Weld County School District RE-1 *Unit/Weekly Planning Template*

**Grade and Content Area: 5th Math**

**Unit Title: Doctor We Still Need to Operate**

**Length of Unit: 12 weeks**

**Unit Description:**

**In this unit, students will learn about the importance of the place value system, through the use of multiplication, division and operations with decimals. Students will begin to understand the place value system through exploring powers of 10, and its effect on numbers. They will apply this knowledge to help them understand how to convert between various measurements within a given measurement system. Then, students will practice their multiplication and division skills while determining the relationship between the two operations. Next, students will round, compare, order, add, subtract, multiply and divide decimals, using their knowledge of place value to assist in their learning. Finally, students will use all of these skills to understand and execute the order of operations.**

**Prior Knowledge and Experiences:**

**-Know whole number place value**

**-Know decimal place value to the hundredths**

**-Understand the basic algorithms for multiplication and division**

**-Understand the two measurement systems and know some of the basic measurements**

**-Mastery of addition and subtraction**

**-Know how to round whole numbers and estimate**

**-Base-ten numerals, number names and expanded form for whole numbers**

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| **Weeks At A Glance** |  |  |
| Week | Standards, GLE’s, EO’s, | Focus |
| 1 | S.1-GLE.1-EO.a  S.1-GLE.1-EO.a.iii  S.1-GLE.1-EO.a.i | -Understand that we use a base-ten place value system and demonstrate what that means  -Use whole number exponents to create powers of 10  -Multiply and divide whole numbers by a power of 10  -Explain the pattern in the number of zeros added when multiplying by a power of 10 |
| 2 | S.1-GLE.1-EO.d.i  S.1-GLE.1-EO.d.ii | -Apply knowledge of the powers of 10 to the understanding of measurements systems  -Convert among different-sized measurements and use the conversions to solve problems  -Solve multi-step problems using unit conversions  -Estimate and round using whole numbers |
| 3 | S.1-GLE.2-EO.a  S.1-GLE.2-EO.d.ii | -Multiply whole numbers fluently using the standard algorithm  -Solve multiplication word problems (be able to set up the problem and explain why they would set it up that way) |
| 4 & 5 | S.1-GLE.2-EO.b.i  S.1-GLE.2-EO.b.ii  S.1-GLE.2-EO.d.ii | -Identify the relationship between multiplication and division  -Divide whole numbers fluently using strategies based on place value and the relationship between multiplication and division (four-digit dividends,two-digit divisors)  -Demonstrate understanding of division using models to explain the problem  -Solve division word problems (be able to set up the problem and explain why they would set it up that way) |
| 6 | S.1-GLE.1-EO.b  S.1-GLE.1-EO.b.i | -Gain a conceptual understanding of decimal place value to the thousandths place and relate to base-ten place value system  -Read and write decimals to the thousandths place using base-ten numerals, number names and expanded form |
| 7 | S.1-GLE.1-EO.b.ii  S.1-GLE.1-EO.c | -Compare two decimals to the thousandths place  -Round and estimate with decimals |
| 8 | S.1-GLE.2-EO.c.i  S.1-GLE.2-EO.c.ii | -Use models or drawings to solve and explain problems involving the adding and subtracting of decimals (use relationship between addition and subtraction to help)  -Add and subtract decimals to the hundredths place using a written method  -Explain the reasoning used |
| 9 | S.1-GLE.1-EO.a.ii  S.1-GLE.2-EO.c.i  S.1-GLE.2-EO.c.ii | -Explain patterns in the placement of a decimal point when multiplied by a power of 10 (relate this learning back to the base-ten place value system)  -Use models or drawings to solve and explain problems involving multiplying decimals  -Multiply decimals to the hundredths place using a written method  -Explain the reasoning used |
| 10&11 | S.1-GLE.1-EO.a.ii  S.1-GLE.2-EO.c.i  S.1-GLE.2-EO.c.ii | -Explain patterns in the placement of a decimal point when divided by a power of 10 (relate this learning back to the base-ten place value system)  -Use models or drawings to solve and explain problems involving dividing decimals (use relationship between multiplication and division to help)  -Divide decimals to the hundredths place using a written method  -Explain the reasoning used |
| 12 | S.1-GLE.2-EO.d.i  S.1-GLE.2-EO.d.ii | -Use parentheses, brackets or braces in numerical expressions and solve using the order of operations  -Understand why the order in which operations are completed is important  -Write an expression that would be used to solve a problem and explain why they made that expression (but they do not need to solve the expression) |

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| **Inquiry Questions (Essential Questions):** |  |
| 1 | What is the purpose of a place value system? |
| 2 | How are mathematical operations related? How can this relationship aide in solving math problems? |
| 3 | How are whole numbers and decimals similar and different? (In regards to place value, operations, skills, etc) |
| 4 | How do we solve word problems? |
| 5 | How can we justify our answer/solution? |

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| Performance Assessment:*The capstone/summative assessment for this unit.* |  |
| **Claims:**  (Key generalization(s) to be mastered and demonstrated through the capstone assessment.) |  |
| **Stimulus Material:**  (Engaging scenario that includes role, audience, goal/outcome and explicitly connects the key generalization) |  |
| **Product/Evidence:**  (Expected product from students) |  |
| **Differentiation:**  (Multiple modes for student expression) |  |

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| **Unit Considerations (Notes to teachers):** |
| -Mastery of the standard algorithms for multiplication and division is important before starting to multiply and divide decimals  -Find real world problems to solve  -Find enough base-ten blocks or sticks for every student |

