

Content: Math	Grade/Course: 5th	Timeline: 1 week (45 minutes each)
Standard(s): 5.NBT.1 Recognize 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.		
Lesson Overview: Students will use their knowledge of place value to recognize moving one place to the right increases the value by 10 times	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to <ul style="list-style-type: none"> Identify place value of a digit in a whole or decimal number. Round whole numbers to a specified place value. 	
Vocabulary: Exponents, Base, Standard Form, Expanded Form, Word Form	Focus Question(s): How can you show and explain the value of digits?	

Description of Lesson (Including Instructional Strategies):**Anticipatory Set:**

I begin this lesson by displaying on the board the 'I Can' statement: *I can show that I understand and can explain the value of digits.* I create a short story problem in which I use names of other teachers in the building to engage the students. *Mr. Santos gives his students two numbers and asks them to compare the numbers. The numbers are 547 and 372. He asks the students to respond. The students are asked to justify their responses. I allow the students time to talk about the problem with their groups. After a few minutes I bring the class back as a whole group. I ask students to share out their reasoning. In this whole group share I am looking for students to share responses that discuss the place value of the 7 being different in the two numerals, which would give it a different value.*

DAY 1: Place Value Review

- Teacher displays the PowerPoint created for this lesson and begins to review the Common Core standard addressed in this lesson.
- Students will echo the standard they will be covering: **I can show that I understand and can explain the value of digits.**
- Teacher gives the students ten numbers and their task is to write the numbers on their notebook.
- Students are given about 5-10 seconds to respond and then the correct answer is displayed in the PowerPoint.
- Teacher will ask: *Can anyone provide a strategy they used to determine the correct response for the given number? Are there any key words you were listening for?*

Day 2:

- Teacher will discuss the meaning of the term exponent. Students will write the term in their math journal. Teacher will build understanding of concept by showing the block that represents 10×1 , 10×10 and 10×100 . Students will complete the tasks with the base ten blocks and report its answers. Each group will discuss, decide and then present its answer to questions on board.
- Teacher will provide each student with a copy of the worksheet. I go over our new 'I Can' statement for today's lesson and then explain the worksheet. I complete the first few lines with them. I then allow the students time to complete the worksheet within their groups. I bring the students back to the whole group and patterns they noticed during their investigation.
- Teacher will then ask the students the following questions: *Let's examine the top half of the worksheet. Talk to me about what you noticed. What about the bottom half? Are there any similarities between the top half of the worksheet and the bottom half?*

Day 3:

- Teacher will show a video about the power of ten to activate discussion and probe questions.
https://www.youtube.com/watch?feature=player_embedded&v=0fKBhvDjuy0
- After showing the video I ask students to make inferences about the math concepts that are covered in this clip.
https://www.youtube.com/watch?feature=player_embedded&v=y1oNMRfIFqU

Day 4:

1. Teacher shows students several examples of how to divide numbers by powers of ten. For example, $1 / 102 = 1/100$ (as a fraction). Or, $64 / 103 = 64/1000$ (as fraction). Teacher then asks students to work within their groups to ask each other questions similar to the ones that I just asked them.
2. The students use their notebooks to record their responses that the group member is asking them. Teacher circulates the room and monitor for misconceptions while students are working.

Day 5:

Powers of Dice Game

In this game, students roll two dice and use those two numbers to create a two-digit number. Then they roll another dice to determine the number of multiples of ten. The students multiply or divide the two-digit number by the multiples of ten.

Rules: Partnerships are given three dice. Partners take turns being the roller. The roller rolls two of the dice and determines the two-digit number they will be using and records it on their paper. The roller then rolls the remaining dice to determine the number of tens they will have. The other player tells the roller if they should multiply or divide by the multiples of ten. The roller writes out the information on their paper and solves the problem. They must then show the other player their work so it can be checked. The partnership switches roles and play continues.

