

Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Adding Decimals
Focus:	Decimals

Materials:	
White boards	Activities at end of lesson plan
Crayolas	Vocabulary Notebooks
Deck of cards	Socks (use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with decimals.

Gain prior knowledge by asking students the following questions

What do you know about decimals? When do we use decimals? The word decimal refers to 10. The place value of the spaces to the right of the decimal point begins with tenths. What comes next? How many places over would you find millionths? How do we use decimals to indicate money?

Content (the "Meat")			
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>		
Look at the problem below. Solve the problem and then create a story to match the problem.	During the lesson check in with students repeatedly.		
\$85.00 - \$42.50 =	Check in about what is happening and what they are		
Fact Practice	thinking.		
Multiplication War	Take advantage of any teachable moments.		
 Divide students into pairs. Give each pair a deck of cards without face cards and jokers. Shuffle the deck and divide the cards evenly between the two players On go, the players turn over the cards at the same time Students multiply the 2 numbers that have been turned up First person to give the answer either wins the cards because the answer is correct, or has to turn over 2 cards because he/she gave the wrong answer 	Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking. When possible, engage		
At the end of round, students may reshuffle the pile of cards that they havePlay can continue until one player has all cards or time has called	learn".		



It is important to review academic math vocabulary

often throughout the day

Complete the Vocabulary

students experience the word

(Ex. 4 students creating a right angle, multiple students

acting out an equation). Vocabulary Notebooks can

notebook for each word.

When possible, have

Math Vocabulary

Word for Today: decimal

Description: The term decimal refers to 10. We have a number system based on ten. Ten stands for 10 single units, 100 is for 10 tens, or 100 units, and so on. The decimal point followed by numbers indicates that those numbers are not representing a whole, but a portion of the whole. They represent tenths (10 pieces), hundredths (100 pieces), thousandths (1,000 pieces), and so on. Unlike fractions, decimals can only be divided into ten and multiples of tens.

Enter the word decimal in your Vocabulary Notebook. Share your entry with a peer.

Vocabulary Notebook Sample:

My Description	be made from ½ of a composition book.
related to ten	
Drawing	
decimal	
	My Description related to ten Drawing

Activity	Focus on having young
Addition of Decimals	people "compete" in pairs or
In order to add decimals you only have to remember one step beyond normal addition.	small groups. Once a game
That step is to align the decimal points. This means that you will be more successful if you	is mastered you can utilize it
write the problems vertically. For example if the problem is 34.25 + 1.234 + 5.4 =, we	in the "When Homework Is"
would begin by writing the problem vertically and line up the decimals. The problem would	center.
look like this:	
34.250	
1.234	
<u>5.400</u>	
You will notice that in order to line up the decimals you add zeros at the end so that all of	
the decimals have the same number of digits after the decimal point. The total of the	
problem above would be 39.884 and would be read 39 and eight hundred eighty-four	
thousandths. The AND represents the decimal point and the thousandths is used because	

the last digit is in the thousandths place. Do several of these problems on the board with the students, bringing them up and having them work through the problem, focusing on getting the decimal points lined up before adding.

Adding Decimals

Directions:

- 1. Divide students into pairs.
- 2. Give each pair a set of Adding Decimals cards and a game board.
- 3. Shuffle the cards and put them between the students.



4.	Player 1 draws a card, completes the problem, locates the answer on the gam
	board and marks it with a token.

- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

Closing Review Say: • • Please recap what we did today. • Did we achieve our objectives? Debrief Three Whats Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" player getting ready to play this game so he/she could get all the blocks are completed?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



4th -5th Grade Addition of Decimals

14.2	18.7	1.47	12.3
<u>+12.1</u>	<u>+10.5</u>	<u>+6.54</u>	<u>+15.2</u>
4.15	8.461	33.421	2.26
6.20	.003	7.350	3.43
<u>+8.63</u>	<u>+.212</u>	<u>+42.600</u>	<u>+8.15</u>
16.6	18.2	15.2	22.2
<u>+13.8</u>	<u>+16.5</u>	<u>+13.0</u>	<u>+13.1</u>
12.95 + 5.06 =	13.8 + 6.9 =	46.02 + 75.67 =	16.3 + 35.7 +
8.16 + 15.204 =	.007 + 1.12 =	5.98 + 35.8 =	.491+ .32 =
.491 + .56 =	22.44 + 1.908 =	32.15 + 64.23 =	14.501 + 62.03 =



4th-5th Grade Addition of Decimals Answers

26.3	29.2	8.01	27.5
18.98	8.676	83.371	13.84
30.4	34.7	28.2	35.3
18.01	20.7	121.69	52.0
23.364	1.127	41.78	.811
1.051	24.348	96.38	76.531





Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Adding Decimals 2
Focus:	Decimals
Focus:	Decimals

Materials:	
White boards	Decks of cards
Crayolas	Vocabulary Notebooks
Socks (for erasers)	Activity at end of lesson plan

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with decimals.

Gain prior knowledge by asking students the following questions

What do you know about decimals? When do we use decimals? The word decimal refers to 10. The place value of the spaces to the right of the decimal point begins with tenths. What comes next? How many places over would you find millionths? How do we use decimals to indicate money?

