Consult 4 Kids Lesson Plans

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

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 fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? What is the recipe for dividing fractions? What does it mean to invert a fraction? When you look at this division problem, which of the fractions is the divisor? $\frac{3}{4} \div \frac{1}{2} =$.

Content (the "Meat")

Problem of the Day

Sue solved the problem shown below and go the answer of 164. Is her answer correct? Explain how you know.

985 ÷ 6 =

Fact Practice

Multiplication War

- 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
- At the end of round, students may reshuffle the pile of cards that they have
- Play can continue until one player has all cards or time has called

Activity → Teachable 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 students in "teaching to learn".

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: invert

Description: A fraction has two numbers, a numerator, the number on top, and the denominator, the number on the bottom. When you divide fractions you must invert the divisor and then multiply numerator times numerator and denominator times denominator. When you invert a fraction it will change from this: ½ to $\frac{2}{1}$. In other words, the denominator becomes the numerator and the numerator becomes the denominator. If you have a whole number like 2 or 4, when they are inverted they look like ½ and ¼ . All whole numbers have an unseen 1 underneath them as a denominator.

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

Vocabulary Notebook Sample:

New Word	**My Description**
invert	turn upside down
Personal Connection	**Drawing**
⅜ can be inverted to $\frac{8}{3}$.	

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 composition book.

Activity

Division of Fractions

Division is the reciprocal of multiplication. When you are dividing fractions, set up is very important. Unlike addition and subtraction of fractions that need to be written vertically, the problems when you are dividing fractions are written horizontally: For example:

½ ÷ ¼ =

Unlike addition and fractions that require the denominators to be the same, in division that is not the case. It is perfectly okay for the denominators to be different.

In the division of fractions the operation is relatively simple as long as you remember to invert the fraction on the right, the divisor.

When you do that, you would change the sign from division to multiplication. In the division problem above, you would rewrite it to be:

$$\frac{1}{2} \times \frac{4}{1} =$$

Just like in multiplication you can simply multiply numerator times numerator, and denominator times denominator. So in the example above, 1 x 4 = 4, and 2 times 1 equals 2 so the answer would be $\frac{4}{2}$. In this particular example, the answer (product) would not be in its simplest terms, so you would not be finished. You would need to reduce the fraction to the whole number, 2.

One of the interesting things about dividing fractions is that you can do some things with the numerator and denominator prior to multiplying numerators and denominators, **BUT AFTER**

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" center.

you have inverted the divisor, to ensure that your answer will be in its simplest terms. For example:

$$\frac{3}{4} \div \frac{6}{7} =$$

would become:

$$\frac{3}{4} \text{ x } \frac{7}{6} =$$

and give you a product of $\frac{21}{24}$. Obviously that would need to be reduced to $\frac{7}{8}$. which can be cumbersome. However, there is something that can happen to make that easier. If you look at the multiplication sign, there are two diagonal lines. One of the lines \ "connects" the 3 and the 6. 3 and 6 have a common divisor, 3. Three is divided be three which equals 1, and 6 can be divided by 3 and equals 2. So before we multiply the fraction, we are going to change the 3 to 1 and the 6 to 2. Sometimes there is no common divisor for a pair of numbers that are connected, but it is always good to check. The second part of the X, the /, "connects" the 4 and the 7. There is not common multiple for these two numbers. Once you have checked and changed where you could, you know have a problem that looks like this:

$$\frac{1}{4} \text{ x } \frac{7}{2} =$$

When you multiply this you find the answer of $\frac{7}{8}$ and you do not need to simplify as it is already done.

Work several problems with the students on the board so they understand the process.

Dividing Fractions

Directions:

1. Divide students into pairs.
2. Give each pair a set of Dividing Fractions cards and game board.
3. Shuffle the cards and place between the players.
4. Player 1 draws a card, completes the problem, locates the answer on the game board and marks it.
5. Player 2 continues play in the same way.
6. Game is over when all answers have been 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?

Reflection (Confirm, Tweak, Aha!)

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.

