

## 4TH Grade

## DIVISION OF

## WHOLE NUMBERS

Created By:
Misty Pohly


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## I SEE YOU~

- struggling each week to write lesson plans that meet the rigor of the TEKS.
- searching endlessly for resources that will help kids learn math while being challenged and engaged.
- staying late everyday after school working on plans and creating everything from scratch.
You are exhausted from working with students all day, and still have to prep, write and create.

I SEE YOU~
SACRIFICING your time with your family and friends
to ensure success for ALL of OUR Children.
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Dear Parents,

This unit is all about division! We will be learning several different division models:
$\begin{array}{ll}\checkmark & \text { Arrays } \\ \checkmark & \text { Area Models } \\ \checkmark & \text { Equations } \\ \checkmark & \text { Standard Algorithm }\end{array}$
Below is an example of each model:


These models might be different from how you learned long division. They are different for me too! Research on the development of math thinking shows that new concepts need to be taught at a deeper level. When kids understand why something happens, they can solve different kinds of problems using the same models. I promise your child will learn the standard algorithm soon and they will feel confident about division.

DIVISION OF WHOLE NUMBERS

| Name | 1 |  |  | 3 |  |  | 5 | 6 | 7 |  |  | 9 |
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$\qquad$ DIVISION OF WHOLE NUMBERS

| LT | Statement | I | 2 | 3 | 4 | Evidence |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | I can represent the quotient of up to a <br> four-digit whole number divided by a one- <br> digit whole number using arrays. |  |  |  |  |  |
| 2 | I can represent the quotient of up to a <br> four-digit whole number divided by a one- <br> digit whole number using area models. |  |  |  |  |  |
| 3 | I can represent the quotient of up to a <br> four-digit whole number divided by a one- <br> digit whole number using equations. |  |  |  |  |  |
| 4 | I can use strategies and algorithms, including <br> the <br> Standard algorithm, to divide up to a four- <br> digit dividend by a one-digit divisor. |  |  |  |  |  |
| 5 | I can round to the nearest l0, lo0, or l,000 |  |  |  |  |  |
| 6 | I can use compatible numbers to estimate <br> solutions involving whole numbers. |  |  |  |  |  |
| 7 | I can solve with fluency one- and two-step <br> problems involving multiplication and division, <br> including interpreting remainders |  |  |  |  |  |
| 8 | I can represent multi-step problems involving <br> the division with whole numbers using strip <br> diagrams and equations with a letter <br> standing for the unknown quantity. |  |  |  |  |  |


| I | 2 | 3 | 4 |
| :---: | :---: | :---: | :---: |
| I have no idea how to <br> do this. | I can do this with <br> some help. | I can do this by <br> myself | I can teach someone <br> to do this. |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 1 \\ \text { Ч.ЧЕ } \end{gathered}$ | Represent the quotient of up to a four-digit whole number divided by a one-digit whole number using arrays. | Representations of quotients Arrangement of a set of objects in rows and columns | Use concrete models to help students understand division. | $\square$ Solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm. |
| $\begin{gathered} 2 \\ \text { Ч.ЧЕ } \end{gathered}$ | Represent the quotient of up to a four-digit whole number divided by a one-digit whole number using area models. | Representations of quotients <br> - Arrangement of squares/rectangles in a grid format Connect the factors as the length and width, and the product as the area | Use concrete models to help students understand division. |  |
| $\begin{gathered} 3 \\ \text { Ч.पЕ } \end{gathered}$ | Represent the quotient of up to a four-digit whole number divided by a one-digit whole number using equations. | Representations of quotients <br> Equation - a mathematical statement composed of algebraic and/or numeric expressions set equal to each other | Use concrete models to help students understand division. |  |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 4 \\ 4.4 F \end{gathered}$ | Use strategies and algorithms, including the standard algorithm, to divide up to a four-digit dividend by a one-digit divisor. | - Recognition of division in mathematical and real-world problem situations <br> - Automatic recall of basic facts <br> - Relationships between multiplication and division to help in solution process <br> - Division structures <br> $\square$ Partitive division <br> $\square$ Quotative division <br> - Relationship between division and multiples of 10 <br> - Strategies and algorithms for division <br> - Partial Quotients <br> - Standard Algorithm using the Distributive Method <br> $\square$ Standard Algorithm | $\square$ Recognize division presented in a real-world problem situation <br> $\square$ Understand how to divide up to a four-digit dividend by a one-digit divisor <br> $\square$ Solve a one-step problem involving division Solve a two-step problem involving division | Solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm. |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 5 \\ 4.4 G \end{gathered}$ | Round to the nearest IO, $100 \text {, or } 1,000$ | $\square$ Round a given number to the closest multiple of 10; 100; or 1,000 on a number line. <br> $\square$ Round numbers to a common place then compute. <br> $\square$ Rounding numerically based on place value | $\square$ Understand how to use rounding or compatible numbers to estimate a solution Understand how to determine the reasonableness of an estimation Determine a | Round decimals to tenths or hundredths. |
| $\begin{gathered} 6 \\ 4.4 G \end{gathered}$ | Use compatible numbers to estimate solutions involving whole numbers. | Determine compatible numbers then compute. | reasonable estimate of the solution to a problem involving division |  |