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions

Content: Math	Grade/Course: 5th	Timeline: week 2 (45 minutes)
Standard(s): 5.NBT.1 Recognize 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.		
Lesson Overview: Students will use their knowledge of place value to recognize moving one place to the right increases the value by 10 times	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to <ul style="list-style-type: none"> Identify place value of a digit in a whole or decimal number. Round whole numbers to a specified place value. 	
Vocabulary: Decimal, mixed number, whole number, expanded form, word form	Focus Question(s): How can you show and explain the value of digits?	

Description of Lesson (Including Instructional Strategies):**Anticipatory Set:**

I begin this lesson by asking the students to order these numbers from least to greatest: 58, 57, and $57 \frac{49}{100}$. Give them 5 minutes to think about their answers. Have them share their responses with a partner. I then expand the numbers together with the students. 58 ($50+8$), 57 ($50+8$) and $57 \frac{49}{100}$ ($50+7+0.4+0.09$). Ordering these numbers from least to greatest, we get **57, $57 \frac{49}{100}$ and 58.**

DAY 1: Introduction to Decimal

- Define **Decimal**. Have the students use the dictionary to find the definition of the word. Have them write the definition of decimal on their math notebook.
- Express the number $57 \frac{49}{100}$ in expanded form and decimal form.

Mixed Number	Expanded Form	Decimal Form
$57 \frac{49}{100}$	$(50+7+0.4+0.09)$.	57.49

- Print a copy of the place value chart for each student. Have them place the decimal 57.49 in the chart to better understand how decimals work.
- Explain to the students that as we move to the right in the place value chart, each number is divided by 10. Let the students know that when reading decimals, the decimal point is read as "and." Have the students write the decimal 57.49 in word form.
- Practice writing these decimals in expanded form and word form: 65.4, 34.56, 234.1, 78.9 and 67.543

Day 2:

- Review the definition and rule of using decimals.
- Have the students practice writing each phrase as a **fraction and decimal**: six tenths, five hundredths, thirty-two hundredths, two hundred sixty-seven thousandths
- Independent Worksheet 1

Day 3:

- Start the lesson by asking the students, **why do we use decimals?** Teacher may write down all the ideas on the board and explain how money is a good way example. Explain that a decimal has both a whole number part (left) and a fraction part (right). Ex. \$4.50
- Have the students separate these decimals into **whole number part and fraction part**: 3.25, 4.172, 25.03, 0.168, 132.7
- Independent worksheet 2

Day 4:

1. Have the students take out their copy of the place value chart. Explain to them that 0.168 has the same value as .168. The zero in the ones place helps us remember that **0.168 is a number less than one.**
2. Whiteboard pair practice: Write each phrase (word form) as a decimal: fifty-sixth hundredths, nine tenths, thirteen and four hundredths, twenty-five and eighty-one hundredths, nineteen and seventy-eight thousands. Correct with students.
3. Whiteboard pair practice: Write each decimal using words: 0.005, 100.6, 2.28, 71.062, 3.0589. Correct with students.

Day 5:

1. Define Expanded form. Have the students write the definition on their notebook. Explain that decimals can also be written in expanded form. It is a way to write numbers by showing the value of each digit.
2. Show a few examples on the board and then have the students practice writing decimals in expanded form: 4.12, 0.9, 9.735, 1.0827 on their notebook.
3. Assess the students (see attached)

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual Work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions.

Content: Math	Grade/Course: 5th	Timeline: week 3 (45 minutes each)
Standard(s): 5.NBT.2 Understand the place value system. Explain patterns in the number zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. 5.NBT.3a Understand the place value system. Read, write, and compare decimals to thousandths. 3b. Compare two decimals to thousandths.		
Lesson Overview: Students will use their knowledge of place value to identify and explain patterns, compare and order.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to <ul style="list-style-type: none"> Identify place value of a digit in a whole or decimal number. To identify decimal patterns. To read and write decimals to thousandths. 	
Vocabulary: Decimal, decimal number	Focus Question(s): How can you show and explain the value of digits?	