Consult 4 Kids Lesson Plans

4th – 5th Grade Division of Fractions

$\frac{1}{6} \div \frac{3}{5} =$	$\frac{3}{5} \div \frac{6}{10} =$	$\frac{8}{15} \div \frac{4}{10} =$	$\frac{5}{12} \div \frac{5}{8} =$
$\frac{3}{10} \div \frac{5}{8} =$	$\frac{3}{4} \div \frac{9}{10} =$	$\frac{3}{4} \div \frac{7}{10} =$	$\frac{12}{25} \div \frac{4}{5} =$
$\frac{4}{5} \div \frac{5}{6} =$	$\frac{2}{3} \div \frac{5}{6} =$	$\frac{3}{10} \div \frac{2}{5} =$	$\frac{10}{21} \div \frac{2}{3} =$
$\frac{3}{4} \div \frac{5}{12} =$	$\frac{2}{3} \div \frac{6}{15} =$	$\frac{5}{8} \div \frac{2}{5} =$	$\frac{6}{21} \div \frac{9}{10} =$

4th – 5th Grade Dividing Fractions Game Board

$\frac{5}{18}$	1		$1\frac{1}{3}$	$\frac{2}{3}$
	$\frac{12}{25}$		$\frac{5}{6}$	$\frac{3}{5}$
		$1\frac{1}{14}$		
$\frac{24}{25}$	$\frac{4}{5}$		$\frac{3}{4}$	$\frac{5}{7}$
$1\frac{4}{5}$	$1\frac{2}{3}$		$1\frac{9}{16}$	$\frac{20}{63}$

Consult 4 Kids Lesson Plans .

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

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 fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? What is the recipe for dividing fractions? What does it mean to invert a fraction? When you look at this division problem, which of the fractions is the divisor? $\frac{3}{4} \div \frac{1}{2} =$.

Content (the "Meat")

Problem of the Day

Marnie say that the quotient of the problem shown below has a 0 (zero) in it. Explain how she could know this. Solve the problem for the correct answer.

Fact Practice

Fore-header

1. Divide students into trios. Give each trio a deck of cards without face cards and jokers.
2. Shuffle the deck and give all of the cards to the referee who will be "judging" the contest
3. On go, players are each handed a card by the referee and **WITHOUT** looking, put the card face out on his/her forehead
4. The referee multiplies the two numbers together and states the answer
5. Each player looks at the other person's exposed number and names his/her own number
6. Person who wins (accuracy and time), collects both cards
7. Play continues until all cards are gone.
8. Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee

Activity → Teachable 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 students in "teaching to learn".

Math Vocabulary

Word for Today: invert

It is important to review academic math vocabulary

Description: A fraction has two numbers, a numerator, the number on top, and the denominator, the number on the bottom. When you divide fractions you must invert the divisor and then multiply numerator times numerator and denominator times denominator. When you invert a fraction it will change from this: ½ to $\frac{2}{1}$. In other words, the denominator becomes the numerator and the numerator becomes the denominator. If you have a whole number like 2 or 4, when they are inverted they look like ½ and ¼ . All whole numbers have an unseen 1 underneath them as a denominator.

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

Vocabulary Notebook Sample:

New Word	**My Description**
invert	turn upside down
Personal Connection	**Drawing**
⅜ can be inverted to $\frac{8}{3}$.	

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.

Activity
Fractions

Division of Fractions

Division is the reciprocal of multiplication. When you are dividing fractions, set up is very important. Unlike addition and subtraction of fractions that need to be written vertically, the problems when you are dividing fractions are written horizontally: For example:

½ ÷ ¼ =

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In the division of fractions the operation is relatively simple as long as you remember to invert the fraction on the right, the divisor.

When you do that, you would change the sign from division to multiplication. In the division problem above, you would rewrite it to be:

$$\frac{1}{2} \times \frac{4}{1} =$$

Just like in multiplication you can simply multiply numerator times numerator, and denominator times denominator. So in the example above, 1 x 4 = 4, and 2 times 1 equals 2 so the answer would be $\frac{4}{2}$. In this particular example, the answer (product) would not be in its simplest terms, so you would not be finished. You would need to reduce the fraction to the whole number, 2.