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>	
You want to have your birthday party at Uncle Joe's Pizza Parlor. You are going to have 12 friends at your party. The birthday guest is free. If the cost is \$5.25 per person, what is the cost of this party? How do you know?	During the lesson check in with students repeatedly.	
Fact Practice Fore-header	Check in about what is happening and what they are thinking.	
 Divide students into trios. Give each trio a deck of cards without face cards and jokers. Shuffle the deck and give all of the cards to the referee who will be "judging" the contest 	Take advantage of any teachable moments.	
3. On go, players are each handed a card by the referee and WITHOUT looking, put the card face out on his/her forehead	Stop the class and focus on a student's key learning or	
 The referee multiplies the two numbers together and states the answer Each player looks at the other person's exposed number and names his/her own number 	understanding. Ask open- ended questions to determine what the rest of	
 Person who wins (accuracy and time), collects both cards Play continues until all cards are gone. 	the group is thinking.	
 Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee 	When possible, engage students in "teaching to learn".	
Math Vocabulary It is important to review Word for Today: decimal academic math vocabulary		



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Description: The term decimal refers to 10. We have a number system based on ten. Ten stands for 10 single units, 100 is for 10 tens, or 100 units, and so on. The decimal point followed by numbers indicates that those numbers are not representing a whole, but a portion of the whole. They represent tenths (10 pieces), hundredths (100 pieces), thousandths (1,000 pieces), and so on. Unlike fractions, decimals can only be divided into ten and multiples of tens. Review the word decimal and share it with a peer.Vocabulary Notebook Sample:My Description		often throughout the day Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation) Vocabulary Notebooks can be made from ½ of a composition book.
Personal Connection .567 is five-hundred sixty-seven thousandths	Drawing decimal	
A De Addition of Decimals In order to add decimals you only have to re That step is to align the decimal points. This write the problems vertically. For example if would begin by writing the problem vertically look like this:	Pocus on naving young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.	
You will notice that in order to line up the det the decimals have the same number of digit problem above would be 39.884 and would thousandths. The AND represents the decin the last digit is in the thousandths place. Do several of these problems on the board of them work through the problem, focusing or adding. Adding Decimals <u>Directions:</u> 1. Divide students into pairs. 2. Give each pair a set of Adding Deci 3. Shuffle the cards and put them betw 4. Player 1 draws a card, completes the	cimals you add zeros at the end so that all of s after the decimal point. The total of the be read 39 and eight hundred eighty-four mal point and the thousandths is used because with the students, bringing them up and having a getting the decimal points lined up before mals cards and a game board. veen the students.	



board and marks it with a token.

- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

c	Closing
R	Review
Say:	
Please recap what we did today.	
 Did we achieve our objectives? 	
Ľ	Debrief
Three Whats	
Ask the following three what questions:	
What was your key learning for the day?	
What opportunities might you have to do this sam	ne thing in the "real world"?
What advice would you give to a "new" student g	etting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



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4th -5th Grade Addition of Decimals

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16.6	18.2	15.2	22.2
<u>+13.8</u>	<u>+16.5</u>	<u>+13.0</u>	<u>+13.1</u>
12.95 + 5.06 =	13.8 + 6.9 =	46.02 + 75.67 =	16.3 + 35.7 +
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4th-5th Grade Addition of Decimals Answers

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1.051	24.348	96.38	76.531



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Subtracting Decimals
Focus:	Decimals
Focus:	Decimals

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Socks (for erasers)
Dice	Activity at the end of the lesson plan

Opening

State the objective

Today we are going to practice using our math vocabulary and skills working with fractions.

Gain prior knowledge by asking students the following questions

What do you know about decimals? When do we use decimals? The word decimal refers to 10. The place value of the spaces to the right of the decimal point begins with tenths. What comes next? How many places over would you find tenthousandths? How do we use decimals to indicate money?

			Content (the "Meat")	
		Pro	blem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
The Do many c	oggie Beauty Parlo logs were bathed	or bathes and g each day. On a	rooms dogs every day. The chart below shows how average, how many dogs were bathed each day?	During the lesson check in with students repeatedly.
	Day	#		Check in about what is happening and what they are
	Monday	9	-	thinking.
	luesday	15	-	Take advantage of any
	Thursday	14		teachable moments
	Friday	12		Stop the class and focus on a
	11009	F	act Practice	student's key learning or understanding. Ask open-
Spoke	s on a Wheel			ended questions to
1.	Divide students	into pairs		determine what the rest of
2.	On a white boar	d, student draw	s a small circle with 9 spokes coming out of it	the group is thinking.
	(should look like	a bicycle tire)		When possible, engage
3.	Have students c	hoose to put a	6, 7 or 8 in the center circle	students in a "teach to learn"
4.	Student rolls two	o dice and adds	the pips (dots)	opportunity and have the
5.	Taking this total	, student writes	a math problem on one of the spokes (eg. 7 is in	student become the teacher.
	the circle and str look like 7 x 8 =	udents rolls a 3 56	and 5 which totals 8. The spoke equation would	



6. Process continues until all spokes l	nave an equation	
Math V Word for Today: align decimals Description: The term "align decimals" ref are going to add or subtract. This means th in a vertical set-up of the problem. Aligned To align the decimals you can add zeros to the term in Vocabulary Notebook. Vocabulary Notebook Sample: New Word	Vocabulary ers to the process of lining up decimals if you hat the decimals must be right under one another decimals look this way: 12.320 <u>546</u> the right of the last digit. Students should enter	It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can
align decimals	vertical alignment of the decimal point	composition book.
Personal Connection I will write the numbers .54 and .34 with the decimals aligned so I can add.	Drawing .345 <u>261</u>	
A De Subtraction of Decimals In order to subtract decimals you only have subtraction. That step is to align the decima successful if you write the problems vertical =, we would begin by writing the problem vertical would look like this:	to remember one step beyond normal al points. This means that you will be more ly. For example if the problem is 34.25 - 1.234 ertically and lining up the decimals. The problem 34.250 -1.234	Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.
You will notice that in order to line up the det the decimals have the same number of digit problem above would be 33.016 and would represents the decimal point and the thousat thousandths place. Do several of these problems on the board them work through the problem, focusing or subtracting. Subtracting Decimals <u>Directions:</u> 1. Divide students into pairs. 2. Give each pair a set of Subtracting 3. Shuffle the cards and put them bet	ecimals you add zeros at the end so that all of ts after the decimal point. The difference of the be read 33 and sixteen thousandths. The AND andths is used because the last digit is in the with the students, bringing them up and having n getting the decimal points lined up before Decimals cards and a game board.	



