes 3. 10-Minute Math: Order of Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>1.1</strong></td>
<td>● Can I read, write, and sequence numbers to 10,000 and 100,000? ● Can I understand the place-value relationships between 10, 100, 1,000, and 10,000?</td>
<td>5.NBT.1</td>
<td>MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Observing Students at Work: ● Can students read and write large numbers?</td>
<td>1. Practicing Place Value. 2. Introducing the 10,000 Chart. 3. Numbers on the 10,000 Chart. 4. 10-Minute Math: Practicing Place Value.</td>
<td>Interactive White Board (IWB): 3.1.1. ● Family letter M1-M2. ● 10,000 charts. ● Student Activity Book (SAB): page 1 ● Student Handbook (SH): page 6</td>
<td>Language Arts: Opportunities for students to explain their mathematical thinking in writing: ● Session 1.1, p 31</td>
<td>● Place value ● Addition combinations</td>
<td></td>
</tr>
<tr>
<td><strong>1.2</strong></td>
<td>● Can I read, write, and sequence numbers to 10,000 and 100,000? ● Can I understand the place-value relationships between 10, 100, 1,000, and 10,000? ● Can I add and subtract multiples of 100 and 1,000?</td>
<td>5.NBT.1</td>
<td>MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Observing Students at Work: ● Are students using relationships on the chart to locate numbers? ● Do students understand the structure of the chart? ● Are students fluent in adding and subtracting multiples of 100?</td>
<td>1. Numbers on the 10,000 Chart. 2. Introducing Moving Up and Down the Chart. 3. Adding and Subtracting Multiples of 100. 4. 10-Minute Math: Practicing Place Value</td>
<td>IWB: 3.1.2. ● M3 Assessment Checklist ● 10,000 charts. ● SAB: page 2-5 ● SH: page 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>1.3</strong></td>
<td>● Can I find the difference between a number and 10,000? ● Can I find combinations of 3-digit numbers that add to 1,000? ● Can I use story contexts and representations, such as number lines, to explain and justify solutions to subtraction problems?</td>
<td>5.NBT.1</td>
<td>MP5: Use appropriate tools strategically</td>
<td>1. Ongoing Assessment: Observing Students at Work: ● How do students find the difference? ● Are students using correct notation to show their answers? ● Can students carry out some steps mentally? 2. Differentiation &amp; Intervention Guide: R20 (May use anytime after 1.3)</td>
<td>1. Introducing how many steps to 10,000. 2. How many steps to 10,000? 3. Close to 1,000 4. 10-Minute Math: Practicing Place Value</td>
<td>IWB: 3.1.3. ● M3 Assessment Checklist ● 10,000 charts. ● SAB: page 7-12 ● SH: page G2 ● Digit cards ● T35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Unit 3: Thousands of Miles, Thousands of Seats**

**Investigation 1: Using Place Values**
# 5th Grade Math

## Unit 3: Thousands of Miles, Thousands of Seats

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 1.4     | ● Can I solve addition and subtraction problems with large numbers by focusing on the place value of the digits?  
        ● Can I find the difference between a number and 10,000?  
        ● Can I find combinations of 3-digit numbers that add to 1,000? | 5.NBT.1          | MPS: S. Use appropriate tools strategically | 1. Ongoing Assessment: Observing Students at Work:  
 ● Do students use their knowledge of adding and subtracting multiples of 10, 100, and 1,000 to solve the related addition or subtraction problems?  
 ● Can students estimate about how much the sum or difference will be?  
 ● Do students use their understanding of subtraction as they use one problem in a set to solve the next problem?  
 2. Differentiation & Intervention Guide: R21 Close to 1,000 (Use anytime after 1.4) | 1. Introducing estimation and number sense: closest estimate.  
 2. Related Problems  
 3. Adding & subtracting large numbers  
 4. 10-Minute-Math: Practicing Place Value | 5.NBT.1          | IWB: 3.1.4.  
 M3 Assessment Checklist  
 M7 (if needed)  
 M8 Close to 1,000  
 10,000 charts.  
 SAB: page 13-17  
 SH: page G2  
 Digit cards  
 T36 |
| 1.5     | ● Can I solve addition and subtraction problems with large numbers by focusing on the place value of the digits?  
        ● Can I read, write, and sequence numbers to 10,000 and 100,000?  
        ● Can I learn the names of places larger than 100,000: million, billion, trillion? | 5.NBT.1  
 5.NBT.5  
 5.NBT.6 | MPS: S. Use appropriate tools strategically | Differentiation & Intervention Guide:  
 ● R19: Quiz (May use anytime after 15) | 1. Adding & subtracting large numbers  
 2. The largest number  
 3. 10-Minute-Math: Estimation and Number Sense: Closest Estimate | 5.NBT.5  
 5.NBT.6 | million  
 billion  
 trillion |

## 1.4 Lessons/Activities
- **Vocabulary**: Place value, estimation, number sense
- **Resources**: IWB: 3.1.4., M3 Assessment Checklist, M7 (if needed), M8 Close to 1,000, 10,000 charts, SAB: page 13-17, SH: page G2, Digit cards, T36
- **Interdisciplinary Connections**: Place value, addition combinations

## 1.5 Lessons/Activities
- **Vocabulary**: Place value, estimation, number sense
- **Resources**: IWB: 3.1.4., M3 Assessment Checklist, M7 (if needed), M8 Close to 1,000, 10,000 charts, SAB: page 13-17, SH: page G2, Digit cards, T36
- **Interdisciplinary Connections**: Place value, addition combinations

---

**Language Arts**: Opportunities for students to explain their mathematical thinking in writing:  
 ● Session 1.5, p 54
## Unit 3: Thousands of Miles, Thousands of Seats
### Investigation 2: Studying Subtraction

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>● Can I solve addition and subtraction problems with large numbers by focusing on the place value of the digits? ● Can I read, write, and sequence numbers to 10,000 and 100,000? ● Can I learn the names of places larger than 100,000: million, billion, trillion?</td>
<td>5.NBT.5 5.NBT.6</td>
<td>MP3: Construct viable arguments and critique the reasoning of others MP8: Look for and express regularity in repeated reasoning</td>
<td>1. Ongoing Assessment: Observing Students at Work: ● What strategies are students using? 2. Differentiation &amp; Intervention Guide: R24 (May use anytime after 2.1)</td>
<td>1. Solving a Subtraction Problem 2. Subtraction Strategies 3. Practicing Subtraction 4. 10-Minute Math: Estimation &amp; Number Sense: Closest Estimate</td>
<td>● subtracting in parts ● adding up ● subtracting back ● change the numbers to make an easier problem ● subtracting by place</td>
<td>● IWB: 3.2.1 ● SAB: page 20-23 ● SH: page 10-13</td>
<td>● Place value ● Addition combinations</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>● Can I identify, describe, &amp; compare subtraction strategies by focusing on how each strategy starts? ● Can I analyze &amp; use different subtraction strategies? ● Can I develop arguments about how the differences represented by two subtraction expressions are related?</td>
<td>5.NBT.5</td>
<td>MP3: Construct viable arguments and critique the reasoning of others MP8: Look for and express regularity in repeated reasoning</td>
<td>1. Ongoing Assessment: Observing Students at Work: ● Are students able to complete subtraction solutions by using two different starts? ● Are students using clear &amp; concise notation to record their solutions? 2. Differentiation &amp; Intervention Guide: R22 (May use anytime after 2.5)</td>
<td>1. Introducing Starter Problems 2. Starter Problems 3. Do I Add or Subtract? 4. 10-Minute Math: Estimation &amp; Number Sense: Closest Estimate</td>
<td>● IWB: 3.2.3 ● SAB: page 31-33 ● SH: page 10-13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>-------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>3.1</td>
<td>● Can I solve addition &amp; subtraction problems with large numbers by focusing on the place value of the digits?</td>
<td>S.NBT.1, S.NBT.5, S.NBT.6</td>
<td>MP8: Look for and express regularity in repeated reasoning</td>
<td>Ongoing Assessment: Observing Students at Work: ● Are students able to use strategies from Close to 1,000 that also work for Close to 7,500? ● Do students use some new strategies for this game when choosing digits for the hundreds place? ● Are students able to accurately add numbers in the thousands?</td>
<td>1. Close to 7,500 2. Comparing Strategies 3. Division Facts 4. 10-Minute Math: Practicing Place Value</td>
<td>1. IWB: 3.3.1 2. SAB: page 47-49 3. SH: page 8-9; G3 4. Digit Cards 5. M16 (as needed) 6. M17 (as needed) 7. M18 8. T21-23; T40</td>
<td>● Place value ● Addition combinations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>● Can I add and subtract multiples of 100 and 1,000? ● Can I solve addition and subtraction problems with large numbers by focusing of the place value of the digits? ● Can I interpret and solve multistep problems?</td>
<td>S.NBT.1</td>
<td>MP1: Make sense of problems and persevere MP4: Model with mathematics</td>
<td>1. Ongoing Assessment: Observing Students at Work: ● How are students solving the problems? ● Are students able to recognize which problems are addition situations and which are subtraction? ● Are students able to accurately add numbers in the thousands? 2. Differentiation &amp; Intervention Guide: R27 (May use anytime after 3.2)</td>
<td>1. Using Stadium Data 2. Strategies with Larger Numbers 3. 10-Minute Math: Practicing Place Value</td>
<td>1. IWB: 3.3.2 2. SAB: page 51-57 3. SH: page 8-9 10-13 4. T41 Stadium and Arena Capacities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>--------------------------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>
| 3.3     | ● Can I solve whole-number addition and subtraction problems efficiently?  
● Can I use clear and concise notation for recording addition and subtraction strategies?  
● Can I interpret and solve multistep problems?  
● Can I read, write, and sequence numbers to 10,000 and 100,000? | 5.NBT.5  
5.NBT.6 | MP1: Make sense of problems and persevere MP4: Model with mathematics | 1. Assessment: Numbers to 100,000  
2. Ongoing Assessment: Observing Students at Work:  
● What strategies are students using to solve these problems?  
● How are students keeping track of their solutions?  
● Can students interpret what is happening in each step of the problems?  
3. Differentiation & Intervention Guide: R26 (May use anytime after 3.3) | 1. Solving Problems with Large Numbers  
2. Adding and Subtracting Large Numbers  
3. 10-Minute Math: Estimation and Number Sense: Closest Estimate |  
● IWB: 3.3.3  
● SAB: page 51, 59-62, 63, 64-65  
● SH: page 7, 8-9 10-13; G3  
● Stadium and Arena Capacities (T41)  
● Digit Cards  
● Close to 7,500 recording sheets (M16)  
● Closest Estimate (T38)  
● Assessment Checklist (M3) | Language Arts: Opportunities for students to explain their mathematical thinking in writing:  
● Session 3.3, p 109 |  
● Place value  
● Addition combinations |
| 3.4     | ● Can I solve whole-number addition and subtraction problems efficiently?  
● Can I interpret and solve multistep problems?  
● Can I read, write, and sequence numbers to 10,000 and 100,000? | 5.NBT.5  
5.NBT.6 | MP1: Make sense of problems and persevere MP4: Model with mathematics | 1. Assessment: Numbers to 100,000 (Assessment Checklist M3)  
2. Ongoing Assessment: Observing Students at Work:  
● What strategies are students using to solve these problems?  
● How are students keeping track of their solutions?  
● Can students interpret what is happening in each step of the problems? | 1. Strategies for Large Numbers  
2. Adding and Subtracting Large Numbers  
3. 10-Minute Math: Estimation and Number Sense: Closest Estimate |  
● IWB: 3.3.4  
● SAB: page 51, 59-62, 63, 64-65, 67-68  
● SH: page 7, 8-9 10-13; G3  
● Stadium and Arena Capacities (T41)  
● Digit Cards  
● Close to 7,500 recording sheets (M16)  
● Closest Estimate (T38)  
● Assessment Checklist (M3) |  
● Place value  
● Addition combinations |
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3.5     | ● Can I solve whole-number addition and subtracting problems efficiently?  
         ● Can I use clear and concise notation for recording addition and subtraction strategies? | S.NBT.1 | MP1: Make sense of problems and persevere  
    MP4: Model with mathematics | 1. M20: End-of-Unit Assessment  
    2. Differentiation & Intervention Guide: R54 (May use anytime after 3.5) | 1. End-of-Unit Assessment  
    2. Solutions to the Assessment Problems  
    3. 10-Minute Math: Practicing Place Value | 1. End-of-Unit Assessment  
    2. Solutions to the Assessment Problems  
    3. 10-Minute Math: Practicing Place Value | 1. M20: End-of-Unit Assessment  
    2. IWB: 3.3.5  
    3. SAB: page 69  
    4. SH: page 8-9 10-13 | ● Place value  
    ● Addition combinations |
# 5th Grade Math