One of the interesting things about dividing fractions is that you can do some things with the numerator and denominator prior to multiplying numerators and denominators, **BUT AFTER** you have inverted the divisor, to ensure that your answer will be in its simplest terms. For example:

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.

$$\frac{3}{4} \div \frac{6}{7} =$$

would become:

$$\frac{3}{4} \text{ x } \frac{7}{6} =$$

and give you a product of $\frac{21}{24}$. Obviously that would need to be reduced to $\frac{7}{8}$. which can be cumbersome. However, there is something that can happen to make that easier. If you look at the multiplication sign, there are two diagonal lines. One of the lines \ "connects" the 3 and the 6. 3 and 6 have a common divisor, 3. Three is divided be three which equals 1, and 6 can be divided by 3 and equals 2. So before we multiply the fraction, we are going to change the 3 to 1 and the 6 to 2. Sometimes there is no common divisor for a pair of numbers that are connected, but it is always good to check. The second part of the X, the /, "connects" the 4 and the 7. There is not common multiple for these two numbers. Once you have checked and changed where you could, you know have a problem that looks like this:

$$\frac{1}{4} \text{ x } \frac{7}{2} =$$

When you multiply this you find the answer of $\frac{7}{8}$ and you do not need to simplify as it is already done.

Work several problems with the students on the board so they understand the process.

Dividing Fractions

Directions:

1. Divide students into pairs.
2. Give each pair a set of Dividing Fractions cards and game board.
3. Shuffle the cards and place between the players.
4. Player 1 draws a card, completes the problem, locates the answer on the game board and marks it.
5. Player 2 continues play in the same way.
6. Game is over when all answers have been 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.

Reflection (Confirm, Tweak, Aha!)

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 Fractions

$\frac{1}{6} \div \frac{3}{5} =$	$\frac{3}{5} \div \frac{6}{10} =$	$\frac{8}{15} \div \frac{4}{10} =$	$\frac{5}{12} \div \frac{5}{8} =$
$\frac{3}{10} \div \frac{5}{8} =$	$\frac{3}{4} \div \frac{9}{10} =$	$\frac{3}{4} \div \frac{7}{10} =$	$\frac{12}{25} \div \frac{4}{5} =$
$\frac{4}{5} \div \frac{5}{6} =$	$\frac{2}{3} \div \frac{5}{6} =$	$\frac{3}{10} \div \frac{2}{5} =$	$\frac{10}{21} \div \frac{2}{3} =$
$\frac{3}{4} \div \frac{5}{12} =$	$\frac{2}{3} \div \frac{6}{15} =$	$\frac{5}{8} \div \frac{2}{5} =$	$\frac{6}{21} \div \frac{9}{10} =$

4th – 5th Grade Dividing Fractions Game Board

$\frac{5}{18}$	1		$1\frac{1}{3}$	$\frac{2}{3}$
	$\frac{12}{25}$		$\frac{5}{6}$	$\frac{3}{5}$
		$1\frac{1}{14}$		
$\frac{24}{25}$	$\frac{4}{5}$		$\frac{3}{4}$	$\frac{5}{7}$
$1\frac{4}{5}$	$1\frac{2}{3}$		$1\frac{9}{16}$	$\frac{20}{63}$

Consult 4 Kids Lesson Plans

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

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

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? What is the recipe for dividing fractions? Write several division of fractions on the board. Have students walk through the process. Remind them what it means to invert the divisor?

Content (the "Meat")

Problem of the Day

Is the number shown below divisible by 3?