4.	Player 1 draws a card, completes the problem, locates the answer on the game
	board and marks it with a token.

- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three what questions:

What was your key learning for the day?

What opportunities might you have to do this same thing in the "real world"?

What advice would you give to a "new" student getting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



4th -5th Grade Subtraction of Decimals

5.6	10.4	8.5	7.8
<u>-3.2</u>	<u>-8.2</u>	<u>-3.5</u>	<u>-4.5</u>
9.3	86.5	6.3	8.7
<u>-7.5</u>	<u>-2.3</u>	<u>-4.1</u>	<u>-5.2</u>
326.7	14.021	1.589	16.882
<u>-42.8</u>	<u>-5.600</u>	<u>756</u>	<u>-9.300</u>
16.4 - 8.2 =	75.4 – 3.1 =	7.6 – 3.2 =	26.7 – 2.5 =
19.5001 =	.501332 =	42.642 – 10.35 =	28.4 – 4.62
33.45 – 15.4 =	18.5 – 9.5 =	14.9 – 3.2 =	1.978 – 1.682 =



4th -5th Grade Subtraction of Decimals

2.4	2.2	5	3.3
1.8	84.2	2.2	3.5
283.9	8.421	.833	7.582
8.2	72.3	4.4	24.2
19.499	.169	32.294	23.78
18.05	9	11.7	.296



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Subtracting Decimals
Focus:	Decimals

Materials:			
White boards	Vocabulary Not	tebooks	Dominoes
Crayolas	Dice		
Activity at the end of	the lesson plan	Socks (us	se for erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with fractions.

Gain prior knowledge by asking students the following questions

What do you know about decimals? When do we use decimals? The word decimal refers to 10. The place value of the spaces to the right of the decimal point begins with tenths. What comes next? How many places over would you find tenthousandths? How do we use decimals to indicate money?

Content (the "Meat")		
Problem of the Day If apples are for sale at 6 for \$1.08. If Lily wants 15 apples, how much will had pay at this	*Activity → Teachable Moment(s) <i>throughout</i>	
price? How did you get your answer?	During the lesson check in with students repeatedly	
Fact Practice Multiplication Ladder 1. Give each student a white board (include marker or crayola) 2. Student should draw a ladder like the one below	Check in about what is happening and what they are thinking.	
9	Take advantage of any teachable moments.	
	Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking.	
 1 3. Have student roll 2 dice, total the pips and then multiply that number times each of the numbers in the ladder, writing the total to the right of the number 	When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.	



Math V Word for Today: align decimals Description: The term "align decimals" ref are going to add or subtract. This means th in a vertical set-up of the problem. Aligned To align the decimals you can add zeros to the term in Vocabulary Notebook. Vocabulary Notebook Sample:	It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can	
align decimals	vertical alignment of the decimal point	be made from ½ of a composition book.
Personal Connection I will write the numbers .54 and .34 with the decimals aligned so I can add.	Drawing .345 <u>261</u>	
A De Subtraction of Decimals In order to subtract decimals you only have subtraction. That step is to align the decima successful if you write the problems vertical =, we would begin by writing the problem vertical would look like this:	Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.	
You will notice that in order to line up the det the decimals have the same number of digit problem above would be 33.016 and would represents the decimal point and the thousa thousandths place. Do several of these problems on the board them work through the problem, focusing or subtracting.		
 Subtracting Decimals <u>Directions:</u> Divide students into pairs. Give each pair a set of Subtracting Shuffle the cards and put them betw Player 1 draws a card, completes the board and marks it with a token. 		



5. Player 2 continues in the same way.

6. Play is over when all answers are covered.

Closing)	
Review	I	
Say:		
 Please recap what we did today. 		
 Did we achieve our objectives? 		
Debrie	f	
Three Whats		
Ask the following three what questions:		
What was your key learning for the day?		
What opportunities might you have to do this same thing in the "real world"?		
What advice would you give to a "new" student getting ready to do this activity?		

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
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4th -5th Grade Subtraction of Decimals

5.6	10.4	8.5	7.8
<u>-3.2</u>	<u>-8.2</u>	<u>-3.5</u>	<u>-4.5</u>
9.3	86.5	6.3	8.7
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326.7	14.021	1.589	16.882
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16.4 - 8.2 =	75.4 – 3.1 =	7.6 – 3.2 =	26.7 – 2.5 =
19.5001 =	.501332 =	42.642 – 10.35 =	28.4 – 4.62
33.45 – 15.4 =	18.5 – 9.5 =	14.9 – 3.2 =	1.978 – 1.682 =



4th -5th Grade Subtraction of Decimals

2.4	2.2	5	3.3
1.8	84.2	2.2	3.5
283.9	8.421	.833	7.582
8.2	72.3	4.4	24.2
19.499	.169	32.294	23.78
18.05	9	11.7	.296



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Multiplying Decimals
Focus:	Fractions

Materials:		
White boards	Vocabulary	v Notebooks
Crayolas	Cards	
Activities at the end of	this lesson plan	Socks (use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with decimals.

Gain prior knowledge by asking students the following questions

What do you know about multiplying decimals? What are the steps you would take to complete this task? After you have finished multiplying, what is the final step you will take to correctly place the decimal point? What is the strategy you will use?