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| **Texts for Independent Reading or Class Read Aloud to Support the Content** |  |
| **Informational/Nonfiction** | **Fiction** |
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| **Websites and Apps.** |
| Activities or Worksheets:  - <http://www.k-5mathteachingresources.com/5th-grade-number-activities.html>  - <http://www.math-salamanders.com/long-division-worksheets.html>  - <http://www.edboost.org/practice/long-division-remainders-1-digit-divisor-4-5-digit-dividend>  - <http://www.nzmaths.co.nz/material-masters?parent_node=>  - <http://www.livebinders.com/play/play/467484>  - [001\_009\_CRM01\_881033.qxd - m1\_nat\_wpwb.pdf](http://glencoe.mcgraw-hill.com/sites/dl/free/0078740428/589238/m1_nat_wpwb.pdf)  - <http://www.math-drills.com/powersoften.shtml#learnmultiply>  - <http://maccss.ncdpi.wikispaces.net/file/view/CCSSMathTasks-Grade5.pdf/375611936/CCSSMathTasks-Grade5.pdf>  - <http://alpertscience.org/CHEM_LABS_PROJECTS/Metric%20System%20and%20Using%20the%20Metric%20Ladder.pdf>  - <http://teachersites.schoolworld.com/webpages/MBalusek/files/lesson1ametricladderpowerpoint.pdf>  - <http://www2.ccsd.ws/sbfaculty/team8e/jecole/science/metric%20conversion.htm>  -<http://www.kidslearningstation.com/math/multiplication-multiple-digits.asp>  -<http://mathforum.org/t2t/faq/gail/duck.story.html>  -<http://3rdgradethings.blogspot.com/2013/09/welcome-to-fall-cool-3rd-grade-place.html>  Videos:  -<http://www.glencoe.com/sites/common_assets/mathematics/im1/concepts_in_motion/interactive_labs/M1_05/M1_05_dev_100.html>  -<http://www.brainpop.com/math/numbersandoperations/decimals/preview.weml>  Real World Application:  - <http://espn.go.com/mlb/standings>  - <http://www.mathsolutions.com/documents/Dr.Suess_Math_Class.pdf>  - <http://www.bvsd.org/curriculum/math/Research%20%20Resources%20Instruction/Understanding%20Place%20Value.pdf>  - <https://www.georgiastandards.org/Common-Core/Common%20Core%20Frameworks/CCGPS_Math_5_Unit1FrameworkSE.pdf>  - <http://www.pkwy.k12.mo.us/homepage/jjauss/file/chemistry_i/measurement/metric_ladder.pdf>  - <http://www.sfponline.org/Uploads/1602/Metric%20Prefixes.pdf> |

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| **Materials (Manipulatives)** |
| -Place value charts (either on paper or manipulatives)  -Decimal grid models (either on paper or manipulatives) |

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| **Week One** |  |  |  |  |  |
| Learning Experience #1 – **2 Day** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE. 1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.a: Explain  that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.  (CCSS: 5.NBT.1) | *3* | \*Why is zero important in our place value system?  \*What is the relationship between 6,540 and 654?  \*How does understanding our place value system help us read, write and compare numbers? | KNOW:  -We use a base-ten place value system  UNDERSTAND:  -A base-ten system means that a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of the place to its left  BE ABLE TO DO:  -Write a number in expanded form  -Explain what a base-ten place value system is and why it is important | *\*\*\*Pre-test\*\*\**  1. Show a jumbled math problem and ask them to solve- discuss what would help them solve the problem  Exp:  21 3 47 8 9 12  + 4 1 1 7 91 1  2. Discuss purpose of place value system  3. Egyptian place value activity  <http://www.bvsd.org/curriculum/math/Research%20%20Resources%20Instruction/Understanding%20Place%20Value.pdf>  4. Discuss difficulties of this system and relate to our base-ten system  5. Demonstrate that a digit in one place represents 10 times as much as it does in the place to the right using a place value chart   |  |  |  |  | | --- | --- | --- | --- | | **Th** | **H** | **T** | **O** | | 1,000 | 100 | 10 | 1 |   6. Place Value game:  -Students split a deck of cards  -Flip over 4 cards and try to make the biggest number possible, to beat the partner (face cards are 0)  -Write numbers in standard form. Then, write the numbers in expanded form and subtract them, the difference is how many points the winner gets (This will help demonstrate that when we regroup we arent’ just regrouping 1, for example, we are really regrouping 10, or 10 times as much as the other place)  Exp:  2,435 2,000 400 30 5  - 627 - 600 20 7  Vocabulary:  -place value  -base-ten system  **-**digit  -standard form  Effort Story/Information:  *Egyptian place value system*  *~Took effort to develop a system and write all those symbols to represent numbers* | -Decks of cards  -Place value charts (either on paper or manipulatives)  -<http://www.bvsd.org/curriculum/math/Research%20%20Resources%20Instruction/Understanding%20Place%20Value.pdf> |

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| Formative Assessment(s): Warm-Up- Have students solve a subtraction or addition problem, that requires regrouping, by splitting it into expanded form.  2,456 + 1,788= 2,000 400 50 6  + 1,000 700 80 8 |

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| **Week One** |  |  |  |  |  |
| Learning Experience #2 – **3 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.a.i: Explain patterns in the number of zeros of the product when  multiplying a number by powers of 10. (CCSS: 5.NBT.2)  EO.a.iii: Use whole-number exponents to denote powers of 10 (CCSS: 5.NBT.2) | *3*  *2* | \*What does a power of ten represent? Such as  4  10  \*How do powers of ten relate to our place value system? | KNOW:  -An exponent is used to denote a power of ten  UNDERSTAND:  -A power of ten represents the number of times a number is multiplied by 10  -Multiplication or division by a power of ten increases or decreases the place value by that many places  BE ABLE TO DO:  - Explain patterns in the number of zeros in a product when multiplying by powers of 10  -Use whole number exponents to represent powers of 10  -Solve power of ten equations (multiplication or division) | 1. Relate base-ten system to powers of 10- If move from 1s to 1,000s, instead of multiplying 1 x 10 x 10 x 10 x 10 you can condense into powers of 10  2. [Building Powers of Ten](http://maccss.ncdpi.wikispaces.net/file/view/CCSSMathTasks-Grade5.pdf/375611936/CCSSMathTasks-Grade5.pdf) activity  -Have students use the base-ten blocks to build visual models of powers of 10  3. Relate the exponent to the number of zeros  2  10 = 100 2 zeros  4. Demonstrate how multiplying by a power of 10 adds zeros to the end of the number OR moves the decimal to the right  3  234 x 10 = 234,000  Ask and discuss is the same as:  234 x 10 x 10 x 10  5. Powers of Ten Worksheet  -Practice [writing an equation](http://www.math-drills.com/powersoften/powersoften_multiply_pos_standard_001.html) as a power of ten equation  -Practice [finding the answer](http://www.math-drills.com/powersoften.shtml#learnmultiply) to a power of ten multiplication equation  6. Ask students what they think happens when you divide by a power of ten  7. Demonstrate [dividing by a power of ten](http://www.math-drills.com/powersoften.shtml#learnmultiply) and then have students practice:  Vocabulary:  -exponent  -powers of ten  **-model**  **-represent**  Effort Story/Information: | -Base-ten blocks (rods, 100’s flat and 1,000’s cube)  -Powers of Ten Sheet (activity- one for each student)  -<http://maccss.ncdpi.wikispaces.net/file/view/CCSSMathTasks-Grade5.pdf/375611936/CCSSMathTasks-Grade5.pdf>  OR  It is uploaded in the resources folder  -<http://www.math-drills.com/powersoften/powersoften_multiply_pos_standard_001.html>  -<http://www.math-drills.com/powersoften.shtml#learnmultiply> |