Description of Lesson (Including Instructional Strategies):**Anticipatory Set:**

To open this lesson, show students this video <https://youtu.be/OfKBhvDjuy0> that discusses the powers of 10. Stop and start the video in order to activate discussion and ask probing questions. In addition, have the students repeat and understand the I CAN statement: **I can explain patterns when multiplying a number by powers of 10.**

DAY 1: Introduction to Place Value of Decimals

- Define **Decimal Number**. Have the students use the dictionary to find the definition of the word. Have them write the definition of decimal number on their math notebook.
- Give each student a copy of the decimal square (see worksheet). Discuss how a decimal square is a whole, or 1, unit. Have each student take a decimal square and separate it into 10 equal parts. Ask the following questions: How many parts are there? (10 parts) What is each part called? (one tenth)
- Then have the students separate each of the parts into 10 equal parts. Ask the following questions: How many parts are there now? (100 parts) What is each part called? (one hundredth)
- Independent Practice

Day 2: Building Understanding

- Explain that decimal numbers and fractions can be modeled on decimal squares. Ex. A square represents a whole, or 1. Read: one Write: 1 or 1.0, the whole is divided into 10 equal parts. One part is shaded. Read: one tenth Write: $1/10$ or 0.1, the whole divided into 100 equal parts. One part is shaded. Read: one hundredth Write: $1/100$ or 0.01
- Explain that decimal numbers can be modeled using money. Ex. Dollar (100 cents)= \$1.00, dime (10 cents)= \$0.10, and penny (1 cent)= \$0.01
- Explain that decimal numbers can be modeled using a meter stick. Ex. Meter (100 cm)= 1.0 meter, decimeter (10 cm)=0.1 meter and centimeter = 0.01
- Talk About It: What pattern do you observe in all three models? (each model to the left is 10x greater than the previous model)
- Independent Practice

Day 3: Comparing Decimals

- Explain that to compare numbers, you compare their digits from left to right. Point out that as soon as you come to 2 digits in the same place that differ, the greater digit identifies the greater number.
- Break students into groups. Show groups these numbers: 248,489; 248,479; 238,889; 235,969.
- Have the groups write the numbers on their place value chart. Then have each group discuss and decide how to order the numbers from least to greatest.
- When all groups are finished, one should report its listing to the class with an explanation of the its decision-making.
- Independent Practice

Day 4: Check for Understanding

1. Whiteboard practice: (In pairs) Name the place value position where the numbers differ. How are they alike? How are they different? a. 1.26; 1.06 b. 12.14 12.41 c. 129.023; 129.025
2. Have the students draw a number line numbered 101.0 to 102.0. Then answer this question: Suppose you turn on the radio with the dial set at FM 102.0. Which station is closer to the 102.0 setting, 101.1 or 101.9? Have the students use the number line to compare decimals.
3. Independent practice.

Day 5:

1. To wrap up this week's lesson, give students a quick quiz using the Powerpoint presentation with six questions. Students write down the answers on a paper as they take the quiz individually and self-grade at the end.

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value, decimals and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual Work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions.

Content: Math	Grade/Course: 5th	Timeline: week 3 (45 minutes each)
Standard(s): 5.NBT.2 Understand the place value system. Explain patterns in the number zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. 5.NBT.3a Understand the place value system. Read, write, and compare decimals to thousandths. 3b. Compare two decimals to thousandths.		
Lesson Overview: Students will use their knowledge of place value to identify and explain patterns, compare and order.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to <ul style="list-style-type: none"> Identify place value of a digit in a whole or decimal number. To identify decimal patterns. To read and write decimals to thousandths. 	
Vocabulary: Decimal, decimal number	Focus Question(s): How can you show and explain the value of digits?	

Description of Lesson (Including Instructional Strategies):**Anticipatory Set:**

To open this lesson, show students this video <https://youtu.be/OfKBhvDjuy0> that discusses the powers of 10. Stop and start the video in order to activate discussion and ask probing questions. In addition, have the students repeat and understand the I CAN statement: **I can explain patterns when multiplying a number by powers of 10.**

DAY 1: Introduction to Place Value of Decimals

- Define **Decimal Number**. Have the students use the dictionary to find the definition of the word. Have them write the definition of decimal number on their math notebook.
- Give each student a copy of the decimal square (see worksheet). Discuss how a decimal square is a whole, or 1, unit. Have each student take a decimal square and separate it into 10 equal parts. Ask the following questions: How many parts are there? (10 parts) What is each part called? (one tenth)
- Then have the students separate each of the parts into 10 equal parts. Ask the following questions: How many parts are there now? (100 parts) What is each part called? (one hundredth)
- Independent Practice