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>* Can I interpret everyday uses of fractions, decimals, and percents? * Can I find fractional parts of a whole or of a group (of objects and people, and so on)? * Can I find a percentage of a group (of objects, people, and so on)?</td>
<td>5.NF.1</td>
<td></td>
<td>*Ongoing assessment: Observing Students at Work (OA)- Can students work on problems that relate fractions and percents?</td>
<td>*Use of fractions, decimals, and percents. *What Do You Already Know? *Fraction and Percent Problems. *Daily Practice and Homework. *10 Minute Math-Estimation and Number Sense</td>
<td>Fraction, decimal, percent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>* Can I find fractional parts of a whole or of a group (of objects and people, and so on)? * Can I find the percentage of a rectangular area? * Can I identify fraction and percent equivalents through reasoning about representations and known equivalents and relationships?</td>
<td></td>
<td></td>
<td>7-Look for and make use of structure.</td>
<td>*Introducing Guess My Rule. *Writing Equivalent Percents and Fractions. *Grid Patterns as Percents and Fractions. *Daily Practice and Homework. *10 Minute Math-Guess My Rule</td>
<td>equivalent</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Unit 4: What's That Portion?**

**Investigation 1: Using Percent's & Fractions**

- "fair shares
- equal-sized
- used halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths to find equivalent fractions
- compare and order fractions based on benchmarks fractions 1/2 and 1/4
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
# 5th Grade Math

## Unit 4: What's That Portion?

### Session 2.3
- **Essential Questions:**
  - Can I identify fraction and percent equivalents through reasoning about representations and known equivalents and relationships?
  - Can I compare fractions and percents to the landmarks 0, 1/2, and 1?
  - Can I order fractions and justify their order through reasoning about fraction equivalents and relationships?
- **Practices:**
  - 3-Construct viable arguments and critique the reasoning of others.
- **Assessments:**
  - OA: Can students find percent equivalents for given fractions? Can students compare and order fractions?
  - Fraction and Percent Equivalents.
  - In Between.
  - Daily Practice and Homework.
  - 10 Minute Math-Estimation and Number Sense
- **Resources:**
  - M9, 10, 14-16.
  - T44.
  - SH, pp. 50-51; G10.
  - 10 Minute Math-Estimation and Number Sense
- **Interdisciplinary Connections:**
  - Writing: Session 2.3
  - SAB p. 27-28

### Session 2.4
- **Essential Questions:**
  - Can I order fractions and justify their order through reasoning about fraction equivalents and relationships?
  - Can I find and compare fractional parts and percents of a whole or a group?
  - Can I use equivalent fractions to solve problems?
- **Practices:**
  - 1-Make sense of problems and persevere in solving them.
- **Assessments:**
  - OA: Can students solve story problems involving fractions and percents?
  - Comparing and Ordering Fractions.
  - What is the Whole?
  - Daily Practice and Homework.
  - 10 Minute Math-Estimation and Number Sense
- **Resources:**
  - M14-16-19.
  - SH, pp. 50-51; G10.
  - 10 Minute Math-Estimation and Number Sense

### Session 2.5
- **Essential Questions:**
  - Can I order fractions and justify their order through reasoning about fraction equivalents and relationships?
  - Can I find and compare fractional parts and percents of a whole or a group?
  - Can I use equivalent fractions to solve problems?
- **Practices:**
  - 1-Make sense of problems and persevere in solving them.
- **Assessments:**
  - OA: Can students solve story problems involving fractions and percents?
  - Comparing and Ordering Fractions.
  - Solving Fraction Comparison Problems.
  - Daily Practice.
  - 10 Minute Math-Guess My Rule
- **Resources:**
  - M14-16-19.
  - SH, pp. 50-51; G10.
  - 10 Minute Math-Guess My Rule

### Session 2.6
- **Essential Questions:**
  - Can I find and compare fractional parts and percents of a whole or a group?
  - Can I use equivalent fractions to solve problems?
  - Can I compare fractional parts of different-sized wholes?
- **Practices:**
  - 1-Make sense of problems and persevere in solving them.
- **Assessments:**
  - AA-Using Fractions and Percents.
  - Using Fractions and Percents.
  - Comparing and Ordering Fractions.
  - Daily Practice and Homework.
  - 10 Minute Math-Guess My Rule
- **Resources:**
  - M14-16-19.
  - SH, pp. 47-51; G10.
  - 10 Minute Math-Guess My Rule

**Writing:** Session 2.6
- SAB p. 33
# 5th Grade Math

## Unit 4: What's That Portion?

### Investigation 3: Adding and Subtracting Fractions

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>*fair shares *equal-sized *used halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths to find equivalent fractions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>compare and order fractions based on benchmarks fractions 1/2 and 1</td>
</tr>
</tbody>
</table>
## Unit 4: What's That Portion?

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3.5     | * Can I compare fractions on a number line?  
* Can I use equivalencies to place fractions on a set of number lines? (fraction tracks)  
* Can I order mixed numbers and fractions greater than 1? | 5.NF.1, 5.NF.2 | 2-Reason abstractly and quantitatively. | *OA-Can students label fractions on a set of number lines?  
Can students use what they know about fraction equivalents and relationships to put a set of fractions in order? | *Comparing Fraction Tracks.  
*Patterns on the Fraction Tracks.  
*Ordering Fractions.  
*Daily Practice and Homework.  
*10 Minute Math-Estimation and Number Sense | *M14-16.  
*TS3.  
*SAB, pp 51-52, 54-55.  
*SH, pp. 43-45.  
*10 Minute Math-Estimation and Number Sense | Writing: Session 3.7  
SAB p. 60-62 |
| 3.6     | * Can I find combinations of fractions with sums between 0 and 2?  
* Can I add and subtract fractions by using a number line? | 5.NF.1, 5.NF.2 | 2-Reason abstractly and quantitatively. | *OA-Can students play the Fraction Track game, in which they find combinations of fractions that add up to a given fraction? | *Introducing Fraction Track.  
*Playing Fraction Track.  
*Moving on More Than One Track.  
*Daily Practice and Homework.  
*10 Minute Math-Estimation and Number Sense | *M14-16, 26-29.  
*SAB, pp 52, 57-58.  
*SH, pp. 52-53; G8-9.  
*10 Minute Math-Estimation and Number Sense |  |
| 3.7     | * Can I find combinations of fractions with sums between 0 and 2?  
* Can I add and subtract fractions by using a number line?  
* Can I add and subtract fractions through reasoning about fraction equivalents and relationships? | 5.NF.1, 5.NF.2 | 2-Reason abstractly and quantitatively. | *OA-Can students solve addition and subtraction fraction problems, including problems with mixed numbers? | *Subtracting Fractions.  
*Adding and Subtracting Fractions.  
*Daily Practice.  
*10 Minute Math-Estimation and Number Sense | *TS3  
*SAB, pp. 59-63, M17,18, 21.  
*SH, pp. 52-53;G8,9,12,13.  
*10 Minute Math-Estimation and Number Sense |  |
| 3.8     | * Can I find combinations of fractions with sums between 0 and 2?  
* Can I add and subtract fractions by using a number line?  
* Can I add and subtract fractions through reasoning about fraction equivalents and relationships? | 5.NF.1, 5.NF.2 | 2-Reason abstractly and quantitatively. | *Adding and Subtracting Fractions.  
*Adding and Subtracting Fractions.  
*Daily Practice and Homework.  
*10 Minute Math-Estimation and Number Sense | *SAB, pp. 59-62, 64-65.  
*M30,31.  
*SH, pp. 52-53;G8,9,12,13.  
*10 Minute Math-Estimation and Number Sense |  |
## 5th Grade Math