Content (the "Meat")			
Problem of the Day	*Activity → Teachable Moment(s) throughout		
for 10 balloons. At the Balloons Galore Store be can buy 3 for a \$1.50. At which store can be	During the lesson check in		
get the best deal? How do you know?	with students repeatedly.		
Fact Practice	Check in about what is		
Target	happening and what they are		
1. Divide students into trios	thinking.		
Each trio needs a deck of cards without face cards and jokers	Take advantage of any		
3. Place the cards face up in a TicTac Toe Grid	teachable moments.		
4. Turn up a 10 th card which will be to the side and becomes the target number (aces count as 1)	Stop the class and focus on a		
5. Each player makes an equation with some or all of the numbers in the grid to equal the target	student's key learning or		
number. Students may add, subtract, multiply or divide	understanding. Ask open-		
6. Each card may be used only one time in the equation	ended questions to		
 As the cards are being picked up, the player must say the equation aloud—for example if the target card is 10, then I could say 5 x 2 = 10, and pick up the 5 and the 2. 	determine what the rest of the group is thinking.		
 After one player finishes his/her turn, then the cards taken are replaced by cards from the remaining deck 	When possible, engage students in a "teach to learn"		
9. Player with the most cards at the end of the game win	opportunity and have the student become the teacher.		



Math Vocabulary It is important to review academic math vocabularv Word for Today: to the right of decimal point often throughout the day. **Description:** The digits to the right of the decimal point represent tenths, hundredths, Complete the Vocabulary thousandths, ten-thousandths, hundred-thousandths, millionths and so on. In a multiplication notebook for each word. problem, count the digits to the right of the decimal point in both factors and then in the product, begin on the right and count that many places to the left and then place the decimal When possible, have point. Understanding the steps of multiplying decimals is important. students experience the word (Ex. 4 students creating a Students should review their Vocabulary Notebook and have an accurate and informative right angle, multiple students entry for the term "mixed number". acting out an equation). Vocabulary Notebook Sample: New Word My Description Vocabulary Notebooks can be made from $\frac{1}{2}$ of a composition book. right of decimal point digits to the right of the decimal are less than a whole Personal Connection Drawing 1 x 3 = 03 He will give her \$.75. Focus on having young Activity people "compete" in pairs or **Multiplication of Decimals** Multiplying decimals is exactly like multiplying in other numbers. You write the problems small groups. Once a game vertically and multiply beginning with the bottom right factor and continuing. You do not need is mastered you can utilize it to align the decimal points. When you have a product, you return to the two factors and count in the "When Homework Is the number of digits to the right of the decimal in both factors. When you have that number, Complete" center. you begin counting right to left in the product and when you have counted the correct number of spaces, you place the decimal point in the product. For example, in the problem: 3.24 x.245 1620 12960 64800 .79380 Once you have multiplied by each of the digits and found the total, you then count the number of digits to the right. In the first factor: 3.24 there are two digits to the right. In the second factor there are 3 numbers to the right. This is a total of 4 numbers. Beginning with the 0 on the right, count five spaces to the left and drop in the decimal point. Do several of these problems on the board with the students, bringing them up and having them work through the problem, focusing on the process of multiplication and then determining where the decimal point belongs when the product has been determined. **Multiplying Decimals Directions:**





- 1. Divide students into pairs.
- 2. Give each pair a set of Multiplying Decimals cards and a game board.
- 3. Shuffle the cards and put them between the students.
- 4. Player 1 draws a card, completes the problem, locates the answer on the game board and marks it with a token.
- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three what questions:

What was your key learning for the day?

What opportunities might you have to do this same thing in the "real world"?

What advice would you give to a "new" student getting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



4th -5th Grade Multiplication of Decimals

5.2	10.5	2.8	2.2
<u>x 1.8</u>	<u>x 6.6</u>	<u>x 9.9</u>	<u>x 4.4</u>
.12	5.2	1.3	7.1
<u>x 3.7</u>	<u>x .21</u>	<u>x 1</u>	<u>x .25</u>
7.54	6.4	16.2	2
<u>x 2.77</u>	<u>x 2.5</u>	<u>x 1.1</u>	<u>x 2.1</u>
5.4 x 1.3 =	6.6 x 1.5 =	4.44 x .01 =	.34 x .12 =
45.5 x 4.6 =	6.1 x 2.5 =	5.6 x 7.4 =	33.1 x .8 =
3.7 x 9.4 =	62.5 x .74 =	.089 x 4.03 =	3.5 x 87 =



4th -5th Grade Multiplication of Decimals Answer Key

9.36	69.3	27.72	9.68
.444	1.092	1.3	1.775
20.8858	16	17.82	4.2
7.02	9.9	.0444	.0408
209.3	15.25	40.88	26.48
34.78	46.250	.35867	304.5



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Multiplying Decimals 2
Focus:	Decimals

Materials:		
White boards	Vocabulary Notebooks	Activity at the end of the lesson plan
Crayolas	two, 12-sided dice for each pair	
Product Hunt Work Sheet	Sock (for erasers)	

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with decimals.

Gain prior knowledge by asking students the following questions

What do you know about multiplying decimals? What are the steps you would take to complete this task? After you have finished multiplying, what is the final step you will take to correctly place the decimal point? What is the strategy you will use?