Day 2: Building Understanding

- Explain that decimal numbers and fractions can be modeled on decimal squares. Ex. A square represents a whole, or 1. Read: one Write: 1 or 1.0, the whole is divided into 10 equal parts. One part is shaded. Read: one tenth Write: $1/10$ or 0.1, the whole divided into 100 equal parts. One part is shaded. Read: one hundredth Write: $1/100$ or 0.01
- Explain that decimal numbers can be modeled using money. Ex. Dollar (100 cents)= \$1.00, dime (10 cents)= \$0.10, and penny (1 cent)= \$0.01
- Explain that decimal numbers can be modeled using a meter stick. Ex. Meter (100 cm)= 1.0 meter, decimeter (10 cm)=0.1 meter and centimeter = 0.01
- Talk About It: What pattern do you observe in all three models? (each model to the left is 10x greater than the previous model)
- Independent Practice

Day 3: Comparing Decimals

- Explain that to compare numbers, you compare their digits from left to right. Point out that as soon as you come to 2 digits in the same place that differ, the greater digit identifies the greater number.
- Break students into groups. Show groups these numbers: 248,489; 248,479; 238,889; 235,969.
- Have the groups write the numbers on their place value chart. Then have each group discuss and decide how to order the numbers from least to greatest.
- When all groups are finished, one should report its listing to the class with an explanation of the its decision-making.
- Independent Practice

Day 4: Check for Understanding

1. Whiteboard practice: (In pairs) Name the place value position where the numbers differ. How are they alike? How are they different? a. 1.26; 1.06 b. 12.14 12.41 c. 129.023; 129.025
2. Have the students draw a number line numbered 101.0 to 102.0. Then answer this question: Suppose you turn on the radio with the dial set at FM 102.0. Which station is closer to the 102.0 setting, 101.1 or 101.9? Have the students use the number line to compare decimals.
3. Independent practice.

Day 5:

1. To wrap up this week's lesson, give students a quick quiz using the Powerpoint presentation with six questions. Students write down the answers on a paper as they take the quiz individually and self-grade at the end.

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value, decimals and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual Work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions.

Content: Math	Grade/Course: 5th	Timeline: 1 week (45 minutes each)
Standard(s): 5.NBT.4 Understand the place value system. Use place value understanding to round decimals to any place.		
Lesson Overview: Students will use their knowledge of place value to understand the place value system and ROUND decimals to any place.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to: <ul style="list-style-type: none"> Round whole numbers to a specified place value. Estimate whole numbers by rounding. 	
Vocabulary: Estimate, Rounding	Focus Question(s): How do you use place value to round a decimal?	

Description of Lesson (Including Instructional Strategies):**Anticipatory Set:**

Divide the class into groups. Draw a number line on the chalkboard, and mark points for thousands from 1,000 to 9,000. Dictate numbers to the class one a time in the thousands (4,875, 5,840, 5,557, 5,247, 6,341, and 5,485). Have each group discuss and decide where the point for that number should be on the number line. Call on a group to show the point on the chalkboard. Have one member mark the point as other members provide guidance such as 'move to the left' or 'move to the right'. Then the other groups will agree or disagree and explain why. **Additional Resource:** https://learnzillion.com/lesson_plans/311-understand-decimal-computation-by-rounding-decimals#fndtn-lesson

DAY 1: Introduction to Estimation and Rounding

- Define **rounding** for the students. Discuss why rounding and estimation is so important.
- Draw a simple hill on the blackboard. Write the numbers 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 so that the one and 10 are at the bottom of the hill, on opposite sides, and the five ends up at the very top of the hill. This hill will be used to illustrate the two tens that the students are choosing between when they are rounding.
- Focus on two digit numbers first, then proceed to multiple digit #'s up to thousands. For example, with a number like 29, this is easy. We can see that 29 is very close to 30. But with numbers like 24, 25, and 26, it gets a little more difficult. That's where our mental hill comes in.
- Continue to do the hill problems with random numbers. Model for the first three with student input (whiteboard practice)