### Session 3.9

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Can I find combinations of fractions with sums between 0 and 2?</td>
<td>5.NF.1, 5.NF.2</td>
<td>2-Reason abstractly and quantitatively.</td>
<td>*Adding and Subtracting Fractions.</td>
<td>*SAB, pp. 67-68.</td>
<td>*SH, pp. 52-53; G8,9,12,13.</td>
<td>*10 Minute Math-Estimation and Number Sense</td>
<td>&quot;fair shares equal-sized used halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths to find equivalent fractions compare and order fractions based on benchmarks fractions 1/2 and 1/4</td>
<td></td>
</tr>
<tr>
<td>* Can I add and subtract fractions by using a number line?</td>
<td></td>
<td></td>
<td>*Daily Practice and Homework.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Can I add and subtract fractions through reasoning about fraction equivalents and relationships?</td>
<td></td>
<td></td>
<td>*10 Minute Math-Estimation and Number Sense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Session 3.10

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Can I find a percentage of a group (of objects, people, and so on)?</td>
<td>5.NF.1, 5.NF.2</td>
<td>1-Make sense of problems and persevere in solving them.</td>
<td>*End-of-Unit Assessment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Can I order fractions and justify their order through reasoning about fraction equivalents and relationships?</td>
<td></td>
<td></td>
<td>*AA-End-of-Unit Assessment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Can I add and subtract fractions through reasoning about fraction equivalents and relationships?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Investigation 4A: Multiplying and Dividing Fractions

### Investigation 4A.1

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Can I extend understanding of the operation of multiplication to include fractions?</td>
<td></td>
<td></td>
<td>4-Model with mathematics.</td>
<td>*OA-Can students solve multiplication problems involving fractions and whole numbers?</td>
<td>*Daily Practice.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Can I write multiplication equations for multiplying a fraction and a whole number?</td>
<td></td>
<td></td>
<td></td>
<td>*10 Minute Math-Estimation and Number Sense</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Investigation 4A.2

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Can I write and interpret multiplication equations involving a fraction and a whole number?</td>
<td>5.NF.4a, 5.NF.5.b, 5.NF.6</td>
<td>1-Make sense of problems and persevere in solving them.</td>
<td>*OA-Can students solve word problems that involve multiplying a fraction and a whole number or a fraction and a mixed number?</td>
<td>*Writing and Interpreting Equations.</td>
<td>*Bicycle Race Training.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Can I use a representation and reason to multiply a whole number by a fraction or mixed number?</td>
<td></td>
<td></td>
<td>4-Model with mathematics.</td>
<td>*OA-Can students solve word problems that involve multiplying a fraction and a whole number or a fraction and a mixed number?</td>
<td>*Daily Practice.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*OA-Can students solve word problems that involve multiplying a fraction and a whole number or a fraction and a mixed number?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# 5th Grade Math

## Unit 4: What's That Portion?

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>-------------------</td>
<td>----------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>----------</td>
<td>-----------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Unit 4: What's That Portion?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4A.8</strong></td>
<td>* Can I use representations to solve problems involving dividing a whole number by a unit fraction? * Can I use reasoning, and the relationship between division and multiplication, to divide a whole number by a unit fraction?</td>
<td>5.NF.7.a, 5.NF.7.c</td>
<td>4-Model with mathematics.</td>
<td>*OA- Can students solve division problems involving dividing a whole number by a unit fraction?</td>
<td>*Dividing a Whole Number by a Fraction. *Division by Fractions. *Daily Practice. **10 Minute Math Estimation and Number Sense: Closest Estimate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unit 4 Page 25
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
# 5th Grade Math

## Unit 5: Measuring Polygons

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>Can I use known angles to find the measures of other angles?</td>
<td>5.G.3</td>
<td>MP5: Use appropriate tools strategically.</td>
<td>Ongoing Assessment: Can students find the measures of the angles in Power Polygons, using right angles and other known angle measurements as landmarks?</td>
<td>10min Math T55/WB; Angles in the Power Polygons; Logo Paths Triangles and Rhombuses and Parallelograms</td>
<td>Interior angle</td>
<td>SAB pp 17-21; Power Polygons; SMH 99-101</td>
<td>Language Arts: Opportunities for students to explain their mathematical thinking in writing: ● Session 1.5, p 52-53</td>
<td>● Perimeter - measuring around familiar and irregular shapes ● Measuring area with square units versus measuring length with linear units ● Familiar with classifying shapes (polygons, triangles, quadrilaterals) ● Familiar with right angles and joining two angles to make one</td>
</tr>
<tr>
<td>1.6</td>
<td>Can I use known angles to find the measures of other angles? Can I identify attributes of polygon?</td>
<td>5.G.3</td>
<td>MP3: Construct Viable arguments and critique the reasoning of others. MP5: Use appropriate tools strategically.</td>
<td>Ongoing Assessment: Can students use their understanding of the properties of equilateral triangles to draw these shapes with the Logo Paths software?</td>
<td>10min Math T55/WB; Angles in the Power Polygons; Guess My Rule; Logo Paths Triangles and Rhombuses and Parallelograms</td>
<td>Exterior angle</td>
<td>SAB pp 17-19, 23; Power Polygons; Shape Cards; M1; SMH p99, 95, 96-98, 99-101</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7</td>
<td>Can I use attributes to describe and compare quadrilaterals including parallelograms, rectangles, rhombuses, and squares? Can I use known angles to find the measures of other angles?</td>
<td>5.G.3 5.G.4</td>
<td>MP3: Construct Viable arguments and critique the reasoning of others. MP5: Use appropriate tools strategically.</td>
<td>Ongoing Assessment: Can students write about the relationships among different types of quadrilaterals and find the measures of the angles in an irregular polygon? ; End of Unit Assessment M17</td>
<td>10min Math T55; Guess My Rule; Logo Paths: Triangles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Perimeter - measuring around familiar and irregular shapes
Measuring area with square units versus measuring length with linear units
Familiar with classifying shapes (polygons, triangles, quadrilaterals)
Familiar with right angles and joining two angles to make one
## 5th Grade Math

### Unit 5: Measuring Polygons

#### Investigation 2: Finding Perimeter and Area of Related Rectangles

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Can I compare the perimeters and areas of rectangles when the dimensions are multiplied by given amounts? Can I use numerical and/or geometrical patterns to describe how the perimeters and areas of rectangles change when the dimensions change?</td>
<td>MP3: Construct Viable arguments and critique the reasoning of others.</td>
<td>Ongoing Assessment: Can students examine the relationship between the dimensions, area, and perimeter of a series of squares?</td>
<td>Quick Survey; 10min Math; Building a Sequence of Squares;</td>
<td>perimeter, area, dimension</td>
<td>SAB p. 27-29; Square Tiles; SMH p.102; M18; Centimeter Grid Paper</td>
<td>Language Arts: Opportunities for students to explain their mathematical thinking in writing: ● Session 2.1, pp 73, 75</td>
<td>● Perimeter - measuring around familiar and irregular shapes ● Measuring area with square units versus measuring length with linear units ● Familiar with classifying shapes (polygons, triangles, quadrilaterals) ● Familiar with right angles and joining two angles to make one</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Can I compare the perimeters and areas of rectangles when the dimensions are multiplied by given amounts? Can I use representations to explain how perimeters and areas of rectangles change?</td>
<td>MP3: Construct Viable arguments and critique the reasoning of others.</td>
<td>Ongoing Assessment: Can students explain why the perimeter doubles and the area quadruples when the sides of a square are doubled? Can students use their understanding of the properties of rhombuses and parallelograms to draw these shapes with the Logo Paths software?</td>
<td>10min Math; Doubling Squares; Logo Paths: Rhombuses and Parallelograms;</td>
<td></td>
<td>SAB p. 27; 31-34; SMH p.102; M2-M3; M18; Centimeter Grid Paper</td>
<td>Language Arts: Opportunities for students to explain their mathematical thinking in writing: ● Session 2.2, P 77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Can I compare the perimeters and areas of rectangles when the dimensions are multiplied by given amounts?</td>
<td>MP3: Construct Viable arguments and critique the reasoning of others.</td>
<td>Ongoing Assessment: Can students examine the relationship between the dimensions, area and perimeter of a series of rectangles?</td>
<td>10min Math; T56/WB; A Sequence of Rectangles;</td>
<td></td>
<td>SAB p.35-38; SMH p102; M18; Centimeter Grid Paper; Square Tiles; SMH p.102</td>
<td>Language Arts: Opportunities for students to explain their mathematical thinking in writing: ● Session 2.3, pp 84-85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Can I create different rectangles with the same area but different perimeters?</td>
<td>MP3: Construct Viable arguments and critique the reasoning of others.</td>
<td>Ongoing Assessment: Can students create a sequence of rectangles, maintaining the same area while the perimeter changes?</td>
<td>10min Math; T56/WB; One More Cut</td>
<td></td>
<td>SAB p39-41; M18; Square Tiles; SMH p.102</td>
<td>Language Arts: Opportunities for students to explain their mathematical thinking in writing: ● Session 2.4, p 90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>-------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>2.5</td>
<td>Can I create different rectangles with the same area but different perimeters? Can I create different rectangles with the same perimeter but different areas?</td>
<td>MP4: Model with Mathematics</td>
<td>Ongoing Assessment: Can students find rectangles with a perimeter of 30 feet? Can students create a sequence of rectangles, maintaining the same area while the perimeter changes?</td>
<td>10min Math; Fencing A Garden; Rearranging a 16 by 12 Rectangle; Logo Paths Rhombuses and Parallelograms;</td>
<td>Square Tiles; M18; SAB p43-45; Logo paths; M2-M3; SMH 102</td>
<td></td>
<td></td>
<td></td>
<td>● Perimeter - measuring around familiar and irregular shapes ● Measuring area with square units versus measuring length with linear units ● Familiar with classifying shapes (polygons, triangles, quadrilaterals) ● Familiar with right angles and joining two angles to make one</td>
</tr>
<tr>
<td>2.6</td>
<td>Can I create different rectangles with the same area but different perimeters? Can I create different rectangles with the same perimeter but different areas? Can I describe the shapes of rectangles that have the same area or the same perimeter?</td>
<td>MP4: Model with Mathematics</td>
<td>Ongoing Assessment: Can students find the area and perimeter of related rectangles? End of Unit Assessment M19</td>
<td>10min Math; Fencing A Garden; Rearranging a 16 by 12 Rectangle; Logo Paths Rhombuses and Parallelograms;</td>
<td>SAB p43; M18, M19; Square Tiles; SAB p43, 44, 46, 47; SMH 102;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.7</td>
<td>Can I create different rectangles with the same area but different perimeters? Can I create different rectangles with the same perimeter but different areas? Can I describe the shapes of</td>
<td>MP1: Make sense of problems and preserve in solving them; MP2: Reason abstractly and quantitatively.</td>
<td>End of Unit Assessment M19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>● Familiar with classifying shapes (polygons, triangles, quadrilaterals) ● Familiar with right angles and joining two angles to make one</td>
</tr>
</tbody>
</table>