Content (the "Meat")			
Problem of the Day If you cut a pan of brownies into 12 pieces and 8 of the pieces were eaten, what fraction of the	*Activity → Teachable Moment(s) <i>throughout</i>		
brownies was not eaten? How do you know?	During the lesson check in with students repeatedly		
Product Hunt 1. Divide students into pairs	Check in about what is happening and what they are thinking.		
 Each pair needs a Product Hunt sheet (attached to this lesson plans) Player rolls two, 12-sided dice. 	Take advantage of any teachable moments.		
 Player multiplies the two numbers. If the product is not yet covered, then player may cover the product. Next player repeats steps 1-3. Winner is determined by who has the most numbers covered. 	Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.		



Math Vocabulary It is important to review academic math vocabularv Word for Today: to the right of decimal point often throughout the day **Description:** The digits to the right of the decimal point represent tenths, hundredths, Complete the Vocabulary thousandths, ten-thousandths, hundred-thousandths, millionths and so on. In a multiplication notebook for each word. problem, count the digits to the right of the decimal point in both factors and then in the product, begin on the right and count that many places to the left and then place the decimal When possible, have point. Understanding the steps of multiplying decimals is important. students experience the word (Ex. 4 students creating a Students should review their Vocabulary Notebook and have an accurate and informative right angle, multiple students entry for the term "right of decimal point". acting out an equation). **Vocabulary Notebook Sample:** New Word Vocabulary Notebooks can My Description be made from $\frac{1}{2}$ of a composition book. right of decimal point digits to the right of the decimal are less than a whole Personal Connection Drawing 1 x 3 = 03 He will give her \$.75. Focus on having young Activity people "compete" in pairs or **Multiplication of Decimals** Multiplying decimals is exactly like multiplying in other numbers. You write the problems small groups. Once a game vertically and multiply beginning with the bottom right factor and continuing. You do not need is mastered you can utilize it to align the decimal points. When you have a product, you return to the two factors and count in the "When Homework Is the number of digits to the right of the decimal in both factors. When you have that number, Complete" center. you begin counting right to left in the product and when you have counted the correct number of spaces, you place the decimal point in the product. For example, in the problem: 3.24 x.245 1620 12960 64800 .79380 Once you have multiplied by each of the digits and found the total, you then count the number of digits to the right. In the first factor: 3.24 there are two digits to the right. In the second factor there are 3 numbers to the right. This is a total of 4 numbers. Beginning with the 0 on the right, count five spaces to the left and drop in the decimal point. Do several of these problems on the board with the students, bringing them up and having them work through the problem, focusing on the process of multiplication and then determining where the decimal point belongs when the product has been determined. **Multiplying Decimals Directions:**





- 1. Divide students into pairs.
- 2. Give each pair a set of Multiplying Decimals cards and a game board.
- 3. Shuffle the cards and put them between the students.
- 4. Player 1 draws a card, completes the problem, locates the answer on the game board and marks it with a token.
- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three what questions:

What was your key learning for the day?

What opportunities might you have to do this same thing in the "real world"?

What advice would you give to a "new" student getting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



Product Hunt

48	20	81	3	45	27
1	24	108	77	7	40
120	72	96	8	18	60
14	144	70	22	15	11
33	35	66	132	63	16
12	30	28	110	100	49
6	36	21	121	90	2
84	5	44	25	99	10
32	9	56	88	4	11
24	50	55	54	42	80



4th -5th Grade Multiplication of Decimals

5.2	10.5	2.8	2.2
<u>x 1.8</u>	<u>x 6.6</u>	<u>x 9.9</u>	<u>x 4.4</u>
.12	5.2	1.3	7.1
<u>x 3.7</u>	<u>x .21</u>	<u>x 1</u>	<u>x .25</u>
7.54	6.4	16.2	2
<u>x 2.77</u>	<u>x 2.5</u>	<u>x 1.1</u>	<u>x 2.1</u>
5.4 x 1.3 =	6.6 x 1.5 =	4.44 x .01 =	.34 x .12 =
45.5 x 4.6 =	6.1 x 2.5 =	5.6 x 7.4 =	33.1 x .8 =
3.7 x 9.4 =	62.5 x .74 =	.089 x 4.03 =	3.5 x 87 =



4th -5th Grade Multiplication of Decimals Answer Key

9.36	69.3	27.72	9.68
.444	1.092	1.3	1.775
20.8858	16	17.82	4.2
7.02	9.9	.0444	.0408
209.3	15.25	40.88	26.48
34.78	46.250	.35867	304.5



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Division of Decimals
Focus:	Decimals

Materials:

White boardsVocabulary NotebooksCrayolasDecks of cardsActivity at the end of the lesson planStatement

Socks (use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills in working with decimals.

Gain prior knowledge by asking students the following questions

What do you know about decimals? What does a decimal indicate about the numbers to the right of it? What about those to the left? When do you commonly use decimals? If you are reading a number with a decimal point aloud, what do you say when you get to the decimal point?

Content (the "Meat")			
Problem of the Day Look at the word below. Write a fraction that shows the number of vowels in the word. Write	*Activity → Teachable Moment(s) <i>throughout</i>		
a fraction that shows the number of consonants. How do you know that the answer is correct?	During the lesson check in with students repeatedly.		
superficial	Check in about what is		
Fact Practice	happening and what they are		
Draw!	lninking. Taka advantara af anv		
1. Divide students into pairs and give each pair a deck of cards	teachable moments.		
2. Remove the face cards and jokers from the deck of cards.	Stop the class and focus on a		
3. Shuffle the deck.	understanding. Ask open-		
5. First player draws two cards.	ended questions to		
6. Student multiplies the cards.	determine what the rest of		
7. Student writes his/her problem on the white board, writing a complete number sentence.	the group is thinking.		
8. Students take turns drawing and creating problems.	when possible, engage students in a "teach to learn" opportunity and have the student become the teacher.		
Math Vocabulary	It is important to review		
Word of the day: decimal in the divisor academic math vocabular			
When you are dividing with decimals you must be sure that there is NO decimal in the divisor.	often throughout the day.		