534

Fact Practice

Spokes on a Wheel

1. Divide students into pairs
2. On a white board, student draws a small circle with 9 spokes coming out of it (should look like a bicycle tire)
3. Have students choose to put a 6, 7 or 8 in the center circle
4. Student rolls two dice and adds the pips (dots)
5. Taking this total, student writes a math problem on one of the spokes (eg. 7 is in the circle and students rolls a 3 and 5 which totals 8. The spoke equation would look like 7 x 8 = 56
6. Process continues until all spokes have an equation

Activity → Teachable 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 students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: equivalent fractions

Description: Equivalent fractions is a math term that describes two fractions that have the same value even though they are not represented with the same fraction. For example, if you have ½ of a pizza, you could also have $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$, or $\frac{5}{10}$. These are all equivalent fractions. No matter how you write it, you have ½ of all that there is. When you understand equivalent fractions it is easier to reduce fractions to the simplest terms.

Students review Vocabulary Notebook, add information as necessary.

Vocabulary Notebook Sample:

New Word	My Description
equivalent fractions	½ and $\frac{100}{200}$ are equivalent fractions
Personal Connection	**Drawing**
My sister and I had equivalent fractional parts of the pizza.	$\frac{4}{8} = \frac{2}{4} = \frac{1}{2}$

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 composition book.

Activity
Fractions

Division of Fractions

Division is the reciprocal of multiplication. When you are dividing fractions, set up is very important. Unlike addition and subtraction of fractions that need to be written vertically, the problems when you are dividing fractions are written horizontally: For example:

½ ÷ ¼ =

Unlike addition and fractions that require the denominators to be the same, in division that is not the case. It is perfectly okay for the denominators to be different.

In the division of fractions the operation is relatively simple as long as you remember to invert the fraction on the right, the divisor.

When you do that, you would change the sign from division to multiplication. In the division problem above, you would rewrite it to be:

$$\frac{1}{2} \times \frac{4}{1} =$$

Just like in multiplication you can simply multiply numerator times numerator, and denominator times denominator. So in the example above, 1 x 4 = 4, and 2 times 1 equals 2 so the answer would be $\frac{4}{2}$. In this particular example, the answer (product) would not be in its simplest terms, so you would not be finished. You would need to reduce the fraction to the whole number, 2.

One of the interesting things about dividing fractions is that you can do some things with the numerator and denominator prior to multiplying numerators and denominators, **BUT AFTER** you have inverted the divisor, to ensure that your answer will be in its simplest terms. For example:

$$\frac{3}{4} \div \frac{6}{7} =$$

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.

would become:

$$\frac{3}{4} \text{ x } \frac{7}{6} =$$

and give you a product of $\frac{21}{24}$. Obviously that would need to be reduced to $\frac{7}{8}$. which can be cumbersome. However, there is something that can happen to make that easier. If you look at the multiplication sign, there are two diagonal lines. One of the lines \ "connects" the 3 and the 6. 3 and 6 have a common divisor, 3. Three is divided be three which equals 1, and 6 can be divided by 3 and equals 2. So before we multiply the fraction, we are going to change the 3 to 1 and the 6 to 2. Sometimes there is no common divisor for a pair of numbers that are connected, but it is always good to check. The second part of the X, the /, "connects" the 4 and the 7. There is not common multiple for these two numbers. Once you have checked and changed where you could, you know have a problem that looks like this:

$$\frac{1}{4} \text{ x } \frac{7}{2} =$$

When you multiply this you find the answer of $\frac{7}{8}$ and you do not need to simplify as it is already done.
Work several problems with the students on the board so they understand the process.

Domino Fractions
Directions:

1. Divide students into pairs.
2. Give each pair as set of Double 9 Dominoes. Remove any domino that has zero spots on ½ of it.
3. Turn the dominoes face down.
4. Player 1 draws 2 dominoes, creates a division problem out of the two dominoes and solves the problem they have created.
5. If the answer is correct, player gets 1 point.
6. Player 2 continues play in the same way.
7. Game is over when one of the players has reached 15 points.

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?

Reflection (Confirm, Tweak, Aha!)

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.