Unit 5: Measuring Polygons
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 1.1     | ● Can I identify everyday uses of fractions and decimals?  
         ● Can I represent decimal fractions as parts of an area?  
         ● Can I read and write tenths, hundredths, and thousandths?  | 5.NBT.1, 5.NBT.3.a, 5.NBT.3.b | MP4. Model with mathematics | Ongoing Assessment:  
            ● Can students identify different fractional parts of a square and ways to represent them by using fractions, percents, and decimals?  
            1. Introducing Decimals  
            2. Introducing Decimals on Grids  
            3. Decimals on Grids  
            4. 10-Minute Math: Practicing Place Value.  | fraction  
         decimal  
         percent  | Interactive White Board (IWB): 6.1.1.  
         ● Family letter M7-M8.  
         ● Chart: Everyday Uses of Fractions, Decimals, and Percents (from Unit 4)  
         ● Student Activity Book (SAB): pages 1-6  
         ● Student Handbook (SH): pages 55, 58  | ● fractions and mixed numbers  
         ● equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
         ● comparing, adding, and subtracting fractions.  
         ● Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 1.2     | ● Can I represent decimal fractions as parts of an area?  
         ● Can I read and write tenths, hundredths, and thousandths?  
         ● Can I identify decimal, fraction, and percent equivalents?  | 5.NBT.1, 5.NBT.3.a, 5.NBT.3.b | MP4. Model with mathematics | Ongoing Assessment:  
            ● Can students shade in parts of a square to represent decimal fractions in the hundredths and thousandths?  
            1. Place Value of Tenths and Hundredths  
            2. Introducing Thousandths  
            3. Representing Hundredths and Thousandths  
            4. 10-Minute Math: Practicing Place Value.  | tenths  
         hundredths  
         thousandths  | IWB: 6.1.2.  
         ● Chart: Equivalents (used in Session 1.1)  
         ● SAB: page 2-4, 7-15  
         ● SH: page -56-60  | ● fractions and mixed numbers  
         ● equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
         ● comparing, adding, and subtracting fractions.  
         ● Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 1.3     | ● Can I represent decimals by using a number line?  
         ● Can I identify decimal, fraction, and percent equivalents?  
         ● Can I order and justify their order through reasoning about decimal representations, equivalents, and relationships?  | 5.NBT.3.a, 5.NBT.3.b | MP4. Model with mathematics | Ongoing Assessment:  
            ● Can students place decimals in order?  
            1. Decimal Equivalencies  
            2. Introducing Decimals on a Number Line  
            3. Ordering Tenths and Hundredths  
            4. 10-Minute Math: Practicing Place Value.  | ten thousandths  
         number line  | IWB: 6.1.3  
         ● M11 Decimal Cards Set A  
         ● M12 Hundredths Grids  
         ● M13 Decimal Cards Set B  
         ● M7-10 Family Letter  
         ● SAB: page 16-19  
         ● SH: page -59-62  | ● fractions and mixed numbers  
         ● equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
         ● comparing, adding, and subtracting fractions.  
         ● Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 1.4     | ● Can I order decimals and justify their order through reasoning? 
         ● Can I compare decimals to the landmarks 0, 1/2, and 1? | 5.NBT.3.a, 5.NBT.3.b | MP2. Reason abstractly and quantitatively | Ongoing Assessment: 
         ● Can students compare and order decimals? | 1. Which is Greatest? 
         2. Decimals In Between Game 
         3. Comparing Decimals 
         4. 10-Minute-Math: Practicing Place Value | ● IWB: 6.1.4 
         ● M11 Decimal Cards Set A 
         ● M12 Hundredths Grids 
         ● M13 Decimal Cards Set B 
         ● M14 Decimal Grids 
         ● M15 Decimals in Between 
         ■ SAB: page 121-22 
         ■ SH: page - 51-62, G5 | ● fractions and mixed numbers 
         ● equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths. 
         ● comparing, adding, and subtracting fractions. |
| 1.5A    | ● Can I round decimals to the nearest one, tenth, and hundredth? | 5.NBT.1, 5.NBT.4 | MP4. Model with mathematics | 1. Ongoing Assessment: 
         ● Can students round decimals to the nearest one, tenth, and hundredth? 
         Differentiation & Intervention Guide R19: Quiz (May use anytime after 1.5) | 1. Rounding Decimals 
         2. Rounding a 9 Up 
         3. 10-Minute-Math: Practicing Place Value | Common Core page 92 
         ● C64 Rounding Decimals 
         ● M12 Hundredths Grids 
         ● C65 Practice with Rounding 
         ■ SAB: page 23A, 23B 
         ■ SH: page - 57 | ● Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 1.5     | ● Can I represent decimal fractions as parts of an area? 
         ● Can I identify decimal, fraction, and percent equivalents? 
         ● Can I order decimals and justify their order through reasoning about decimal representations, equivalents, and relationships? | 5.NBT.3.a, 5.NBT.3.b, 5.NBT.5 | MP2. Reason abstractly and quantitatively | 1. Ongoing Assessment: 
         ● Can students place, compare and order decimals on a game board? 
         ● Can students shade in parts of squares to represent decimal fractions? 
         ● Can students solve problems comparing fractions and decimals? 
         2. Differentiation & Intervention Guide: R47 (May use anytime after 1.5) | 1. Solving a Subtraction Problem 
         2. Subtraction Strategies 
         3. Practicing Subtraction 
         4. 10-Minute Math: Estimation & Number Sense: Closest Estimate | ● IWB: 6.1.5 
         ● M11, M12, M13, M15, M16, M17, M18 
         ■ SAB: page 23-25,26-27 
         ■ SH: page 54-56, 61-62 | Language Arts: Writing to explain mathematical thinking: 
         ● Session 1.5, p 53 |
## 5th Grade Math

### Unit 6: Decimals on Grids & Number Lines

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7</td>
<td>● Can I interpret fractions as division? ● Can I identify everyday uses of fractions and decimals? ● Can I identify decimal, fraction, and percent equivalents?</td>
<td>S.NBT.6 S.NF.3</td>
<td>MP2. Reason abstractly and quantitatively MP5. Use appropriate tools strategically</td>
<td>1. Ongoing Assessment: ● Can students use a calculator to find a decimal equivalent to a fraction that represents number of wins out of total games played?</td>
<td>1. Fractions to Decimals on the Calculator 2. Win/Loss Records 3. 10-Minute Math: Estimation &amp; Number Sense</td>
<td>numerator denominator</td>
<td>IWB: 6.1.7 Calculators Charts for Wins &amp; Losses SAB: page 31, 32-33 SH: page 59-60</td>
<td></td>
<td>Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75.</td>
</tr>
</tbody>
</table>
## 5th Grade Math

### Unit 6: Decimals on Grids & Number Lines

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 1.10    | ● Can I order decimals and justify their order through reasoning about decimal representations, equivalents, and relationships?  
         ● Can I interpret fractions as division?  
         ● Can I identify decimal, fraction, and percent equivalents? | S.NBT.3.a  
S.NBT.3.b  
S.NF.3 | MPS. Use appropriate tools strategically | 1. Assessment: Comparing and Ordering Decimals (M20)  
2. Differentiation & Intervention Guide: R46 (May use anytime after 1.10)  
3. 10-Minute Math: Practicing Place Value | 1. Comparing and Ordering Decimals  
2. Fraction-Decimal Equivalents  
3. 10-Minute Math: Practicing Place Value | IWB: 6.1.10  
M20 (Assessment)  
M11, M12, M13, M16  
SAB: page 35, 37, 41-42  
SH: page 59-60; 61-62; G14 | Language Arts: Writing to explain mathematical thinking  
Session 1.10, p 80 | fractions and mixed numbers  
equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
comparing, adding, and subtracting fractions  
Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |

### Investigation 2: Adding Decimals

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 2.1     | ● Can I represent decimal fractions as parts of an area?  
         ● Can I estimate sums of decimal numbers?  
         ● Can I use representations to add tenths, hundredths, and thousandths? | S.NBT.3.a  
S.NBT.3.b  
S.NF.7 | MP4. Model with mathematics | Ongoing Assessment:  
● Can students use hundredths grids to combine decimals? | 1. Introducing Fill Two  
2. Fill Two  
3. Adding Decimals  
4. 10-Minute Math: Practicing Place Value | IWB: 6.2.1  
M11, M13, M21, M23  
SAB: page 43, 44  
SH: page 63-65 | |