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| Formative Assessment(s): Warm-Up: Have students turn 267 x 10,000 into a power of ten equation. Then, solve the problem to find the answer **and** explain how they know their answer is correct.  4  267 x 10,000= 267 x 10 = 2,670,000 |

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| **Week One & Two** |  |  |  |  |  |
| Learning Experience #3 – **3 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.d.i: Convert among different-sized standard measurement units within a given measurement system.  (CCSS: 5.MD.1)  EO.d.ii: Use measurement conversions in solving multi-step, real world problems  (CCSS: 5.MD.1) | *2*  *3* | \*How are measurement and powers of 10 related?  \*How are measurement and the place value system similar? | KNOW:  -There are two measurements systems that contain different-sized measurements  UNDERSTAND:  -You can convert between measurements within the same system by using powers of ten  BE ABLE TO DO:  -Convert among different-sized measurement units within a given measurement system  -Use measurement conversions to solve real-world problems | 1. Briefly discuss the two measurement systems (Customary and metric)  \*\*\*You could break up the systems into two days\*\*\*  2. Show metric ladder and demonstrate how to use it  Here are some possible sources:  -<http://www.sfponline.org/Uploads/1602/Metric%20Prefixes.pdf>  -<http://alpertscience.org/CHEM_LABS_PROJECTS/Metric%20System%20and%20Using%20the%20Metric%20Ladder.pdf>  -Slide Show!  <http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CDMQFjAD&url=http%3A%2F%2Fsciencespot.net%2FMedia%2Fmetric_metconv.ppt&ei=UBOXU7TvMtCayATYqIHQCA&usg=AFQjCNHjcwSc8UzulLfG3hHi0CjAUafcag&bvm=bv.68445247,d.aWw&cad=rja>  Answer Key (<http://teachersites.schoolworld.com/webpages/MBalusek/files/lesson1ametricladderpowerpoint.pdf>)  3. Optional: Teach them the mnemonic device to remember the order of measurements in the metric system  <http://www2.ccsd.ws/sbfaculty/team8e/jecole/science/metric%20conversion.htm>    4. How does this relate to the powers of ten we learned about? How does this relate to the place value system?  5. Have students practice finding basic metric conversions. Below are a couple possible sites with practice problems:  -<http://www.sfponline.org/Uploads/1602/Metric%20Prefixes.pdf>  -http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CDMQFjAD&url=http%3A%2F%2Fsciencespot.net%2FMedia%2Fmetric\_metconv.ppt&ei=UBOXU7TvMtCayATYqIHQCA&usg=AFQjCNHjcwSc8UzulLfG3hHi0CjAUafcag&bvm=bv.68445247,d.aWw&cad=rja  6. Then, have students apply this knowledge to real world problems. Here are some possible options:  -Engage NY has a great lesson for real world conversions that also incorporates powers of ten  -<https://www.engageny.org/node/13806/file/39361>  -Have them measure items in the classroom and convert to a different sized measurement  -<http://www.pkwy.k12.mo.us/homepage/jjauss/file/chemistry_i/measurement/metric_ladder.pdf> (Don’t use the ladder on this site but there are a ton of questions)  -<http://www.sfponline.org/Uploads/1602/Metric%20Prefixes.pdf>  -http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CDMQFjAD&url=http%3A%2F%2Fsciencespot.net%2FMedia%2Fmetric\_metconv.ppt&ei=UBOXU7TvMtCayATYqIHQCA&usg=AFQjCNHjcwSc8UzulLfG3hHi0CjAUafcag&bvm=bv.68445247,d.aWw&cad=rja  -Chapter 9-2 (pg 420-424) in math textbook  \*Optional:  -Customary systemChapter 6-7 (pg 292-295) in math book  Vocabulary:  -Customary/Metric  -**unit**  **-conversion/ convert**  -**measurement systems**  Effort Story/Information: | -<http://www.sfponline.org/Uploads/1602/Metric%20Prefixes.pdf>  -<http://alpertscience.org/CHEM_LABS_PROJECTS/Metric%20System%20and%20Using%20the%20Metric%20Ladder.pdf>  -<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CDMQFjAD&url=http%3A%2F%2Fsciencespot.net%2FMedia%2Fmetric_metconv.ppt&ei=UBOXU7TvMtCayATYqIHQCA&usg=AFQjCNHjcwSc8UzulLfG3hHi0CjAUafcag&bvm=bv.68445247,d.aWw&cad=rja>  -<http://www2.ccsd.ws/sbfaculty/team8e/jecole/science/metric%20conversion.htm>  -Prentice Hall Mathematics: Course 1 textbook |

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| Formative Assessment(s): Have students measure an object (their pencil?) in centimeters and convert to another measurement using powers of ten. |