Day 2:

- Show students a video of the Rounding Rap: https://www.youtube.com/watch?v=5_kt0ecu_jk#t=21
- Once students have understood the rules of rounding, do a **quick check**. Write random numbers (thousands) on the board and round to the nearest ten. Check for understanding.
- To develop a better number sense by rounding a number to different places, have the students partner up using a whiteboard. Example: Round to the nearest (473,852): ten (473,850), hundred (473,900), thousand (474000), ten thousand (470,000), hundred thousand (500,000).
- Guided Practice Worksheet # 1

Day 3:

- The population of Washington, DC was five hundred seventy-two thousand fifty-nine. Write this on the board. Ask: What does the 2 mean in this number? Accept reasonable responses, for example, 2,000 or 2 thousands. What does the 7 mean in this number? Accept reasonable responses, for example, 70,000 or 7 ten thousands.
- Remind students that just as we can talk about ones, tens, and hundreds, we can also talk about thousands, ten thousands, and hundred thousands. We name our place value families in groupings of three. On the board, draw a square around each place value family: 572,059 - # is 10 times greater as we move to the left.
- Worksheet # 2

Day 4:

1. Problem #1 - Round 4.285 to the nearest whole number. The digit to the right of that place value determines if the ones place value rounds up or stays the same. If the digit to the right is 5 or greater, we round the number up. If the digit is 4 or less, the number stays the same place to the right.
2. Guided practice – Have the students round 39.17345 to the nearest ten-thousandths place. Have them think-pair-share and respond their explanation.
3. Worksheet # 3

Day 5: Coupon Math

1. Have students complete a weekly grocery list on their notebook. Let them know they each have \$50 to spend. Clip coupons of items. Next, ask your child to sort the coupons by category – food, bathroom items (toiletries), cleaning supplies, etc. Glue categorized items on paper.
2. Once all coupons are sorted, show your students how to use mental math to calculate the savings. Remind them of the importance of place value when dealing with decimals.
3. Make sure students get as close to \$50 without going over.
4. Students present grocery list.

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions

Content: Math	Grade/Course: 5th	Timeline: 1 week (45 minutes each)
Standard(s): 5.NBT.4 Understand the place value system. Use place value understanding to round decimals to any place. 5.NBT.7 ADD, SUBTRACT, MULTIPLY, and DIVIDE decimals to hundredths, USING concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; RELATE the strategy to a written method and EXPLAIN the reasoning used.		
Lesson Overview: There are multiple ways to add, subtract, multiply and divide decimals.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to: <ul style="list-style-type: none"> multiply decimals by using fractions and number models. understand how to add and subtract decimals. develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. 	
Vocabulary: decimal, tenths, hundredths, add, subtract, multiply, divide, addend, sum, difference, factor, product, quotient, and whole number	Focus Question(s): What are some ways you can add, subtract, multiply and divide decimals?	

Description of Lesson (Including Instructional Strategies):

Anticipatory Set: Students will practice dividing with multi-digit quantities. Use attached Powerpoint.

Day 1:

- Problem #1 - Round 4.285 to the nearest whole number. The digit to the right of that place value determines if the ones place value rounds up or stays the same. If the digit to the right is 5 or greater, we round the number up. If the digit is 4 or less, the number stays the same place to the right.
- Guided practice – Have the students round 39.17345 to the nearest ten-thousandths place. Have them think-pair-share and respond their explanation.
- Worksheet # 3

Day 2: Coupon Math

- Have students complete a weekly grocery list on their notebook. Let them know they each have \$50 to spend. Clip coupons of items. Next, ask your child to sort the coupons by category – food, bathroom items (toiletries), cleaning supplies, etc. Glue categorized items on paper.
- Once all coupons are sorted, show your students how to use mental math to calculate the savings. Remind them of the importance of place value when dealing with decimals.
- Make sure students get as close to \$50 without going over.
- Students present grocery list.