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 2.2     | ● Can I estimate sums of decimal numbers?  
         ● Can I use representations to add tenths, hundredths, and thousandths?  
         ● Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | S.NBT.3.a  
S.NBT.3.b  
S.NF.7 | MP3. Construct viable arguments and critique the reasoning of others | Ongoing Assessment:  
● Can students add decimal fractions and explain their strategies? | 1. Jeweler’s Gold  
2. Explaining Solutions  
3. 10-Minute Math: Practicing Place Value | IWB: 6.2.2  
M11, M12, M13, M17, M21, M23  
SAB: page 44-47  
SH: page 63-65 | |

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 2.3     | ● Can I estimate sums of decimal numbers?  
         ● Can I use representations to add tenths, hundredths, and thousandths?  
         ● Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | S.NBT.3.a  
S.NBT.3.b  
S.NF.7 | MP6. Attend to precision  
MP8. Look for and express regularity in repeated reasoning | Ongoing Assessment:  
● Can students add tenths, hundredths, and thousandths?  
2. Differentiation & Intervention Guide: R50 (May use anytime after 2.3) | 1. Adding Decimals  
2. Strategies for Adding Decimals  
3. 10-Minute Math: Practicing Place Value | IWB: 6.2.3  
M11, M12, M13, M17, M21  
SAB: page 51  
SH: page 63-65 | |
<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 2.4.    | ● Can I estimate sums of decimal numbers?  
         ● Can I use representations to add tenths, hundredths, and thousandths?  
         ● Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | 5.NBT.3.a  
5.NBT.3.b  
5.NF.7 | MP6. Attend to precision  
MP8. Look for and express regularity in repeated reasoning | Ongoing Assessment:  
● Can students add tenths, hundredths, and thousandths?  
● Can students compare the sums of pairs of Decimal Cards? | 1. Decimal Problems  
2. Adjusting One Number  
3. Decimal Double Compare  
4. 10-Minute Math: Practicing Place Value | 1. IWB: 6.2.4  
2. M11, M12, M13, M17, M22  
3. SAB: page 52-53, 54-55  
4. SH: page 63-65; G4 | 1. fractions and mixed numbers  
2. equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
3. comparing, adding, and subtracting fractions.  
4. Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 2.5A    | ● Can I use representations to subtract tenths and hundredths?  
         ● Can I subtract decimals to the hundredths through reasoning about place value, equivalents, and representations? | 5.NBT.1  
5.NBT.7 | MP1. Make sense of problems and persevere | 1. Ongoing Assessment:  
● Can students subtract numbers with tenths and hundredths? | 1. Introducing Subtracting Decimals  
2. Subtracting Decimals  
3. Subtraction Problems with Decimals  
4. 10-Minute Math: Practicing Place Value | 1. IWB: 6.2.5  
2. M21  
3. SAB: page 57A, 57B  
4. SH: page 57 | 1. fractions and mixed numbers  
2. equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
3. comparing, adding, and subtracting fractions.  
4. Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 2.5.    | ● Can I estimate sums of decimal numbers?  
         ● Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | 5.NBT.3.a  
5.NBT.3.b  
5.NF.7 | MP6. Attend to precision | Ongoing Assessment:  
● Can students add decimals to get a sum as close to one as possible?  
● Can students solve addition problems involving tenths, hundredths, and thousandths? | 1. Introducing Close to 1  
2. Adding Decimals  
3. 10-Minute Math: Practicing Place Value | 1. IWB: 6.2.5  
2. M11, M12, M13, M21, M24, M25, M26  
3. Colored pencils or crayons  
4. SAB: page 57, 59-61, 62  
5. SH: page 63-65; G1, G4 | 1. fractions and mixed numbers  
2. equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
3. comparing, adding, and subtracting fractions.  
4. Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 2.6     | ● Can I estimate sums of decimal numbers?  
         ● Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | 5.NBT.3.a  
5.NBT.3.b  
5.NF.7 | MP6. Attend to precision | 1. Differentiation & Intervention Guide: R51 (May use anytime after 2,6) | 1. Adding Decimals  
2. Adding Decimals  
3. 10-Minute Math: Practicing Place Value | 1. IWB: 6.2.6  
2. M11, M12, M13, M17, M21, M24, M25, M26  
3. Colored pencils or crayons  
4. SAB: page 57, 59-61, 63-64  
5. SH: page 63-65; G1, G4 | 1. fractions and mixed numbers  
2. equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
3. comparing, adding, and subtracting fractions.  
4. Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
# 5th Grade Math

## Unit 6: Decimals on Grids & Number Lines

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 2.7     | Can I estimate sums of decimal numbers?  
          Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | 5.NBT.3.a  
          5.NBT.3.b  
          5.NF.7 | MP6. Attend to precision | 1. Adding Decimals  
          2. 10-Minute Math: Practicing Place Value | IWB: 6.2.7  
          M11, M12, M13,  
          M17, M21, M24, M25, M26  
          Colored pencils or crayons  
          SAB: page 57, 59-61, 65  
          SH: page 63-65; G1, G4 | fractions and mixed numbers  
          equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
          comparing, adding, and subtracting fractions.  
          Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 2.8     | Can I order decimals and justify their order through reasoning about decimal representations, equivalents?  
          Can I add decimals to the thousandths through reasoning about place value, equivalents, and representations? | 5.NBT.3.a  
          5.NBT.3.b  
          5.NF.7 | MP1. Make sense of problems and persevere  
          and quantitatively  
          MP6. Attend to precision | 1. End of Unit Assessment: (M27)  
          1. End-of-Unit Assessment  
          2. 10-Minute Math: Practicing Place Value | IWB: 6.2.8  
          M12, M21, M27-M28  
          Colored pencils or crayons  
          SAB: page 66  
          SH: page 61-62, 63-65 | fractions and mixed numbers  
          equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths.  
          comparing, adding, and subtracting fractions.  
          Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
# 5th Grade Math

## Session 1
### Essential Questions
- Can I use representations and reasoning to multiply whole numbers by powers of 10 (including 1, 0.1, and 0.01)?
- Can I explain the patterns in the placement of the decimal point when a decimal is multiplied by a power of 10?

### Content Standards
- 5.NBT.2, 5.NBT.3.a, 5.NBT.4, 5.NBT.7

### Practices
- MP7. Look for and make use of structure

### Assessments
- **Ongoing Assessment:**
  - Can students multiply whole numbers by powers of 10 and look for patterns in their answers?

### Sample Lessons/Activities
- **1. Multiplying Powers of 10**
- **2. Moving the Decimal Point**
- **3. 10-Minute Math:** Practicing Place Value

### Sample Resources
- **SAB:** page 67, 68

### Vocabulary

### Interdisciplinary Connections

### Prior Knowledges
- Fractions and mixed numbers
- Equivalent fractions and percents for fractions involving halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths
- Comparing, adding, and subtracting fractions.
- Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75.

## Session 2
### Essential Questions
- Can I estimate products of decimal numbers?
- Can I multiply decimals to hundredths through reasoning about place value and multiplication?

### Content Standards
- 5.NBT.3.a, 5.NBT.4, 5.NBT.7

### Practices
- MP2. Reason abstractly and quantitatively

### Assessments
- **Ongoing Assessment:**
  - Can students use multiplication strategies they already know and reasoning to solve multiplication problems with decimal numbers?

### Sample Lessons/Activities
- **1. Introducing Multiplying Decimals**
- **2. Multiplying Decimals**
- **3. How Big is the Answer?**
- **4. 10-Minute Math:** Practicing Place Value

### Sample Resources
- **SAB:** page 69, 70, 71

## Session 3
### Essential Questions
- Can I estimate products of decimal numbers?
- Can I multiply decimals to hundredths through reasoning about place value and multiplication?
- Can I write a rule for multiplying decimal numbers?

### Content Standards
- 5.NBT.3.a, 5.NBT.4, 5.NBT.7

### Practices
- MP6. Attend to precision

### Assessments
- **Ongoing Assessment:**
  - Can students use multiplication strategies they already know and reasoning to solve multiplication problems with decimal numbers?

### Sample Lessons/Activities
- **1. Decimal Multiplication**
- **2. Writing a Rule**
- **3. 10-Minute Math:** Practicing Place Value

### Sample Resources
- **SAB:** page 72-75

## Session 4
### Essential Questions
- Can I estimate products of decimal numbers?
- Can I multiply decimals to hundredths through reasoning about place value and multiplication?
- Can I write a rule for multiplying decimal numbers?

### Content Standards
- 5.NBT.3.a, 5.NBT.4, 5.NBT.7

### Practices
- MP6. Attend to precision

### Assessments
- **Ongoing Assessment:**
  - Can students solve problems involving multiplication of decimals and continue to develop a rule to use?

### Sample Lessons/Activities
- **1. Multiplying Tenths**
- **2. Animal Speeds**
- **3. A Rule for Multiplying Decimals**
- **4. 10-Minute Math:** Practicing Place Value

### Sample Resources
- **SAB:** page 76-78

---

### Unit 6: Decimals on Grids & Number Lines

#### Investigation 3A: More Decimal Operations

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A.3</td>
<td>Can I estimate products of decimal numbers? Can I multiply decimals to hundredths through reasoning about place value and multiplication? Can I write a rule for multiplying decimal numbers?</td>
<td>5.NBT.3.a, 5.NBT.4, 5.NBT.7</td>
<td>MP6. Attend to precision</td>
<td>Ongoing Assessment: Can students use multiplication strategies they already know and reasoning to solve multiplication problems with decimal numbers?</td>
<td>1. Decimal Multiplication 2. Writing a Rule 3. 10-Minute Math: Practicing Place Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Unit 6: Decimals on Grids & Number Lines