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| **Week Two** |  |  |  |  |  |
| Learning Experience #4 – **2 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.c: Use place value understanding to round decimals to any place.  (CCSS: 5.NBT.4)  \*\*\*This lesson will be to refresh students’ skills on whole number rounding and estimation so they will be prepared for using these skills with decimals. Also, they can estimate before they solve multiplication and division problems in the next few weeks.\*\*\* | *2* | \*How can rounding and estimating help our problem solving skills? | KNOW:  -Rounding is used to estimate sums, differences, products and quotients  UNDERSTAND:  -Estimating is used to help find a ballpark answer for a problem (which helps us determine if the answer is correct)  BE ABLE TO DO:  -Round whole numbers  -Estimate sums, differences, products and quotients | 1. Review prior knowledge  2. Chapter 1-2 (pg 8-11) in math textbook  -It presents two strategies for estimating: rounding and using compatible numbers (optional: you could split these up into two days)  3. Practice using pg 10-11 OR pages in the ALL-IN-ONE Teaching Resources book  -The Guided Problem Solving page is good for real-world application  4. Optional: Estimation Game  -Students get a deck of cards  -They flip over 5 cards each to make one 3-digit number and one 2-digit number  \_\_\_\_ \_\_\_\_ \_\_\_\_ x \_\_\_\_ \_\_\_\_  -Write the problem on a piece of paper  -They estimate the product or quotient of those two numbers  -Then, solve for the real answer  -Subtract the real answer and the estimate  -The difference is their score for that round  -After each round the students add up their accumulating score  -The winner is the person with the **lowest** score, like golf  4. Discuss the guiding question  Vocabulary:  -**estimation**  -rounding  Effort Story/Information: | -Prentice Hall Mathematics: Course 1 textbook  -Deck of cards |

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| Formative Assessment(s): Give the students 5 problems to estimate (vary the operations used). |

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| **Week Three** |  |  |  |  |  |
| Learning Experience #5 – **5 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.2: Formulate, represent, and use algorithms with multi-digit whole numbers and decimals with flexibility, accuracy, and efficiency*  EO.a: Fluently multiply multi-digit whole numbers using standard algorithms. (CCSS:5.NBT.5)  EO.d.ii: Write simple  expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.  (CCSS: 5.OA.2) | *3*  *3* | \*How does using the standard algorithm create partial products?  \*What makes one strategy or algorithm better than another?  \*How many place values does the partial product shift when multiplying by the digit in the hundreds place? (**OR** How many placeholder zeros do you have to add when you multiply by a number in the 100s place?) | KNOW:  -The standard algorithm for multiplication  UNDERSTAND:  -The standard algorithm creates partial products that are added to find the product  -Multiplication is not repeated addition  \*\*\*For example:  5 x 0.316- You cannot add 5, 0.316 times\*\*\*  BE ABLE TO DO:  -Fluently multiply muti-digit whole numbers using the standard algorithm  -Write and explain equations for word problems | *\*\*\*Pre-test\*\*\**  1. Review prior knowledge  2. What is actually happening when we multiply?  3. Show students a multi-digit multiplication problem that has been solved and ask them how the partial products were found.  -Relate back to place  valuepartial products are created by separating the bottom number into its places and then multiplying  Exp:  234 234 + 234  x 56 x 50 x 6  4. Go through the steps for the multiplication algorithm together- reminding of place holder zeros  5. Possible resources for practice:  -p 640 in textbook  -<http://www.kidslearningstation.com/math/multiplication-multiple-digits.asp>  -<http://www.math-aids.com/Multiplication/Multiplication_Worksheets_MDV.html>  -<http://www.math-salamanders.com/multiplication-printable-worksheets.html>  6. Discuss how solve word problems  -What key words tell you that you need to multiply?  -What information is important? What information can be trashed  -Set up expectations for solving word problems  7. Practice solving real-world problems.  -<http://www.commoncoresheets.com/Multiplication.php>  Vocabulary:  -partial productsin the standard algorithm, when you multiply each of the numbers on the bottom by each of the numbers on the top it results in partial products, then you add these partial products to get the final answer  -factor  -product  -algorithm  -**fluently**  **-multiplication**  Effort Story/Information: | -Prentice Hall Mathematics: Course 1 textbook  -<http://www.kidslearningstation.com/math/multiplication-multiple-digits.asp>  -<http://www.math-aids.com/Multiplication/Multiplication_Worksheets_MDV.html>  -<http://www.math-salamanders.com/multiplication-printable-worksheets.html>  -<http://www.commoncoresheets.com/Multiplication.php>  (For word problems) |

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| Formative Assessment(s): Give them a couple multiplication word problems to solve, that contain some extra information. |

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| **Week Four & Five** |  |  |  |  |  |
| Learning Experience #6 – **5-8 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.2: Formulate, represent, and use algorithms with multi-digit whole numbers and decimals with flexibility, accuracy, and efficiency*  EO.b: Find whole-number quotients of whole numbers. **(4-digit dividends, 2-digit divisors)**  (CCSS:5.NBT.6)  EO.b.i: Use strategies based on place value, the properties of operations, and/or the relationship between  multiplication and division. (CCSS:5.NBT.6)  EO.b.ii:Illustrate and explain calculations by using equations,  rectangular arrays, and/or area models. (CCSS:5.NBT.6)  EO.d.ii: Write simple  expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.  (CCSS: 5.OA.2) | *2*  *3*  *3*  *3* | \*How does the relationship between multiplication and division support division when using the standard algorithm?  \*What is the role of place value in the division algorithm? | KNOW:  -The steps for the standard division algorithm  -Key words in word problems that require you to divide  UNDERSTAND:  -How multiplication and division are related  -The steps for the standard division algorithm  BE ABLE TO DO:  -Find whole-number quotients of whole numbers  -Represent a division problem using a model  - Write and explain equations for word problems | 1. Review prior knowledge- What is division? How are multiplication and division connected? How do you use multiplication when dividing? What strategies do you know for division? When do those strategies work well/not work well?  2. Give the students the problem 25 5 and have them draw (and explain) a picture to show what is happening  3. Go over the multiple ways they will see a division problem:  274 12 12 274 274  12  4. Optional: Share division family mnemonic device  **\*\*\*Add Rover (the dog) for repeat or remainder\*\*\***  5. Walk through the algorithm together- When would you want to know the division algorithm?  6. To keep their work organized have the students use grid paper and/or lanes  7. Discuss the possible ways to write a remainder  -If have 6 students and 24 cookies how many does each student get?  -What if have 6 students and 39 cookies? Just throw away the leftovers? No, you can split them up  -Write remainders as: a remainder (R), fraction or decimal  \*\*\*As they start to understand the steps for division introduce new ways to find the remainder.\*\*\*  8. Practice:  -pg 642 in the textbook  -<http://www.math-salamanders.com/long-division-worksheets.html>  -<http://www.edboost.org/practice/long-division-remainders-1-digit-divisor-4-5-digit-dividend>  -<http://www.dadsworksheets.com/v1/Worksheets/Long%20Division.html>  -<http://www.commoncoresheets.com/Division.php>  9. Discuss how solve word problems  -What key words tell you that you need to divide?  -What information is important? What information can be trashed  -Set up expectations for solving word problems  10. Practice solving real-world problems--Have students draw a model or picture to represent what is happening  -<http://www.commoncoresheets.com/Division.php>  Vocabulary:  -division  -dividend  -divisor  -quotient  Effort Story/Information: | -Grid paper  -Division family poster  -Prentice Hall Mathematics: Course 1 textbook  -<http://www.math-salamanders.com/long-division-worksheets.html>  -<http://www.edboost.org/practice/long-division-remainders-1-digit-divisor-4-5-digit-dividend>  -<http://www.dadsworksheets.com/v1/Worksheets/Long%20Division.html>  -<http://www.commoncoresheets.com/Division.php> |