Day 3:

- Students will be put into groups of four. Using money and change, students will divide currency evenly among their group members. The amounts that they will divide are \$6.00, \$2.40, \$10.00, and \$7.20.
- Students will write their answers on chart paper. Their solution should include a visual representation.
- The students will present their solutions to the class by taking their paper to the front of the class and posting it on the board for everyone to see.
- For the 2nd activity, students will determine how many coins are in a specific amount of money. The amount of

money is listed below.

- a. How many quarters are in \$5.25?
- b. How many nickels are in \$1.50?
- c. How many dimes are in \$12.30?

Day 4:

1. Students will complete five problems for guided practice that involve dividing with decimal quantities.
2. During guided practice, teacher will take the time to answer questions and clear up misconceptions. One common mistake that students make when dividing with decimal quantities is not placing the decimal in the correct place in the quotient.
3. See Guided Practice Worksheet

Day 5:

1. Students will complete problems involving dividing decimal quantities on their own. The problems that they will be solving will be word problems.
2. Teacher will stipulate that the keywords, phrases, and important values must be marked before solving the problem.
3. Teacher will walk around the room and answer questions that arise from the students.
4. See Problem Solving Worksheet

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions

Content: Math	Grade/Course: 5th	Timeline: 1 week (45 minutes each)
Standard(s): 5.NBT.7 ADD, SUBTRACT, MULTIPLY, and DIVIDE decimals to hundredths, USING concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; RELATE the strategy to a written method and EXPLAIN the reasoning used.		
Lesson Overview: There are multiple ways to add, subtract, multiply and divide decimals.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to: <ul style="list-style-type: none"> multiply decimals by using fractions and number models. understand how to add and subtract decimals. develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. 	
Vocabulary: decimal, tenths, hundredths, add, subtract, multiply, divide, addend, sum, difference, factor, product, quotient, and whole number	Focus Question(s): What are some ways you can add, subtract, multiply and divide decimals?	

Description of Lesson (Including Instructional Strategies):

Anticipatory Set: Show 1 penny. Use a dollar sign and cents point to write this amount of money. \$0.01 Ask the students what would be 10x the number of pennies (\$0.10). Have the students answer and explain. The students will then imagine then traded 10 pennies for 1 dime. Ask, what would be 10x the number of dimes (\$1.00). Question: Each time you multiply the amount of money by 10, what happens to the decimal point in the number? (Think-pair-share-random reporter) – *(It moves one place to the right)*

DAY 1:

- Use base-ten blocks to model decimal place value.
- Write the decimals 5.3 and 2.5 on the chalkboard. Have students use flats for wholes, or ones, and longs for tenths to model these decimals.
- Have the students (use graph paper) model 5.3.
- Have the students model 2.5
- Now have the students model the joining (addition) of these 2 decimals and write the decimal for the sum (7.8)
- Worksheet- Addition/Subtraction

Day 2:

- Write on the chalkboard: $8.74 - 5.31 = n$.
- Have students use their base-ten materials to model 8.74. Then have them take away blocks representing 5.31 and write the decimal represented by the blocks that are left. (3.43)
- Worksheet- Addition/Subtraction Vertical

Day 3:

- Introduce multiplying decimals: <https://www.youtube.com/watch?v=3H9DYeR5Wmg>
- Quick Check: Have the students quickly solve the problems on their notebook:
 1×0.06 , 10×0.06 , 100×0.06 , $1,000 \times 0.06$
 1×0.35 , 10×0.35 , 100×0.35 , $1,000 \times 0.35$
 1×8.23 , 10×8.23 , 100×8.23 , $1,000 \times 8.23$
- After completing the problems, ask, what pattern do you see in the placement of the decimal point? (

it moves one more place to the right each time you multiply by 10, 100, 1,000)

4. Why is multiplying by 10, 100, and 1,000 easy to compute? (*it is because only the position of the decimal point changes*)
5. Worksheet- Multiplying Decimals

Day 4:

1. Show these division exercises on the chalkboard or projector:
 - a. $5,000/1,000=n$
 - b. $5,000/100=n$
 - c. $5,000/10=n$
 - d. $5,000/1=n$
2. Have the students find the quotient and then look for a pattern in their answers. Ask:
 - a. As the divisors decrease, what happens to the quotients? They increase
 - b. How does each quotient compare with the preceding quotient? It is 10x as much
 - c. If you divide 5,000 by 0.1, what do you think the answer will be?
3. Worksheet- Dividing Decimals

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions

Content: Math	Grade/Course: 5th	Timeline: 1 week (45 minutes each)
Standard(s): 5.NBT.7 ADD, SUBTRACT, MULTIPLY, and DIVIDE decimals to hundredths, USING concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; RELATE the strategy to a written method and EXPLAIN the reasoning used.		
Lesson Overview: There are multiple ways to add, subtract, multiply and divide decimals.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to: <ul style="list-style-type: none"> multiply decimals by using fractions and number models. understand how to add and subtract decimals. develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. 	
Vocabulary: decimal, tenths, hundredths, add, subtract, multiply, divide, addend, sum, difference, factor, product, quotient, and whole number	Focus Question(s): What are some ways you can add, subtract, multiply and divide decimals?	

Description of Lesson (Including Instructional Strategies):

Anticipatory Set: Show 1 penny. Use a dollar sign and cents point to write this amount of money. \$0.01 Ask the students what would be 10x the number of pennies (\$0.10). Have the students answer and explain. The students will then imagine then traded 10 pennies for 1 dime. Ask, what would be 10x the number of dimes (\$1.00). Question: Each time you multiply the amount of money by 10, what happens to the decimal point in the number? (Think-pair-share-random reporter) – *(It moves one place to the right)*

DAY 1:

- Use base-ten blocks to model decimal place value.
- Write the decimals 5.3 and 2.5 on the chalkboard. Have students use flats for wholes, or ones, and longs for tenths to model these decimals.
- Have the students (use graph paper) model 5.3.
- Have the students model 2.5
- Now have the students model the joining (addition) of these 2 decimals and write the decimal for the sum (7.8)
- Worksheet- Addition/Subtraction

Day 2:

- Write on the chalkboard: $8.74 - 5.31 = n$.
- Have students use their base-ten materials to model 8.74. Then have them take away blocks representing 5.31 and write the decimal represented by the blocks that are left. (3.43)
- Worksheet- Addition/Subtraction Vertical

Day 3:

- Introduce multiplying decimals: <https://www.youtube.com/watch?v=3H9DYeR5Wmg>
- Quick Check: Have the students quickly solve the problems on their notebook:
 1×0.06 , 10×0.06 , 100×0.06 , $1,000 \times 0.06$
 1×0.35 , 10×0.35 , 100×0.35 , $1,000 \times 0.35$
 1×8.23 , 10×8.23 , 100×8.23 , $1,000 \times 8.23$
- After completing the problems, ask, what pattern do you see in the placement of the decimal point? (

it moves one more place to the right each time you multiply by 10, 100, 1,000)

4. Why is multiplying by 10, 100, and 1,000 easy to compute? (*it is because only the position of the decimal point changes*)
5. Worksheet- Multiplying Decimals

Day 4:

1. Show these division exercises on the chalkboard or projector:
 - a. $5,000/1,000=n$
 - b. $5,000/100=n$
 - c. $5,000/10=n$
 - d. $5,000/1=n$
2. Have the students find the quotient and then look for a pattern in their answers. Ask:
 - a. As the divisors decrease, what happens to the quotients? They increase
 - b. How does each quotient compare with the preceding quotient? It is 10x as much
 - c. If you divide 5,000 by 0.1, what do you think the answer will be?
3. Worksheet- Dividing Decimals

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
2. Students will complete worksheets individually and whole group.

Formative Assessment:

Q&A, Individual work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions

Content: Math	Grade/Course: 5th	Timeline: 1 week (45 minutes each)
Standard(s): 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm. 5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. 5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.		
Lesson Overview: There are multiple ways to find a product and quotients.	Lesson Objective(s): I CAN STATEMENTS In this lesson, students will be able to: <ul style="list-style-type: none"> Identify division patterns Estimate whole-number quotients Divide 2-digit numbers by 2-digit divisors Identify and use the distributive property of multiplication 	
Vocabulary: distributive property, compatible numbers, factor, product, estimate, multiply, divide, factor, product, quotient, whole number, divisor, dividend	Focus Question(s): What strategies can be used to multiply whole numbers? What are the ways to find a quotient with two-digit divisors?	