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3A.5    | ● Can I use representations and reasoning to divide whole numbers by powers of 10 (including 1, 0.1, and 0.001)?  
          ● Can I explain the patterns in the placement of the decimal point when a decimal is divided by a power of 10? | S.NBT.2, S.NBT.7 | MP7. Look for and make use of structure | Ongoing Assessment:  
          ● Can students divide whole numbers by powers of 10 and look for patterns in their answer? | 1. Dividing by Powers of 10  
          2. Comparing Multiplication and Division  
          3. 10-Minute Math: Estimation and Number Sense: Closest Estimate | | | | M21  
          SAB: page 79-81 | ● fractions and mixed numbers  
          ● equivalent fractions and percents for fractions involving halves, thirds, fourths, Fifths, sixths, eighths, tenths, and twelfths.  
          ● comparing, adding, and subtracting fractions.  
          ● Sums of decimal fractions involving tenths and some familiar hundredths such as 0.25 and 0.75. |
| 3A.6    | ● Can I estimate quotients of the decimal number?  
          ● Can I divide decimals to the hundredths through reasoning about place value and division? | S.NBT.7 | MP6. Attend to precision | Ongoing Assessment:  
          ● Can students use division strategies they already know and reasoning to solve division problems with decimal numbers? | 1. Introducing Dividing Decimals  
          2. Dividing Decimals  
          3. Making Sense of Dividing Decimals  
          3. 10-Minute Math: Estimation and Number Sense: Closest Estimate | | | | SAB: page 82-83 | |
| 3A.7    | ● Can I multiply decimals to the hundredths through reasoning about place value and multiplication?  
          ● Can I divide decimals to the hundredths through reasoning about place value and division? | S.NBT.7 | MP6. Attend to precision | 1. Assessment:  
          Multiplying and Dividing Decimals (C89)  
          2. Ongoing Assessment:  
          ● Can students solve multiplication and division word problems? | 1. Rhomaa Animal Jumps  
          2. Multiplying and Dividing Decimals  
          3. Multiplying and Dividing Decimals  
          3. 10-Minute Math: Estimation and Number Sense: Closest Estimate | | | | C87, C88, C89, C90  
          SAB: page 84-85 | |
| 3A.8    | ● Can I convert measurements within a given measurement system? | S.OA.1 S.MD.1 | MP7. Look for and make use of structure | Ongoing Assessment:  
          ● Can students convert lengths within the U.S. standard units and within the metric system? | 1. Converting Lengths  
          2. Conversion Problems  
          3. 10-Minute Math: Order of Operations | | | | C91, C92, C93  
          SAB: page 87-91  
          Chart paper (prepare a length equivalents chart as shown on p. CC143)  
          rulers, yardsticks, meter sticks | |
## Unit 6: Decimals on Grids & Number Lines

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3A.9    | • Can I convert weights and masses?  
         • Can I convert capacities?  
         5.OA.1  
         5.MD.1 | MP7. Look for and make use of structure | Ongoing Assessment:  
         • Can students convert measurements within the U.S. standard units and within the metric system?  
         1. Converting Weights and Masses  
         2. Converting Capacities  
         3. 10-Minute Math: Order of Operations |  
         • C94, C95, C96, C97  
         • SAB: page 90-93  
         • Chart paper (prepare a length equivalents chart as shown on p. CC148)  
         • Length equivalents from Session 3A.8  
         • Measurement Equivalents chart |  |  |  |  |  |
### Session | Essential Questions | Content Standards | Practices | Assessments | Sample Lessons/Activities | Vocabulary | Resources | Interdisciplinary Connections | Prior Knowledges
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---

### 1.2 | Can I generate equivalent multiplication expressions by doubling (or tripling) one factor and dividing the other by 2 (or 3)? Can I use story contexts and representations to support explanations of the relationship between equivalent expressions? | 5.OA.2 | MP8. Look for and express regularity in repeated reasoning. | Ongoing Assessment: Observing Students at Work: 1. Tripling and Thirding 2. Sharing Representations 3. 10-Minute Math: Estimation and Number Sense: Closest Estimate. | Language Arts: Writing to explain mathematical thinking: Session 1.1, p 39


### 1.4 | Can I compare equivalent multiplication expressions to equivalent division expressions? Can I represent equivalent expressions in divisions? Can I generate equivalent division expressions. | 5.OA.2 | MP8. Look for and express regularity in repeated reasoning. | Ongoing Assessment: Observing Students at Work: 1. Creating Equivalent Expressions in division 2. Comparing Division and Multiplication. 3. 10-Minute Math: Estimation and Number Sense: Closest Estimate. | Language Arts: Writing to explain mathematical thinking: Session 1.4, p 42
## 5th Grade Math

### Session | Essential Questions | Content Standards | Practices | Assessments | Sample Lessons/Activities | Vocabulary | Resources | Interdisciplinary Connections | Prior Knowledges
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---

### Unit 7: How Many People? How Many Teams?

#### Investigation 2: Reviewing Multiplication Strategies

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Can I solve 2-digit by 2-digit or 3-digit multiplication problems fluently? Can I describe and compare strategies used to solve multi-digit multiplication problems?</td>
<td>5.NBT.5</td>
<td>MP8. Look for and express regularity in repeated reasoning.</td>
<td>Ongoing Assessment: Observing Students at Work · Students solve 2-digit by 2-digit or 3-digit multiplication problems individually and then solve problems by using a partner's first step.</td>
<td>1. Reviewing Strategies 2. Multiplication: How Did I solve it? 3. 10-Minute-Math: Number Puzzles</td>
<td>· IWB: 7.2.1 · Multiplication strategy posters for 35 x 28 · SAB: page 13-16. · SH: pages 30-32.</td>
<td>· Language Arts: Writing to explain mathematical thinking: Session 2.1, p 51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Can I solve 2-digit or 3-digit multiplication problems fluently? Can I use clear and concise notation?</td>
<td>5.NBT.5</td>
<td>MP8. Look for and express regularity in repeated reasoning.</td>
<td>Ongoing Assessment: Observing Students at Work · Students solve multiplication problems by breaking the numbers apart by place.</td>
<td>1. Solving More Problems 2. 253 x 46 3. 10-Minute Math: Estimation and Number Sense: Closest Estimate.</td>
<td>· IWB: 7.2.4 · M25 · SAB: page 25-26 · SH: page 30-32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Investigation 3: Division Strategies and Notation

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Can I represent a division problem with a picture or diagram? Can I create a story context for a division expression? Can I describe and compare strategies used to solve division problems?</td>
<td>5.NBT.5, 5.NBT.6</td>
<td>MPS. Use appropriate tools strategically MP6. Attend to Precision</td>
<td>Ongoing Assessment: Observing Students at Work · Students solve a division problem with a 3-digit dividend and a 2-digit divisor.</td>
<td>1. Solving a Division Problem 2. Naming Strategies 3. 10-Minute Math: Number Sense: Closest Estimate</td>
<td>· IWB: 7.3.1 · construction paper; markers; square tiles; connecting cubes · M26-27 (optional) · SAB: pages 27-28 · SH: pages 38-39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 5th Grade Math

### Unit 7: How Many People? How Many Teams?

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3.2     | • Can I use clear and concise notation?  
          • Can I solve multistep word problems?  
          5.NBT.5, 5.NBT.6 | MP6. Attend to Precision | Ongoing Assessment: Observing Students at Work  
          • Students solve division problems.  
          1. Clear and Concise Notation  
          2. Solving Division Problems?  
          3. 10-Minute Math: Estimation and Number Sense: Closest Estimate. | 1. Clear and Concise Notation  
          2. Solving Division Problems?  
          3. 10-Minute Math: Estimation and Number Sense: Closest Estimate. | IWB: 7.3.2  
          SAB: pages 29-32, C101  
          SH: pages 38-39 |        |  |  |  |  |
| 3.3     | • Can I use clear and concise notation?  
          • Can I solve division problems with a 2-digit divisor fluently?  
          5.NBT.5, 5.NBT.6 | MP3. Construct viable arguments and critique the reasoning of others.  
          MP6. Attend to Precision | Ongoing Assessment: Observing Students at Work  
          • Students solve division problems.  
          1. Introducing How Do You Start  
          2. How Do You Start  
          3. First Steps  
          4. 10-Minute Math: Number Puzzles |  | IWB: 7.3.3  
          SAB: pages 33-36, C102  
          SH: pages 38-39 |        |  |  |  |
| 3.4     | • Can I describe and compare strategies used to solve division problems?  
          • Can I solve division problems with a 2-digit divisor fluently?  
          • Can I solve multistep word problems?  
          5.NBT.5, 5.NBT.6 | MP3. Construct viable arguments and critique the reasoning of others.  
          MP6. Attend to Precision | Ongoing Assessment: Observing Students at Work  
          • Students are given a starter problem (first step) to solving division problems and are asked to solve the rest of the problem.  
          • Students solve multistep word problems involving all four operations.  
          1. Division Strategies  
          2. Division Strategies  
          3. 10-Minute Math: Number Puzzles |  | IWB: 7.3.4  
          SAB: pages 37-43  
          SH: pages 38-39 |        |  |  |  |
| 3.5     | • Can I describe and compare strategies used to solve division problems?  
          • Can I solve division problems with a 2-digit divisor fluently?  
          • Can I solve multistep word problems?  
          5.NBT.5, 5.NBT.6 | MP3. Construct viable arguments and critique the reasoning of others.  
          MP6. Attend to Precision | see 3.4  
          1. Division Strategies  
          2. Solving Multistep Problems  
          3. 10-Minute Math: Number Puzzles |  | IWB: 7.3.5  
          SAB: pages 37-41, 45-46  
          SH: pages 38-39  
          T77 |        |  |  |  |
## 5th Grade Math

### Unit 7: How Many People? How Many Teams?

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 3.6     | ● Can I solve division problems with a 2-digit divisor fluently?  
          ● Can I use clear and concise notation? | 5.NBT.5, 5.NBT.6  
          MP3. Construct viable arguments and critique the reasoning of others.  
          MP6. Attend to Precision | Ongoing Assessment: Observing Students at Work  
          Students create their own starter problems and solve problems created by other students | 1. Division: How Did I solve it?  
2. Using Strategies  
3. 10-Minute Math: Estimation and Number Sense: Closest Estimate. | ● IWB: 7.3.6  
● SAB: pages 47-50  
● SH: pages 38-39 | | | | Understand the meaning of the operations of multiplication and division and how they are related.  
Since Unit 1, carrying out multiplication fluently and efficiently.  
Have strategies for solving division problems, working towards fluency and concise notation. |
| 3.7     | ● Can I solve division problems with a 2-digit divisor fluently?  
          ● Can I use clear and concise notation? | 5.NBT.6  
          MP6. Attend to Precision | Ongoing Assessment: Observing Students at Work  
Student are assessed on their ability to solve a division problem accurately and record their solutions clearly | 1. Assessment Activity: 701 ÷ 27  
2. 10-Minute Math: Estimation and Number Sense: Closest Estimate. | ● IWB: 7.3.7  
● SAB: page 51  
● SH: pages 38-39  
● M29 | | | | |