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| Formative Assessment(s):Give them a couple division word problems to solve, that contain some extra information. |

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| **Week Six** |  |  |  |  |  |
| Learning Experience #7 – **5 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.b: Read, write, and compare decimals to thousandths. (CCSS:  5.NBT.3)  EO.b.i: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form (CCSS:5.NBT.3a) | *2*  *2* | \*What is the relationship between 654 and 65.4?  \*How does understanding our place value system help to read, write and compare decimals?  \*What is the purpose of the decimal point?  \*How many tenths make a whole? | KNOW:  -There are three ways to write decimals  UNDERSTAND:  -Decimals represent a part of a whole and have place value  BE ABLE TO DO:  -Read decimals to the thousandths place  -Write decimals to the thousandths place using base-ten numerals, number names and expanded form | *\*\*\*Pre-test\*\*\**  1. Introduce decimals  Optional:  -Find real-world examples of decimals (cut out and make a collage)  -Videos  <http://www.shmoop.com/video/decimals/>  <http://www.brainpop.com/math/numbersandoperations/decimals/preview.weml>  2. Define decimals- part of a whole  3. Use tenths, hundredths and thousandths grids to represent decimals using a model    -Fill in some squares and ask how many are filled  -Ask how many squares there are total  -Relate to decimals being part of a whole  4. Practice using a model to represent decimals  Optional Game:  -Students each have (dry erase) decimal grids and a set of decimal cards (with various decimals written on them)  -Flip over a decimal card and race to draw on the decimal grids  -Check partners work  -If win, collect the decimal card  5. Like whole numbers, decimals have place value   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | H | T | O | **.** | Tths | Hths | Thths |   6. How is decimal place value similar to whole number place value? (Relate to base-ten system)  7. Explain how to read decimals  -Read the number then the place it ends in  -Decimal = and  8. Practice reading decimals  \*Optional game: Donde esta mi casa?  -Give students a decimal place value chart  -Call out random numbers and the place they belong in  -Students write the number in their corresponding places on the chart (filling any leftover spaces with zeros= talk about the importance of 0 in our place value system)  -Students read the number out loud  -Bonus Round: have them add to different places and read  “Add 4 to the hundredths place”  \*\*\*You can extend this into writing the numbers in word and expanded form.\*\*\*  9. Use Chapter 1-5 (pg 22-25) to teach the three ways to write a decimal  Vocabulary:  -**decimal**  -standard form/ base-ten numerals  -expanded form  -word form/ number names  -part of a whole  Effort Story/Information: | -<http://www.shmoop.com/video/decimals/>  -<http://www.brainpop.com/math/numbersandoperations/decimals/preview.weml>  -Tenths, hundredths and thousandths grid    -Decimal place value chart    <http://www.bisd.us/skinner/5thgrade/5thgrade/Math/1st%20Six%20Weeks/First%20Six%20Weeks.htm> |

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| Formative Assessment(s): Call out random numbers and their place. Have students write the decimal, read it to you and then write it in expanded and word form |

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| **Week Seven** |  |  |  |  |  |
| Learning Experience #8 –  **2 or 3 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.b.ii:Compare two decimals to thousandths based on meanings of  the digits in each place, using >, =, and < symbols to record the results of comparisons. (CCSS:5.NBT.3b) | *2* | \*How does understanding our place value system help to compare decimals?  \*What skills are used to order decimals? | KNOW:  -The similarities between comparing and ordering decimals and comparing and ordering whole numbers  UNDERSTAND:  -Place value is used to compare and order decimals  BE ABLE TO DO:  - Compare two decimals to the thousandths place using models and place value  - Order decimals using place value | 1. Introduce using a simple real life situation which requires them to compare decimals:  \*\*Which candy bar costs less?\*\*  -How do you know?  2. Link to knowledge of place value  \*\*\*If students are visual learners, show the comparison using the hundredths grids or number lines\*\*\*  3. Explain use of place value to compare decimals  -Use textbook Chapter 1-6 pg. 26 Example 2  \*\*\*If students need it use [**framed notes**](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1ukTN5hkJqcPMpQHC168nDNta9SwaMUqLhugbO_EDSu0/edit).\*\*\*  4. Discuss importance of place holder zero when comparing decimals that end in different places  EXP: 0.4  0.42  5. Guided practice  6. Link to ordering decimals  -Use textbook Chapter 1-6 pg. 26  Example 3  7. Practice  -Textbook pg. 29  -Practice 1-6 in Resources book  -[Comparing and Ordering Decimals](http://www.greatschools.org/worksheets-activities/5913-comparing-and-ordering-decimals.gs)  8. Optional Games:  \*[Steal and Sort](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1499Tts7jt77J48BhsWcimHgriBDRF1p49vvFVUVigpg/edit)  -Players have equal stack of decimal cards  -Each flip over one  -Compare ([show work on paper](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1W2jBSygQDEbW_Jz5tPh9oolHgjSMgh6RhcViZ7uswmI/edit)) and player with bigger card steals partners card  -Play until original deck is gone  -Order the cards they won from least to greatest (show work on paper)  -Give master answer key, once done, to check work  9. How similar to or different from whole numbers?  Vocabulary:  -**compare**  **-order**  **-**place holder zero  Effort Story/Information:  *-Dewey decimal system* | -Prentice Hall Mathematics: Course 1 textbook  -Prentice Hall Mathematics: All-In-One Resource book  -Framed notes <https://docs.google.com/a/weld-re1.k12.co.us/document/d/1ukTN5hkJqcPMpQHC168nDNta9SwaMUqLhugbO_EDSu0/edit>  -<http://www.greatschools.org/worksheets-activities/5913-comparing-and-ordering-decimals.gs>  -<https://docs.google.com/a/weld-re1.k12.co.us/document/d/1499Tts7jt77J48BhsWcimHgriBDRF1p49vvFVUVigpg/edit>  -Student game tracker  <https://docs.google.com/a/weld-re1.k12.co.us/document/d/1W2jBSygQDEbW_Jz5tPh9oolHgjSMgh6RhcViZ7uswmI/edit> |