In the problem 40 ÷ 5, the 5 is the divisor. If the to the right by however many places you have you would need to move the decimal two points move a decimal point in the divisor, you MUST the dividend. If the dividend is 4.25, then it would add two zeros so you contright. This is permissible. Students should enter the term in Vocabulary Notebook Sample:	Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can	
New Word	My Description	be made from ½ of a
decimal in the divisor	move the decimal out of the divisor, matching the move in the dividend	composition book.
Personal Connection	Drawing	
I will move the decimal two places in both the divisor and the dividend.	.45 becomes 45.—divisor 42. becomes 4200. In the dividend	
Act	ivity	Focus on having young
Dividing decimals requires that you write the pr	oblems in traditional form:	people "compete" in pairs or small groups. Once a game
5 [[]	is mastered you can utilize it in the "When Homework Is Complete" center.	
Since there is no decimal point in the divisor, the quotient is 81). You then move the decima 8.1. If there was a decimal point in the diviso moving it to the right, and then doing the exact		
.5 [
bec	omes	
5 [405	
and the answer would become 81. What this a 40.5.		
Do several of these problems on the board with them work through the problem, focusing on th they should move any decimal in the divisor. I straight up.		
Division With Decimals		
Directions:		
 Divide students into pairs. Cive each pair a set of Division with D 	ocimals cards and a come board	
 Give each pair a set of Division With De Shuffle the cards and put them between 		
4. Player 1 draws a card, completes the		



and marks it with a token.

- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

	Closing
	Review
Say:	
Please recap what we did today.	
 Did we achieve our objectives? 	
	Debrief
Three Whats	
Ask the following three what questions:	
What was your key learning for the day?	
What opportunities might you have to do this sa	ame thing in the "real world"?
What advice would you give to a "new" student	getting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



4th -5th Grade Division of Decimals

5.481 ÷ 6 =	30.24 ÷ 36 =	57.96 ÷ 63 =	166.88 ÷ 56
73.84 ÷ 8 =	579.6 ÷ 92 =	48.24 ÷ 72 =	5,577.6 ÷ 83 =
3.402 ÷ 7 =	15.75 ÷ 45 =	266.8 ÷ 58 =	32.496 ÷ 48 =
212.4 ÷ 6 =	407.4 ÷ 97 =	23.04 ÷ 64 =	64 ÷ .8 =
100 ÷ .25 =	7.93 ÷ 6.1 =	35 ÷ .5 =	48 ÷ 1.2 =
42.4 ÷5.3 =	64 ÷ .4 =	4.9 ÷ .7 =	15.2 ÷ .19 =



4th – 5th Grade Division of Decimals Answers

.903	.84	.92	2.98
9.23	6.3	.67	67.2
.486	.35	4.6	.677
35.4	4.2	.36	80
400	1.3	70	40
8	160	7	80



Component:	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Division of Decimals 2
Focus:	Decimals

Materials:		
White boards	Vocabulary Noteb	pooks
Crayolas	Double 9 Domino	bes
Activity at the end of the lesso	n plan	Socks (use for erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with decimals.

Gain prior knowledge by asking students the following questions

What do you know about decimals? What does a decimal indicate about the numbers to the right of it? What about those to the left? When do you commonly use decimals? If you are reading a number with a decimal point aloud, what do you say when you get to the decimal point?

Content (the "Meat")	
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
Lori will use 20 beads to make a bracelet. If 8 of the beads are gold, 3 are purple, and 5 are orange, how many of the beads are blue? Write a fraction to show each color of bead.	During the lesson check in with students repeatedly.
Fact Practice Spots and Dots There is a master of Double 9 Dominos attached to this lesson plan. You will need 1 full set for each pair of students in your class. It is recommended that you duplicate on card stock and if possible, laminate for use again in the future. Players sit across from each other. Dominoes are between them, face (or spots) down. Each student draws a domino and writes the multiplication problem on their white board, multiplying the numbers represented by the spots Example: Domino drawn is Image:	Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Math Vo Word of the day: decimal in the divisor When you are dividing with decimals you must In the problem 40 ÷ 5, the 5 is the divisor. If the to the right by however many places you have to you would need to move the decimal two points move a decimal point in the divisor, you MUST the dividend. If the dividend is 4.25, then it wou any decimal you would add two zeros so you co right. This is permissible. Students should enter the term in Vocabulary Notebook Sample:	It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can be made from ½ of a	
New Word	My Description	composition book.
decimal in the divisor	move the decimal out of the divisor, matching the move in the dividend	
Personal Connection	Drawing	
I will move the decimal two places in both the divisor and the dividend.	.45 becomes 45.—divisor 42. becomes 4200. In the dividend	
Acti	ivity	Focus on having young
Division of Decimals Dividing decimals requires that you write the pro- 5 [2	small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.	
Since there is no decimal point in the divisor, y the quotient is 81). You then move the decima 8.1. If there was a decimal point in the divisor moving it to the right, and then doing the exact		
.5 [
becc		
5 and the answer would become 81. What this a 40.5. Do several of these problems on the board with them work through the problem, focusing on the they should move any decimal in the divisor. It straight up.		

CONSULT 4 KIDS

Division With Decimals

Directions:

- 1. Divide students into pairs.
- 2. Give each pair a set of Division with Decimals cards and a game board.
- 3. Shuffle the cards and put them between the students.
- 4. Player 1 draws a card, completes the problem, locates the answer on the game board and marks it with a token.
- 5. Player 2 continues in the same way.
- 6. Play is over when all answers are covered.