| Learning Target | What do we want students to learn? | How will we know if they learned it? | What will we do if they don't? | What will we do if they already know it? |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7 \\ 4.4 Н \end{gathered}$ | Solve with fluency oneand two-step problems involving multiplication and division, including interpreting remainders. | Various ways to record remainder Ignore the <br> remainder Add one to the quotient Remainder is the answer as afrection | - Recognize division presented in a real-world problem situation Understand how to divide a fourdigit number by a one-digit number <br> [] Understand how to interpret a remainder based on the problem situation and question being asked <br> - Solve a problem involving division, including interpreting the remainder | [. Solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm. |
| $\begin{gathered} \hline 8 \\ 4.5 \mathrm{~A} \end{gathered}$ | Represent multi-step problems involving the division with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity. | - Representations of an unknown quantity in an equation <br> - Recognition of division in mathematical and real-world problem situations <br> $\square$ Representation of problem situations with strip diagrams and equations <br> Division Structures <br> - Partitive Division Quotative Division | - Understand the relationship between the description of a problem situation and the symbols represented in an equation <br> - Understand how a strip diagram can be used to represent division | Represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity. |


| $\begin{aligned} & \text { Day I } \\ & \text { 4.4G } \end{aligned}$ | $\begin{gathered} \text { Day } 2 \\ \text { Ч.ЧE, Ч.ЧG, Ч.ЧH } \end{gathered}$ | Day 3 Ч.ЧЕ, Ч.ЧG, Ч.ЧН | $\begin{gathered} \text { Day } 4 \\ \text { Ч.ЧЕ, Ч.4G, Ч.ЧH } \end{gathered}$ | $\begin{gathered} \text { Day } 5 \\ \text { Ч.ЧЕ, Ч.ЧG, Ч.ЧH } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Mini Lesson <br> LT I, 5, 6 <br> Rounding and <br> Compatible <br> Numbers | Word Splash <br> LT 2, 5, 6, 7 <br> Arrays <br> Remainder | Mini Lesson LT 2, 5, 6 <br> Area Model <br> Remainder | Mini Lesson LT 2, 5, 6 <br> Area Model <br> Remainder | Mini Lesson <br> LT 3, 5, 6 <br> Equations <br> Remainder |
| Guided Math | Guided Math | Guided Math | Guided Math | Guided Math |
| Reteach Unit 3 | LT I | LT 2 | LT 2 | LT 2 |
| $\begin{gathered} \text { Day } 6 \\ \text { Ч.ЧЕ, Ч.4G } \end{gathered}$ | Day 7 Ч.ЧF Ч.ЧН Н.5А | Day 8 Ч.ЧF Ч.ЧН Н.5А | Day 9 Ч.ЧF Ч.ЧН Н.5А | Day 10 Ч.ЧF Ч.ЧН Ч.5А |
| Independent Practice | Mini Lesson <br> LT 4, 5, 6, 7, 8 <br> Partial Quotient <br> Remainder | Music <br> LT 4, 5, 6, 7, 8 <br> Standard <br> Algorithm <br> Remainder | Mini Lesson <br> LT 4, 5, 6, 7, 8 <br> Standard <br> Algorithm <br> Remainder | Mini Lesson <br> LT $4,5,6,7,8$ <br> Standard <br> Algorithm <br> Remainder |
| Guided Math | Guided Math | Guided Math | Guided Math | Guided Math |
| LT 2-3 | LT 4, 7, 8 | LT 4, 7, 8 | LT 4, 7, 8 | LT 4, 7, 8 |
| $\begin{gathered} \text { Day II } \\ \text { Ч.ЧF ५.ЧН ५.5A } \end{gathered}$ | DIVISION |  |  |  |
| Independent Practice |  |  |  |  |
| Guided Math |  |  |  |  |
| LT 4, 7, 8 |  |  |  |  |
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## EPRAlly Fqu.

Thank you for your downloqd!

I hope this helps your students!


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