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| Formative Assessment(s): Use the Lesson Quiz on page 30, in the Course 1: Teacher’s Edition. |

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| **Week Seven** |  |  |  |  |  |
| Learning Experience #9 – **2 or 3 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.c: Use place value understanding to round decimals to any place.  (CCSS: 5.NBT.4) | *3* | \*How is rounding decimal numbers similar to and different from rounding whole numbers? | KNOW:  -The similarities between rounding decimals and rounding whole numbers  UNDERSTAND:  -Place value is used to round decimals  BE ABLE TO DO:  -Use place value understanding to round decimals to any place | 1. Ask students to find the approximate value of $4.15+$6.74+$5.97 in their heads (give them 30 seconds)  2. What skill could you use to make this easier?----Rounding  -How use rounding, in life?  3. Review how to round numbers  -How do you think you round a decimal?  4. Relate to rounding decimals  -Use textbook Chapter 1-5 pg. 23 Example 3  Other options:  -<http://mathforum.org/t2t/faq/gail/duck.story.html>  -<http://3rdgradethings.blogspot.com/2013/09/welcome-to-fall-cool-3rd-grade-place.html>    5. Give students a real world word problem to practice rounding with  6. Practice  -Textbook pg. 24 #26-33  -Puzzle 1-5: Making the Rounds  7. Relate to estimating with decimals  -Why estimate?  8. Have students use rounding to estimate the sum or difference of decimal problems  -Textbook Chapter 1-7 pg. 33 Example 2  9. Practice by only estimating the sums and differences on pg. 34 in the textbook  (Have students save this estimation work because they will find the exact sums and differences next week)  10. Optional Games:  [Egg Carton Decimals](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1DqG89lZea5awJYFdQxIPwwwTFq6J1ebBPQXG0F8HlCs/edit)  -Give students an egg carton filled with 20-30 beans  \*\*\*Mark a decimal point on the inside of the carton. Each spot that would normally hold an egg now stands for a place value\*\*\*    -Shake the egg carton  -Choose a row and write the number represented with the beans (using place value knowledge)  -Round to a place called out by the teacher OR roll a place value dice  Vocabulary:  -round  -estimate  Effort Story/Information: | -Prentice Hall Mathematics: Course 1 textbook  -<http://mathforum.org/t2t/faq/gail/duck.story.html>  -<http://3rdgradethings.blogspot.com/2013/09/welcome-to-fall-cool-3rd-grade-place.html>  -<https://docs.google.com/a/weld-re1.k12.co.us/document/d/1DqG89lZea5awJYFdQxIPwwwTFq6J1ebBPQXG0F8HlCs/edit>  -Rounding check-in  <https://docs.google.com/a/weld-re1.k12.co.us/document/d/1xmx78VSm_IWYd2UP0FzScz8B6IIndgoYQR37-W58tR0/edit> |

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| Formative Assessment(s): Give students 3 addition or subtraction problems with decimals and ask them to round and estimate the sums or differences. **OR** [Round check-in](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1xmx78VSm_IWYd2UP0FzScz8B6IIndgoYQR37-W58tR0/edit) |

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| **Week Eight** |  |  |  |  |  |
| Learning Experience #10 – **5 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.2: Formulate, represent, and use algorithms with multi-digit whole numbers and decimals with flexibility, accuracy, and efficiency*  EO.c.: Add, subtract, multiply, and divide decimals to hundredths. (CCSS:5.NBT.7)  EO.c.i: Use concrete models or drawings and strategies based on place value, properties of operations, and/or the  relationship between addition and subtraction. (CCSS: 5.NBT.7)  EO.c.ii: Relate strategies to a written method and explain the reasoning used. (CCSS: 5.NBT.7) | *2*  *3*  *4* | \*Why must you line up the decimals when finding the sum or difference?  \*How does addition and subtraction with whole numbers relate to addition and subtraction with decimals? | KNOW:  -The decimals must be lined up to ensure that corresponding place values are aligned  UNDERSTAND:  -Numbers can only be added or subtracted if they share the same place value  BE ABLE TO DO:  -Add and subtract decimals to the hundredths place  -Use models, place value and the properties of operations to solve decimal problems  -Explain and justify the strategy used to solve decimal problems | 1. How would you solve 145+14?  -Why not line it up 145 ?  +14 \_  2. Explain using place value  -How do you think this relates to adding and subtracting decimals?  3. Use models to add/subtract decimals  -Textbook Activity Lab 1-7a pg. 31  4. Relate model to algorithm  -Textbook Chapter 1-7 pg. 32 Examples 1 & 3  \*\*\*Use [framed notes](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1FXS4QljMxo-jzc3pC279HhhJwjeCXxW6vd6PTLc8WlQ/edit)\*\*\*  5. Why must you line up the decimals when finding the sum or difference?  -Why use placeholder zeros?  6. Practice  -Textbook pg. 34  \*\*\*Require them to use a [model](https://docs.google.com/a/weld-re1.k12.co.us/file/d/0B8edHEYFhqjiZ1NXMURQSkxvMWs/edit) or words to explain/justify their answer.\*\*\*  -Resource book Guided Problem Solving 1-7  -[Addition to the thousandths](https://drive.google.com/a/weld-re1.k12.co.us/?urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU#folders/0B8edHEYFhqjiWUpENmRmclFha1U)    7. How does addition and subtraction with whole numbers relate to addition and subtraction with decimals?  Vocabulary:  -sum  -difference  **-justify**  Effort Story/Information: | -Framed notes  [https://docs.google.com/a/weld-re1.k12.co.us/document/d/1FXS4QljMxo-jzc3pC279HhhJwjeCXxW6vd6PTLc8WlQ/edit#](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1FXS4QljMxo-jzc3pC279HhhJwjeCXxW6vd6PTLc8WlQ/edit)  -Prentice Hall Mathematics: Course 1  -<https://docs.google.com/a/weld-re1.k12.co.us/file/d/0B8edHEYFhqjiZ1NXMURQSkxvMWs/edit>  -Decimal review quiz  <https://docs.google.com/a/weld-re1.k12.co.us/document/d/1dEpm7EkfwSwP4dITwxqz4Bs6UkPb7PdTsu6llMucbI0/edit> |