	Closing
	Review
Say:	
•	Please recap what we did today.
•	Did we achieve our objectives?
	Debrief
Three	e Whats
Ask the	e following three what questions:
	What was your key learning for the day?
	What opportunities might you have to do this same thing in the "real world"?
	What advice would you give to a "new" student getting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



Double 9 Dominoes

	•	•••



	•	

				•	
	•				•







Do not use		
Do not use		









4th -5th Grade Division of Decimals

5.481 ÷ 6 =	30.24 ÷ 36 =	57.96 ÷ 63 =	166.88 ÷ 56
73.84 ÷ 8 =	579.6 ÷ 92 =	48.24 ÷ 72 =	5,577.6 ÷ 83 =
3.402 ÷ 7 =	15.75 ÷ 45 =	266.8 ÷ 58 =	32.496 ÷ 48 =
212.4 ÷ 6 =	407.4 ÷ 97 =	23.04 ÷ 64 =	64 ÷ .8 =
100 ÷ .25 =	7.93 ÷ 6.1 =	35 ÷ .5 =	48 ÷ 1.2 =
42.4 ÷5.3 =	64 ÷ .4 =	4.9 ÷ .7 =	15.2 ÷ .19 =



4th – 5th Grade Division of Decimals Answers

.903	.84	.92	2.98
9.23	6.3	.67	67.2
.486	.35	4.6	.677
35.4	4.2	.36	80
400	1.3	70	40
8	160	7	80

Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Fractions, Decimals, and Percentages
Focus:	Number

Materials:		
White boards	Vocabulary Notebooks	Activity at end of the lesson plan
Crayolas	6-sided dice; 12-sided dice	
Decks of cards	Socks (use as erasers)	

Opening

State the objective

Today we are going to practice using our math vocabulary and skills in working with decimals.

Gain prior knowledge by asking students the following questions

It is important that students can learn to translate fractions, decimals, and percentages into one another. These types of entities have a relationship. How would you change a fraction into a decimal? How would you change a decimal into a fraction? How would you change a decimal into a percentage? How would you change a percentage into a decimal?

Content (the "Meat")	
Problem of the Day Write 3 more fractions that are an equivalent for $\frac{3}{4}$. Tell how you know your answer is correct	*Activity → Teachable Moment(s) <i>throughout</i>
Write 3 more fractions that are an equivalent for $\frac{3}{4}$. Tell how you know your answer is correct.Fact Practice Fact FamilyA Fact FamilyA Fact Family is 3 numbers which have a relationship in multiplication and division. For example, the number 9, 4, and 36 have a particular relationship in math. This family has four members: $9 \times 4 = 36$ $4 \times 9 = 36$ $36 \div 9 = 4$ Students should roll 2 dice and create a Fact Family by writing the members of the family on 	Moment(s) throughout During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking. When possible engage
	When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.
Math Vocabulary	It is important to review
Word for Today: equivalent decimals, fractions, percentages	academic math vocabulary
Description: Decimals, fractions, and percentages can be equivalent. 1/4, .25, and 25% are	onen unoughout the day.





all equivalent. This makes $\frac{1}{8}$, .125, and equivalent of a fraction divide the numer percentage remember that the % sign re- you move 2 spaces to the right and add that you should memorize. They are co In the vocabulary notebook, students sh equivalencies should be listed: $\frac{1}{4}$, .25, 25% $\frac{1}{2}$.5, 50% $\frac{3}{4}$, .75, 75% $\frac{1}{8}$.125, 12.5% $\frac{3}{8}$, .375, 37.5% $\frac{5}{8}$, .625, 62.5% 7/8, .875, 87.5% $\frac{1}{3}$, .33, 33.3% $\frac{2}{3}$, .67, 66.7% $\frac{1}{5}$.2, 20% $\frac{2}{5}$, .4 40% $\frac{3}{5}$.6, 60% $\frac{4}{5}$.8, 80% Vocabulary Notebook Sample:	Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can be made from ½ of a composition book.	
New Word	My Description	
1⁄2 .5 50%	equaling the same fractional part	
Personal Connection	Drawing	
He got 80% on his spelling test.	1/2 .5 50%	
	Activity	Focus on having young
	Decimals	people "compete" in pairs or
Decimals, Fractions, and Percentages Decimals, fractions and percentages can all represent the same amount. For example, ¼, .25 and 25% are of equal value, just like ½, .5 and 50%. While all of these equivalents can be easily calculated (to translate a fraction into a decimal divide the numerator by the denominator, to translate the decimal into a percent, move the decimal two places to the right and follow by a % sign). Today, students are going to play Tic Tac Toe by using equivalents to score or block the opponents play. On the Tic Tac Toe board, player can only play the equivalent that labels the column: Fraction Decimal Percent Be sure to duplicate the Equivalents cards on two different colors of paper to determine which player has laid down which card. Play several games on the chalk board with students, until they are comfortable playing the		small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.



Tic Tac Equivalents

Directions:

- 1. Divide students into pairs.
- 2. Give each pair a Tic Tac Equivalent board and two sets of Equivalent cards (duplicated on different colors of paper)
- 3. Players each take one color of Equivalent Cards.
- 4. Players each arrange their cards to be in equivalent trios.
- 5. Play begins like Tic Tac Toe, following the description above.
- 6. Player who gets three color cards in a row (vertically, horizontally, or diagonally) wins.

Closing		
Review		
Say:		
Please recap what we did today.		
 Did we achieve our objectives? 		
Debrief		
Three Whats		
Ask the following three what questions:		
What was your key learning for the day?		
What opportunities might you have to do this same thing in the "real world"?		
What advice would you give to a "new" student getting ready to do this acti	vity?	