### Investigation 4: Using the Operations

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 4.1     | ● Can I solve multistep word problems?  
          ● Can I solve 2-digit by 2-digit or 3-digit multiplication problems fluently?  
          ● Can I solve division problems with a 2-digit divisor fluently?  
          ● Can I use all four operations to solve problems?  
          ● Can I describe and compare strategies used to solve division problems? | 5.NBT.5, 5.NBT.6  
          MP1. Make sense of problems and persevere | Ongoing Assessment: Observing Students at Work  
Student solve a multistep problem using all four operations | 1. Field Day Refreshments  
2. Explaining Solutions  
3. 10-Minute Math: Number Puzzles | ● IWB: 7.4.1  
● SAB: pages 52-55, 57A, C103  
● SH: pages 30-32, 38-39  
● M30  
● Calculators | | | | |
| 4.2     | ● Can I solve division problems with a 2-digit divisor fluently?  
          ● Can I use all four operations to solve problems?  
          ● Can I describe and compare strategies used to solve division problems? | 5.NBT.5, 5.NBT.6  
          MP1. Make sense of problems and persevere | Ongoing Assessment: Observing Students at Work  
Student solve division problems in the story context of Field Day teams. | 1. Field Day Activities  
2. Field Day Lunch and Cleanup  
3. 10-Minute Math: Number Puzzles | ● IWB: 7.4.2  
● SAB: pages 52, 57-62  
● SH: pages 8-11, 30-32, 38-39  
● M30 | | | | |
## 5th Grade Math

### Unit 7: How Many People? How Many Teams?

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
</table>
| 4.3     | ● Can I solve multistep word problems?  
● Can I solve 2-digit by 2-digit or 3-digit multiplication problems fluently?  
● Can I solve division problems with a 2-digit divisor fluently? | 5.NBT.5, 5.NBT.6 | MP1. Make sense of problems and persevere | Ongoing Assessment: Observing Students at Work  
● Students solve multiplication and division problems with large numbers.  
● Are students able to efficiently use strategies to multiply and divide. | 1. Field Day  
2. Ten Minute Math: Estimation and Number Sense: Closest Estimate |  
| 4.4     | ● Can I solve multistep word problems?  
● Can I solve 2-digit by 2-digit or 3-digit multiplication problems fluently?  
● Can I solve division problems with a 2-digit divisor fluently? | 5.NBT.5, 5.NBT.6 | MP1. Make sense of problems and persevere | Ongoing Assessment: Observing Students at Work  
● Students are assessed on their ability to efficiently solve multiplication and division problems. | 1. Field Day  
2. Dividing with Large Numbers  
3. Ten Minute Math: Estimation and Number Sense: Closest Estimate |  
| 4.5     | ● Can I solve division problems with a 2-digit divisor fluently?  
● Can I solve 2-digit by 2-digit or 3-digit multiplication problems fluently?  
● Can I solve 2-digit by 2-digit or 3-digit multiplication problems fluently? | 5.NBT.5, 5.NBT.6 | MP1. Make sense of problems and persevere  
MP2. Reason abstractly and quantitatively | Ongoing Assessment: Observing Students at Work  
● Students are assessed on their ability to efficiently solve multiplication and division problems. | 1. End-of-Unit Assessment  
2. Solution to the Assessment Problems  
3. Ten Minute Math: Number Puzzles |  

**Language Arts: Writing to explain mathematical thinking:**  
Session 4.3, p 112  
Session 4.4, p 112  
Session 4.5, p 112  
● Understand the meaning of the operations of multiplication and division and how they are related.  
● Since Unit 1, carrying out multiplication fluently and efficiently.  
● Have strategies for solving division problems, working towards fluency and concise notation.
### 5th Grade Math

#### Unit 8: Growth Patterns

**Investigation 1: Height & Growth**

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Can I measure in length with meters and centimeters? Can I plot points on a coordinate grid to represent a situation in which one quantity is changing in relation to another? Can I use tables to represent the relationship between two quantities?</td>
<td>5.OA.3; 5.MD.1; 5.G.1; 5.G.2</td>
<td>MP4: Model with mathematics</td>
<td>Ongoing Assessment: Can students review measuring in meters and centimeters and identify benchmarks for these measures? Can students complete a table and a graph to represent the stories of Tara’s and Nat’s growth?</td>
<td>10min Math Estimation and Number Sense M5-M7/WB; Reviewing Measurement in Centimeters; Growth Stories Tara and Nat</td>
<td>rate of change</td>
<td>SAB p1-4; M9-M12; SMH p66-67; T78-79</td>
<td>○ line plot ○ Creating tables and graphs to represent situations of constant change. ○ Using symbolic notation and equations to represent rules</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Can I plot points on a coordinate grid to represent a situation in which one quantity is changing in relation to another? Can I identify points on a graph with a corresponding value in a table and interpret the numerical information in terms of the situation the graph represents? Can I describe the relative steepness of graphs or parts of graphs in terms of different rates of change?</td>
<td>5.OA.3; 5.G.1; 5.G.2</td>
<td>MP4: Model with mathematics</td>
<td>Ongoing Assessment: Can students use the information from three growth stories to generate a graph and a table?</td>
<td>10min Math Estimation and Number Sense M5-M7/WB; Comparing Tara and Nat; More Growth Stories: Tony, Maya, and Susie; Comparing Growth Stories</td>
<td>steady rate; steepness</td>
<td>SAB p5-8; M13-16; T79; SMH p68-71</td>
<td>○ Language Arts: Writing to explain mathematical thinking: ● Session 1.3, p 48</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Can I identify points on a graph with corresponding values in a table and interpreting the numerical information in terms of the situation the graph represents? Can I describe the relationship between two quantities in a situation with a constant rate of change, taking into account a beginning amount and a constant increase(decrease)? Can I find the value of one quantity in a situation with a constant rate of change, given the value of the other?</td>
<td>5.OA.3; 5.NBT.3a; 5.NBT.3b; 5.G.1; 5.G.2</td>
<td>MP4: Model with mathematics; MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students complete the table and graph for the Flickerbill’s height, including the height at ages 15 and 100?</td>
<td>10min Math Practicing Place Value; Animals’ Growth; How Tall at Age 100?</td>
<td></td>
<td>SAB p9-14; SMH p70-71; R64-R66</td>
<td>○ Language Arts: Writing to explain mathematical thinking: ● Session 1.3, p 48</td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>-----------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>1.4</td>
<td>Can I identify points in a graph with corresponding values in a table and interpret the numerical information in terms of the situation the graph represents? Can I compare situations by describing differences in their graphs? Can I describe the relative steepness of graphs or parts of graphs in terms of different rates of change?</td>
<td>5.OA.3; 5.NBT.3a; 5.NBT.3b; 5.G.1; 5.G.2</td>
<td>MP4: Model with Mathematics; MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students represent the growth of three more animals of Rhomaar on a table and a graph? (Each animal has a certain height or length at birth and a steady rate of growth per year thereafter.)</td>
<td>10min Math Practicing Place Value; The Krink, the Trifoot, and the Water Weasel; Comparing Animals' Growth; How do the Animals Grow?</td>
<td>SAB p15-17; SMH 72-73; M17; R64-R66</td>
<td>Language Arts: Writing to explain mathematical thinking: ● Session 1.4, p 52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Can I describe a situation in which the rate of change is not constant but can be determined? Can I describe the relative steepness of graphs or parts of graphs in terms of different rates of change? Can I compare tables, graphs and situations with a constant rate of change is not constant?</td>
<td>5.OA.3; 5.G.1; 5.G.2</td>
<td>MP4: Model with Mathematics; MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students decide on a rule for the Fast walker's growth based on height data for 5 years? Can students represent the growth with a table and graph and describe the growth pattern?</td>
<td>10min Math Estimation and Number Sense; A Different Kind of Animal; What is Different about Fast walker?</td>
<td>SABp18-22; SMHp74; M8; T82; R64-R66</td>
<td>Language Arts: Writing to explain mathematical thinking: ● Session 1.5, p 58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Can I write arithmetic expression for finding the value of one quantity in terms of the other in a situation with a constant rate of change?; Can I make rules that relate on variable to the other in situations with a constant rate of change?; Can I use symbolic letter notation to represent the value of one variable in terms of another variable?; Can I find the perimeter of a rectangle?</td>
<td>5.OA.2; 5.NBT.3a; 5.NBT.3b; 5.G.1</td>
<td>MP1: Make sense of problems and preserve in solving them; MP2: Reason abstractly and quantitatively; MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students determine the number of tiles in a rectangular array constructed of rows of 3 for different numbers of rows? Can students determine how the perimeter of a rectangle built from rows of 3 tiles changes as the number of rows increases? Can students develop a rule or formula for ( n ) rows?</td>
<td>10min Math Practicing Place Value; 3 Tiles Across; Using Symbolic Notation; What's the Perimeter?</td>
<td>SAB p23-28; SMH p 77-78; M8; R67-68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>-------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>2.2</td>
<td>Can I find the value of one quantity in a situation with a constant rate of change, given the value of the other?; Can I use symbolic letter notation to represent the value of one variable in terms of another variable?; Can I describe the relationship between two quantities in a situation with a constant rate of change, taking into account beginning amount and a constant increase/decrease?; Can I find the area of a rectangle?</td>
<td>5.OA.1; 5.OA.2; 5.NBT.3A; 5.NBT.3b</td>
<td>MP1: Make sense of problems and preserve in solving them; MP2: Reason abstractly and quantitatively; MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students determine why the total number of tiles for 20 rows is double that for 10 rows, but the perimeter of 20 rows is not double that for 10 rows (using rows of 3 tiles)?</td>
<td>10min Math Practicing Place Value; Perimeter for 20 Rows; Double or not?</td>
<td>SAB25-29; SHB77-78; M8; R67-R68</td>
<td>● line plot ● Creating tables and graphs to represent situations of constant change. ● Using symbolic notation and equations to represent rules</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Can I find the value of one quantity in a situation with a constant rate of change, given the value of the other?; Can I use symbolic letter notation to represent the value of one variable in terms of another variable?; Can I identify points in a graph with corresponding values in a table and interpreting the numerical information in terms of the situation the graph represents?</td>
<td>5.OA.1; 5.OA.2; 5.OA.3; 5.G.1; 5.G.2</td>
<td>MP1: Make sense of problems and preserve in solving them; MP2: Reason abstractly and quantitatively; MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students work on rectangles with 4, 5 and 6 tiles across to generate a table, graph, and rule for the total number of tiles and the perimeter?; Can students discuss their tables, graphs and formulas with students who have worked with the same-size rectangles?; Can students compare three related situations of constant change using tables, graphs and rules expressed in words and symbolic notation?</td>
<td>10min Math Estimation and Number Sense; 4, 5 and 6 Tiles Across, Comparing Tiles Across; Sharing 4, 5 and 6 Tiles Across</td>
<td>SAB30-37; SHB p66-67; 77-78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session</td>
<td>Essential Questions</td>
<td>Content Standards</td>
<td>Practices</td>
<td>Assessments</td>
<td>Sample Lessons/Activities</td>
<td>Vocabulary</td>
<td>Resources</td>
<td>Interdisciplinary Connections</td>
<td>Prior Knowledges</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------</td>
<td>------------</td>
<td>----------</td>
<td>-------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>2.4</td>
<td>Can I identify points in a graph with corresponding values in a table and interpret the numerical information in terms of the situation the graph represents? Can I compare situations by describing differences in their graphs? Can I describe the relative steepness of graphs of parts in terms of different rates of change?</td>
<td>S. OA.3; S.G.1; S.G.2</td>
<td>MP1: Make sense of problems and preserve in solving them; MP7: Look for and make use of structure. Ongoing Assessment: Can students find the total number of tiles and the perimeter for rectangles with 10 tiles across? Can students compare these results to the results for other sizes of rectangles and to their predictions for 10-tile rectangles?</td>
<td>10min Math Estimation and Number Sense; Comparing Graphs and Tables; 10 Tiles Across</td>
<td>SAB p30-35, 39-44, 45-46; SMH p66-68; T83, T84; M20, M21</td>
<td>● line plot ● Creating tables and graphs to represent situations of constant change. ● Using symbolic notation and equations to represent rules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5</td>
<td>Can I identify points in a graph with corresponding values in a table and interpret the numerical information in terms of the situation the graph represents? Can I compare tables, graphs and situations with a constant rate of change with those in which the rate of change is not constant? Can I describe relative steepness of graphs or parts of graphs in terms of S. OA.2; S.OA.3; S.NBT.3.b; S.G.1; S.G.2</td>
<td>MP7: Look for and make use of structure. Ongoing Assessment: Can students make a table and a graph for each of the two Penny Jar situations?</td>
<td>10min Math Practicing Place Value; Introducing Penny Jar Situations; Penny Jar Problems; Comparing Penny Jars</td>
<td>SAB p47-52; SMH p66-67, 72-73, 75-76</td>
<td>Language Arts: Writing to explain mathematical thinking: ● Session 2.5, pp 99-101</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.6</td>
<td>Can I identify points in a graph with corresponding values in a table and interpret the numerical information in terms of the situation the graph represents? Can I describe a situation in which the rate of change is not constant but can be determined? Can I describe how a graph represents a situation in which the rate of change is not constant?</td>
<td>S.OA.2; S.OA3; S.NBT.3a; S.NBT.3b; S.G.1; S.G.2</td>
<td>MP7: Look for and make use of structure. Ongoing Assessment: Can students complete a table and graph to show the area for a sequence of squares?</td>
<td>10min Math Practicing Place Value; How Do the Squares Grow?</td>
<td>SAB p53-56; SMH p74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# 5th Grade Math