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| Formative Assessment(s): Use the Lesson Quiz in the Teacher’s Edition textbook (pg. 35). **OR** [Decimal review quiz](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1dEpm7EkfwSwP4dITwxqz4Bs6UkPb7PdTsu6llMucbI0/edit) |

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| **Week Nine** |  |  |  |  |  |
| Learning Experience #11 – **5 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.a.ii: Explain patterns in the placement of the decimal point when a  decimal is multiplied or divided by a power of 10. (CCSS: 5.NBT.2)  *GLE.2: Formulate, represent, and use algorithms with multi-digit whole numbers and decimals with flexibility, accuracy, and efficiency*  EO.c.: Add, subtract, multiply, and divide decimals to hundredths. (CCSS:5.NBT.7)  EO.c.i: Use concrete models or drawings and strategies based on place value, properties of operations, and/or the  relationship between addition and subtraction. (CCSS: 5.NBT.7)  EO.c.ii: Relate strategies to a written method and explain the reasoning used. (CCSS: 5.NBT.7) | *3*  *2*  *3*  *4* | \*How do powers of ten impact decimals?  \*How does multiplication with whole numbers relate to multiplication with decimals? | KNOW:  -Multiplying by a power of ten causes the decimal to move to the right  -The number of decimals places in a product is determined by the number of decimals in the multiplicand and multiplier  UNDERSTAND:  -Multiplying by a power of ten represents multiplication by a multiple of ten  -When multiplying decimals, the resulting decimal (**not** whole number) is smaller  EXP: 0.4 x 0.5= 0.2  BE ABLE TO DO:  -Find the product of a decimal when multiplied by a power of ten  -Multiply decimals to the hundredths place  -Use models, place value and the properties of operations to solve decimal problems  -Explain and justify the strategy used to solve decimal problems | 1. What do you remember about powers of ten?  -How do you think this will compare to multiplying a decimal by a power of ten?  2. Explain that now the decimal moves a number of places equivalent to the exponent in the power of ten.  3. Practice  -Give students 10 problems to try  -Multiplying decimals by a power of ten  <http://www.math-drills.com/powersoften.shtml>  OR  Look in the [resources folder](https://drive.google.com/a/weld-re1.k12.co.us/?urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU&urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU#folders/0B8edHEYFhqjiWUpENmRmclFha1U)  4. Predict what you think will happen when we multiply decimals. Will the product be bigger or smaller?  5. Textbook Activity Lab 1-8a  pg. 37  -What notice about the products? When multiplied by a whole number? By a decimal?  6. Try some Exercises on pg. 37  7. How does multiplication with whole numbers relate to multiplication with decimals?  8. Introduce the algorithm as another strategy  -Textbook Chapter 1-8 pg. 38  \*\*\*Optional: Teach the students to box the numbers after the decimals. This gives them a visual of how many places they will need to move the decimal in the product.\*\*\*  \*\*\*Require them to use a [model](https://docs.google.com/a/weld-re1.k12.co.us/file/d/0B8edHEYFhqjiZ1NXMURQSkxvMWs/edit) or words to explain/justify their answer.\*\*\*  9. Discuss all the different symbols that represent multiplication  EXP: 2 x 4 2(4) 24  10. Do some of the Quick Checks for guided practice  11. Practice  -Textbook Chapter 1-8 pg. 40  -Resource book Practice 1-8/ Reteach 1-8  Vocabulary:  -multiplicand  -multiplier  -product (review) | -Framed notes  [https://docs.google.com/a/weld-re1.k12.co.us/document/d/1FXS4QljMxo-jzc3pC279HhhJwjeCXxW6vd6PTLc8WlQ/edit#](https://docs.google.com/a/weld-re1.k12.co.us/document/d/1FXS4QljMxo-jzc3pC279HhhJwjeCXxW6vd6PTLc8WlQ/edit)  -Prentice Hall Mathematics: Course 1  -Multiplying decimals by a power of ten  <http://www.math-drills.com/powersoften.shtml>  OR  Look in the resources folder |

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| Formative Assessment(s): Challenge students with #43 on pg. 41 |

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| **Week Ten** |  |  |  |  |  |
| Learning Experience #12 – **2 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.1: The decimal number system describes place value patterns and relationships that are*  *repeated in large and small numbers and forms the foundation for efficient algorithms*  EO.a.ii: Explain patterns in the placement of the decimal point when a  decimal is multiplied or divided by a power of 10. (CCSS: 5.NBT.2) | *3* | \*What is the pattern in the placement of the decimal when a number is multiplied or divided by a power of ten?  \*Why is dividing by 10 equivalent to multiplying by 1/10? | KNOW:  -Dividing by a power of ten causes the decimal to move to the left  UNDERSTAND:  -Dividing by a power of ten represents division by a multiple of ten  -Dividing by 10 is equivalent to multiplying by 1/10  BE ABLE TO DO:  -Find the quotient of a decimal when divided by a power of ten | 1. Using your prior knowledge, what do you think will happen when we divide a decimal by a power of ten?  2. Textbook Activity Lab 1-8b  pg. 42  3. Practice  -Multiplying decimals by a power of ten  <http://www.math-drills.com/powersoften.shtml>  OR  Look in the [resources folder](https://drive.google.com/a/weld-re1.k12.co.us/?urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU&urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU#folders/0B8edHEYFhqjiWUpENmRmclFha1U)  4. How can your knowledge of powers of ten help you in life?  Vocabulary:  **-equivalent**  -quotient  Effort Story/Information: | -Multiplying decimals by a power of ten  <http://www.math-drills.com/powersoften.shtml>  OR  Look in the [resources folder](https://drive.google.com/a/weld-re1.k12.co.us/?urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU&urp=https://www.google.com/_/chrome/newtab?espv%3D2%26ie%3DU#folders/0B8edHEYFhqjiWUpENmRmclFha1U)  -Prentice Hall Mathematics: Course 1 |