Description of Lesson (Including Instructional Strategies):

Anticipatory Set: Review the term product: The result when two numbers are multiplied. For example, $4 \times 5 = 20$, 20 is the product. Also review that multiplication is repeated addition. For example, $32+32+32+32$ or you can say 32×4 . Review the powers of 10: ex. $36 \times 10 = 360$ (10x bigger), $36 \times 100 = 3,600$ (100x bigger), $36 \times 1000 = 36,000$ (1000x bigger).

DAY 1:

- Using graph paper, outline a rectangle that is 8 units high and 17 units wide.
- After complete, talk about it:
 - How many units are there inside the rectangle? *136 units*
 - How did you find the # of units inside the rectangle? *by counting or multiplying*
 - What multiplication # sentences does the rectangle represent? *$8 \times 17 = 136$*
- Have the students move across the top, count off 10 units, and draw a line to break apart the rectangle. Talk about it:
 - How many units are in each of the two rectangles? *80 units; 56 units*
 - What multiplication # sentences can you write for each rectangle? Have them think-pair-share-random report answer. *$8 \times 10 = 80$; $8 \times 7 = 56$*
 - What is the sum of the products for the two smaller rectangle? *$80 + 56 = 136$*
 - Is the product for the large rectangle the same as the sum of the products for the 2 smaller rectangles? *yes*

Day 2:

- Define Distributive Property: An easier way to multiply, which allows you to break apart the numbers to make them easy to multiply.
- Compare the two methods: Multiply $6 \times 24 = n$
Method 1- Model 6×24 on graph paper. Move across the top, count off 20 squares, and draw a line. Write a multiplication sentence for each rectangle. Add the two products. $(6 \times 20) = 120$ $(6 \times 4) = 24$; $120 + 24 = 144$
Method 2- Break apart 24 into $20 + 4$, rewrite as $6 \times (20 + 4)$, multiply $(6 \times 20) = 120$ $(6 \times 4) = 24$, add the two products $120 + 24 = 144$
- Compare: How is method 2 like method 1? *It breaks apart the number.* Why does breaking apart the # make multiplication easier? *Because it is easier to multiply w multiples of ten and multiplication facts.* What two operations did you use in both methods? *Multiplication and addition*

Day 3: Check for Understanding and check students' drawings

1. Use graph paper to find each product: $3 \times 25 = n$; $5 \times 37 = n$, $4 \times 15 = n$, $6 \times 22 = n$, $5 \times 26 = n$, $7 \times 18 = n$
2. Find each product using method 2: 3×25 , 5×37 , 3×48 , 9×68 , 4×37

Day 4:

1. Write these division patterns on the board:
 - $60/30=2$, $600/30=20$, $6,000/30=200$
 - $420/7=60$, $4,200/7=600$, $42,000/7=6000$
 - $600/20=30$, $6,000/20=300$, $60,000/20=3,000$
2. Talk about it: What pattern do you see? How can the pattern help you determine the # of zeros in the quotient? How many zeros will be in the quotient of $40,000/50$? How does this differ from the pattern?
3. Practice Worksheet

Day 5:

1. Write each division exercise on the board:
 - $2,800/40$
 - $2,900/40$
 - $2,847/40$
 - $1,371/30$
 - $236/50$
 - $5,649/90$
2. Have students write on paper the basic division fact that might be used to help them find the quotient.
3. Have a volunteer come to the chalkboard, write the basic division fact, and underline the digits in the dividend and divisor that he or she looked at to find that fact.
4. Practice Worksheet

Guided Practice:

1. Teacher will ask students oral questions pertaining to place value and the power of 10.
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Formative Assessment:

Q&A, Individual work

Accommodations/Modifications:

Peer Tutoring, One-to-one, Simplified Directions