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Domino Fractions 2
Focus:	Fractions

Materials:

White boards | Vocabulary Notebooks | Dominoes

Crayolas | Dice

Activity at the end of the lesson plan | Socks (use 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

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? What is the recipe for dividing fractions? Write several division of fractions on the board. Have students walk through the process. Remind them what it means to invert the divisor? Have them complete the problem and reduce the answer to the simplest terms.

Content (the "Meat")

Problem of the Day

During the winter a lot of people go to the snow. The people who visited the snow were asked to complete a survey of what activity they most like to do in the winter. Look at the table below and determine how you would share the data.

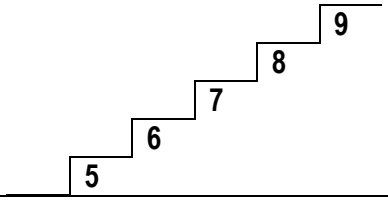
Activity	Number of People
Skiing	45
Snowboarding	60
Snowshoeing	50
Tubing	75

Create the documents you need to share your plan with the others.

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



Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

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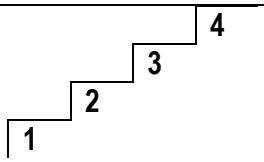

3. Have student roll 2 dice, total the pips and then multiply that number times each of the numbers in the ladder, writing the total to the right of the number

Math Vocabulary

Word for today: reduce

Description: Reduce is the term we use to discuss how to make fractions more manageable. If you have a fraction that is $\frac{150}{300}$, even though the numerator and the denominator are large, the fact is that you still have ½ of the whole thing. Understanding how much you have is easier when the fraction has been reduced to its lowest form. To reduce a fraction you do the same to both the numerator and the denominator which allows the relationship to stay in proportion.

Look in your notebook at your entry for the term "reduce". Add any information that you believe makes more sense.

Vocabulary Notebook Sample:

New Word	My Description
reduce	a fraction like $\frac{75}{100}$ is easier to understand when reduced to $\frac{3}{4}$.
Personal Connection	**Drawing**
If I eat 4 of the eight pieces of pizza, then I have eaten ½ of it.	$\frac{4}{8}$ can be reduced to 

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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.

Activity
Fractions

Division of Fractions

Division is the reciprocal of multiplication. When you are dividing fractions, set up is very important. Unlike addition and subtraction of fractions that need to be written vertically, the problems when you are dividing fractions are written horizontally: For example:

½ ÷ ¼ =

Unlike addition and fractions that require the denominators to be the same, in division that is not the case. It is perfectly okay for the denominators to be different.

In the division of fractions the operation is relatively simple as long as you remember to invert the fraction on the right, the divisor.

When you do that, you would change the sign from division to multiplication. In the division problem above, you would rewrite it to be:

$$\frac{1}{2} \times \frac{4}{1} =$$

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.

Just like in multiplication you can simply multiply numerator times numerator, and denominator times denominator. So in the example above, 1 x 4 = 4, and 2 times 1 equals 2 so the answer would be $\frac{4}{2}$. In this particular example, the answer (product) would not be in its simplest terms, so you would not be finished. You would need to reduce the fraction to the whole number, 2.

One of the interesting things about dividing fractions is that you can do some things with the numerator and denominator prior to multiplying numerators and denominators, **BUT AFTER** you have inverted the divisor, to ensure that your answer will be in its simplest terms. For example:

$$\frac{3}{4} \div \frac{6}{7} =$$

would become:

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and give you a product of $\frac{21}{24}$. Obviously that would need to be reduced to $\frac{7}{8}$. which can be cumbersome. However, there is something that can happen to make that easier. If you look at the multiplication sign, there are two diagonal lines. One of the lines \ "connects" the 3 and the 6. 3 and 6 have a common divisor, 3. Three is divided be three which equals 1, and 6 can be divided by 3 and equals 2. So before we multiply the fraction, we are going to change the 3 to 1 and the 6 to 2. Sometimes there is no common divisor for a pair of numbers that are connected, but it is always good to check. The second part of the X, the /, "connects" the 4 and the 7. There is not common multiple for these two numbers. Once you have checked and changed where you could, you know have a problem that looks like this:

$$\frac{1}{4} \times \frac{7}{2} =$$

When you multiply this you find the answer of $\frac{7}{8}$ and you do not need to simplify as it is already done.