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



4th-5th Grade Tic Tac Equivalent

Fraction	Decimal	Percent





1⁄4	.25	25%
1/2	.5	50%
3/4	.75	75%

1⁄8	.125	12.5%
1/3	.33	33%
2/3	.67	67%





3/ 8	.375	37.5%
5/ 8	.625	62.5%
7/ 8	.875	87.5%
1/10	.1	10%
2/5	.2	20%
3/5	.6	60%



4/5	.8	80%
1/6	.167	16.7%
5/6	.833	83.3%



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Fractions, Decimals, Percentages 2
Focus:	Number

Materials:			
White boards	Vocabulary Noteboo	ks	
Crayolas	Decks of cards		
Activity at the end of the lessor	n plan	Socks	(use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills in working with decimals.

Gain prior knowledge by asking students the following questions

It is important that students can learn to translate fractions, decimals, and percentages into one another. These types of entities have a relationship. How would you change a fraction into a decimal? How would you change a decimal into a fraction? How would you change a decimal into a percentage? How would you change a percentage into a decimal?

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>	
John bought a dozen donuts for \$5.40. He sold the donuts at school for a total of \$7.80. How much money did he make on each donut? How do you know?	During the lesson check in with students repeatedly.	
Fact Practice Multiples	Check in about what is happening and what they are thinking.	
Multiplication facts are learned by recognizing the multiples of any given number. In this practice you will be determining the multiples of randomly generated numbers. You will need	Take advantage of any teachable moments.	
 a chart and crayolas (150 chart). 1. Roll one or two dice (if you roll two add the numbers together to determine the factor in the fact practice) 2. Mark all multiples of the number and then pass off to the next person. 3. Player may mark the same number. 	Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.	
Math Vocabulary	It is important to review	
Word for Today: equivalent decimals, fractions, percentages	academic math vocabulary	
Description: Decimals, fractions, and percentages can be equivalent. 1/4, .25, and 25% are	onen anoughout the day.	



all equivalent. This makes $\frac{1}{6}$, .125, and equivalent of a fraction divide the numer percentage remember that the % sign re- you move 2 spaces to the right and add that you should memorize. They are col- In the vocabulary notebook, students sh equivalencies should be listed: $\frac{1}{4}$, .25, 25% $\frac{1}{2}$.5, 50% $\frac{3}{4}$, .75, 75% $\frac{1}{8}$.125, 12.5% $\frac{3}{8}$, .375, 37.5% $\frac{5}{8}$, .625, 62.5% $\frac{7}{8}$, .875, 87.5% $\frac{1}{3}$, .33, 33.3% $\frac{2}{3}$, .67, 66.7% $\frac{1}{5}$.2, 20% $\frac{2}{5}$, .4 40% $\frac{3}{5}$.6, 60% $\frac{4}{5}$.8, 80% Vocabulary Notebook Sample:	Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can be made from ½ of a composition book.	
New Word	My Description	
1⁄2 .5 50%	equaling the same fractional part	
Personal Connection	Drawing	
He got 80% on his spelling test.	12.550%	
	Activity	Focus on having young
	Decimals	people "compete" in pairs or
Decimals, Fractions, and Percentages Decimals, fractions and percentages can all represent the same amount. For example, ¼, .25 and 25% are of equal value, just like ½, .5 and 50%. While all of these equivalents can be easily calculated (to translate a fraction into a decimal divide the numerator by the denominator, to translate the decimal into a percent, move the decimal two places to the right and follow by a % sign). Today, students are going to play Tic Tac Toe by using equivalents to score or block the opponents play. On the Tic Tac Toe board, player can only play the equivalent that labels the column: Fraction Decimal Percent Be sure to duplicate the Equivalents cards on two different colors of paper to determine which player has laid down which card. Play several games on the chalk board with students, until they are comfortable playing the		small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.



Tic Tac Equivalents

Directions:

- 1. Divide students into pairs.
- 2. Give each pair a Tic Tac Equivalent board and two sets of Equivalent cards (duplicated on different colors of paper)
- 3. Players each take one color of Equivalent Cards.
- 4. Players each arrange their cards to be in equivalent trios.
- 5. Play begins like Tic Tac Toe, following the description above.
- 6. Player who gets three color cards in a row (vertically, horizontally, or diagonally) wins.

	Closing
	Review
Say:	
Please recap what we did today.	
Did we achieve our objectives?	
	Debrief
Three Whats	
Ask the following three what questions:	
What was your key learning for the day?	
What opportunities might you have to do this s	ame thing in the "real world"?
What advice would you give to a "new" student	getting ready to do this activity?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.



Fact Practice—Multiples

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150



4th-5th Grade Tic Tac Equivalent

Fraction	Decimal	Percent





1/4	.25	25%
1/2	.5	50%
3/4	.75	75%

1⁄8	.125	12.5%
1/3	.33	33%
2/3	.67	67%





3/ 8	.375	37.5%
5/ 8	.625	62.5%
7/ 8	.875	87.5%
1/10	.1	10%
2/5	.2	20%
3/5	.6	60%



4/5	.8	80%
1/6	.167	16.7%
5/6	.833	83.3%



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Student Activity Choice
Focus:	Review

Materials:

Game Boards for games below.

Opening

State the objective

Today we are going to have fun playing games that we learned this week.

Content (the "Meat") Activity Today is a review lesson. Students should choose from the following activities: Addition With Decimals Subtraction With Decimals Multiplication With Decimals Division With Decimals Tic Tac Equivalents

	Closing
	Review
Say:	
•	Please recap what we did today. Did we achieve our objectives?

- 1. Ask students to think about what they did today in math.
- 2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them.