## Unit 8: Growth Patterns

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7</td>
<td>Can I identify points on a graph with corresponding values in a table and interpreting the numerical information in terms of the situation the graph represents? Can I describe a situation in which the rate of change is not constant but can be determined? Can I describe how a graph represents a situation in which the rate of change?</td>
<td>5.OA.3; 5.G.1; 5.G.2</td>
<td>MP7: Look for and make use of structure.</td>
<td>Ongoing Assessment: Can students complete tables and graphs for the two staircase tower situations?</td>
<td>10min Math Estimation and Number Sense; Staircase Towers; How Do the Staircase Towers Grow?</td>
<td>SAB p57-63, p53-52; SMH p74; R69</td>
<td>SAB-M22-M25; SAB 64-65; SMH p72-73, 77-78</td>
<td>M22-M25; SAB 64-65; SMH p72-73, 77-78</td>
<td>Language Arts: Writing to explain mathematical thinking: Session 2.8, pp 112-113</td>
</tr>
<tr>
<td>2.8</td>
<td>Can I identify points in a graph with corresponding values in a table and interpreting the numerical information in terms of the situation the graph represents? Can I compare situations by describing the differences in their graphs? Can I use symbolic letter notation to represent the value of one variable in terms of another variable?</td>
<td>5.OA.3; 5.G.1; 5.G.2</td>
<td>MP7: Look for and make use of structure.</td>
<td>End of Unit M22-25</td>
<td>SAB-M22-M25; SAB 64-65; SMH p72-73, 77-78</td>
<td>Language Arts: Writing to explain mathematical thinking: Session 2.8, pp 112-113</td>
<td>SAB-M22-M25; SAB 64-65; SMH p72-73, 77-78</td>
<td>M22-M25; SAB 64-65; SMH p72-73, 77-78</td>
<td>Language Arts: Writing to explain mathematical thinking: Session 2.8, pp 112-113</td>
</tr>
</tbody>
</table>
# Unit 9: How Long Can You Stand on One Foot?

## Investigation 1: Comparing Balancing Data

<table>
<thead>
<tr>
<th>Session</th>
<th>Essential Questions</th>
<th>Content Standards</th>
<th>Practices</th>
<th>Assessments</th>
<th>Sample Lessons/Activities</th>
<th>Vocabulary</th>
<th>Resources</th>
<th>Interdisciplinary Connections</th>
<th>Prior Knowledges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Can I use a line plot to represent ordered, numerical data?; Can I compare sets of data using the shape and spread of the data; Can I describe the shape of a set of data: where the data are concentrated, the median, what is typical, highest and lowest values, range and outliers?</td>
<td>5.MD.2</td>
<td>MP3: Construct viable arguments and critique the reasoning of others; MP6: Attend to precision; MP7: Look for and make use of structure</td>
<td>Ongoing Assessment: Can students perform an experiment and collect the data on how long they can stand on one foot with their eyes closed?</td>
<td>10 Min Math Quick Survey; Recording Data on a Line; Describing and Comparing Balancing Data</td>
<td>Data, experiment, line plot, range</td>
<td>SAB p.1-4; SMH p.81-82; M11-12 Family Letter</td>
<td>● Collecting, describing, and representing data to compare two groups ● Collected data through counting and measuring ● Introduced to bar graphs and line plots ● Familiar with making and interpreting representations ● Described the shape of data ● Learned terms mode, median, range, and outlier ● Developed conclusions and making arguments about two groups on basis of data ● Began study of probability and &quot;likelihood line&quot; (impossible to certain)</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Can I compare sets of data using the shape and spread of the data?; Can I use medians to compare groups?; Can I develop an argument based on data?</td>
<td>5.MD.2</td>
<td>MP3: Construct viable arguments and critique the reasoning of others; MP6: Attend to precision; MP7: Look for and make use of structure</td>
<td>Ongoing Assessment: Can students compare sets of mystery balancing data and make hypotheses about who the balancers might be?</td>
<td>10 Min Math Quick Survey; T89 WB; Another 5th Grade Class; Mystery Balancers</td>
<td>median</td>
<td>SAB p.3-8; SMH p.82-88; T89 WB; M10, M13-14</td>
<td>Language Arts: Writing to explain mathematical thinking; ● Session 1.2, p 33</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Can I compare sets of data using the shape and spread of the data?; Can I develop an argument based on the data?</td>
<td>5.NBT.5; SNBT.6; SMD.2</td>
<td>MP3: Construct viable arguments and critique the reasoning of others; MP6: Attend to precision; MP7: Look for and make use of structure</td>
<td>Ongoing Assessment: Can students compare specific aspects of the adult and student balancing data?</td>
<td>10 Min Math Estimation and Number Sense: Closest Estimate; Who are the Mystery Balancers?; Comparing Adults and Students?; Comparing Left-Foot Data</td>
<td>SAB p.3-4, 9-11; SMH p.85-88; M15/T90, M16 T91, M18, T92 WB</td>
<td>Language Arts: Writing to explain mathematical thinking; ● Session 1.4, p 42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Can I draw conclusions based on data?; Can I compare sets of data using the shape and spread of the data?</td>
<td>5.NBT.5; SMD.2</td>
<td>MP3: Construct viable arguments and critique the reasoning of others; MP6: Attend to precision; MP7: Look for and make use of structure</td>
<td>Ongoing Assessment: Can students compare specific aspects of the adult and student balancing data?; Can students draw conclusions about who are better balancers from their comparisons of the adult and student data?</td>
<td>10 Min Math Estimation and Number Sense: Closest Estimate; Comparing Right-Foot Data; Drawing Conclusions; Who Can Balance Longer on One Foot?</td>
<td>SAB p.9-10, 12-13, 15-16; SMH 85-88; M18 WB</td>
<td>Language Arts: Writing to explain mathematical thinking; ● Session 1.4, p 42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>