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| Formative Assessment(s): Give them 4 powers of ten equations to do using mental math. |

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| **Week Ten & Eleven** |  |  |  |  |  |
| Learning Experience #13 – **8 Days** |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.2: Formulate, represent, and use algorithms with multi-digit whole numbers and decimals with flexibility, accuracy, and efficiency*  EO.c.: Add, subtract, multiply, and divide decimals to hundredths. (CCSS:5.NBT.7)  EO.c.i: Use concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (CCSS: 5.NBT.7)  EO.c.ii: Relate strategies to a written method and explain the reasoning used. (CCSS: 5.NBT.7) | *2*  *3*  *4* | \*Explain what you are actually doing when you move the decimal in both the dividend and divisor.  (Answer: We are multiplying both numbers by the same power of ten to eliminate the decimal in the divisor)  \*How does division with whole numbers relate to division with decimals? | KNOW:  -If there is a decimal in the divisor it must be moved in the divisor **and** the dividend  UNDERSTAND:  -The movement of the decimals in the dividend and divisor actually represents multiplying both numbers by the same power of ten to make the divisor a whole number  BE ABLE TO DO:  -Divide decimals to the hundredths place  -Use models, place value and the properties of operations to solve decimal problems  -Explain and justify the strategy used to solve decimal problems | 1. What is actually happening when we divide two numbers?  2. Prior knowledge about dividing decimals?  3. Show this visual to introduce the conceptual understanding  -[Glencoe visual](http://www.glencoe.com/sites/common_assets/mathematics/im1/concepts_in_motion/interactive_labs/M1_05/M1_05_dev_100.html)  4. Demonstrate the same visual presented in the video using base-ten blocks or sticks  5. Have students practice the concept using base-ten blocks or sticks  EXP 1.2 0.4  6. How does division with whole numbers relate to division with decimals?  -What do you notice about the resulting quotient?  7. Introduce the algorithm as another strategy  -Textbook Chapter 1-9 pg 44  -Explain how to:  ~Divide a decimal by a whole number  ~Divide a decimal by a decimal  ~Add 0s if the dividend runs out of places  8. What patterns do you see in the quotients on pg. 45?  0.80.2= 4  82= 4  8020= 4  \*\*\*Look at the Key Concepts box on pg. 45\*\*\*  9. Practice  -Textbook Chapter 1-9 pg. 46  -Resources book Practice 1-9  \*\*\*Require them to use a [model](https://docs.google.com/a/weld-re1.k12.co.us/file/d/0B8edHEYFhqjiZ1NXMURQSkxvMWs/edit) or words to explain/justify their answer.\*\*\*  Vocabulary:  -dividend (review)  -divisor (review)  Effort Story/Information: | -Glencoe visual  <http://www.glencoe.com/sites/common_assets/mathematics/im1/concepts_in_motion/interactive_labs/M1_05/M1_05_dev_100.html>  -Prentice Hall Mathematics: Course 1 |

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| Formative Assessment(s): Use teh Lesson Quiz in the textbook Teacher’s Edition pg. 47 |

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| **Week Twelve** |  |  |  |  |  |
| Learning Experience #13 – Days |  |  |  |  |  |
| Standard(s), GLE, and EO Addressed: | DOK | Guiding Question(s) | Objective(s)  *By the end of the learning we will:* | Activities, Vocabulary, and Effort | Resources (Books, materials, apps., websites, hands-on manipulatives) |
| ***Standard 1: Number Sense, Properties and Operations***  *GLE.2: Formulate, represent, and use algorithms with multi-digit whole numbers and decimals with flexibility, accuracy, and efficiency*  EO.d: Write and interpret numerical expressions. (CCSS:5.OA)  EO.d.i: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. (CCSS: 5.OA.1)  EO.d.ii: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. (CCSS: 5.OA.2) | *3*  *2*  *3* | \*What is the order of operations?  \*Why does the order of operations matter?  (Answer: Ensures uniformity and accuracy of solution) | KNOW:  -The order of operations  UNDERSTAND:  -The purpose of the order of operations  BE ABLE TO DO:  -Use parentheses, brackets or braces in numerical expressions and solve using the order of operations  -Write an expression that would be used to solve a problem and explain why they made that expression, without evaluating them | 1. Give students an order of operations problem and tell them to solve it (don’t tell them about the order of operations)  -Ask for answers  -Why did people get different answers?  -Have them explain their procedure for finding the answer  2. What could we do to get the same answer?  -Link to universal order of operations  3. Introduce strategy to remember order  \*\*\*I use the word PEMDAS\*\*\*  -Please Excuse My Dear Aunt Sally  4. Define the word expression and show an example  EXP 12 x [14+(63)]-17  5. Go over Example 1 in textbook pg. 17  \*\*\*There are also some videos to watch on the textbook’s website\*\*\*  6. Explain that you can also develop expressions to solve problems  7. Go over Example 2 in textbook pg. 17  8. Practice  -Textbook Chapter 1-4 pg. 18  Vocabulary:  -operations  -brackets  -braces  **-parentheses**  -expression  **-evaluate**  -value  Effort Story/Information: | -Prentice Hall Mathematics: Course 1 |

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| Formative Assessment(s): Use the Lesson Quiz in the textbook Teacher’s Edition **and** question #34 on pg. 19 |