Work several problems with the students on the board so they understand the process.

Domino Fractions

Directions:

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3. Turn the dominoes face down.
4. Player 1 draws 2 dominoes, creates a division problem out of the two dominoes and solves the problem they have created.
5. If the answer is correct, player gets 1 point.
6. Player 2 continues play in the same way.
7. Game is over when one of the players has reached 15 points.

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.

Reflection (Confirm, Tweak, Aha!)

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.

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Mixed Division
Focus:	Fractions

Materials:

White boards
Crayolas
Activities at the end of this lesson plan
Vocabulary Notebooks
Cards
Socks (use as 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

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? What is the recipe for dividing fractions? Write several division of fractions on the board. Have students walk through the process. Remind them what it means to invert the divisor? Have them complete the problem and reduce the answer to the simplest terms.

Content (the "Meat")

Problem of the Day

Find the average of the numbers written below. Tell how you know that the answer is correct.

56 65 61 58 75

Fact Practice

Target

1. Divide students into trios
2. Each trio needs a deck of cards without face cards and jokers
3. Place the cards face up in a TicTac Toe Grid
4. Turn up a 10th card which will be to the side and becomes the target number (aces count as 1)
5. Each player makes an equation with some or all of the numbers in the grid to equal the target number. Students may add, subtract, multiply or divide
6. Each card may be used only one time in the equation
7. 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.
8. After one player finishes his/her turn, then the cards taken are replaced by cards from the remaining deck
9. Player with the most cards at the end of the game win

Activity → Teachable 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 students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: mixed number

Description: Mixed number is a mathematical term that refers to the combination of a whole number and a fraction to describe a value. For example, 3 ½ is a mixed number. It tells you that there are 3 whole items and ½ of a fourth item.

Students should review their Vocabulary Notebook and have an accurate and informative entry for the term "mixed number".

Vocabulary Notebook Sample:

New Word	My Description
mixed number	A whole number and a fraction as one number
Personal Connection	**Drawing**
My little brother is 7 ½ years old.	

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 composition book.

Activity

Fractions

Division of Mixed Numbers

The division of mixed numbers is similar to the process of dividing simple fractions, with some additional preliminary steps.

Sometimes a mixed number will be a whole number and a fraction. For example:

5 ½ is a mixed number. In order to divide a fraction that is a mixed number it is important to first turn the mixed number into an improper fraction. To do that we multiply the denominator times the whole number and then add the numerator. In the example above, you would say 2 x 5 = 10 + 1 for a total of $\frac{11}{2}$. Now you can go through the division process that you have used when it is simply fractions, remembering to invert the divisor or the number on the right and then multiplying. Students should remember to look at numerator and the denominator connected by a piece of the X (\ or /), and then multiplying.

Work several of these problems on the board with students. Explain that the division of fractions is not hard, there are just lots of steps. Make a "recipe" card with the students and list the steps so students can remember the steps and the order.

Mixed Division

Directions:

1. Divide students into pairs.
2. Give each pair a Mixed Division card and Answer Game Board.
3. Working together, pair solves the problems on the Mixed Division Card, and then marks off the answers on the game board.
4. Activity is complete when all answers on the game board are marked off.

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.

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.

Reflection (Confirm, Tweak, Aha!)

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 and 5th Grade Mixed Division

$2 \div 2\frac{1}{3} =$ $3 \div 5\frac{1}{5} =$ $9 \div 3\frac{2}{3} =$

$8 \div 9\frac{1}{10} =$ $4 \div 5\frac{1}{8} =$ $6 \div 3\frac{1}{6} =$

$5 \div 6\frac{5}{8} =$ $3 \div 9\frac{1}{3} =$ $7 \div 1\frac{3}{4} =$

$7 \div 2\frac{3}{5} =$ $4 \div 2\frac{1}{2} =$ $7 \div 2\frac{1}{7} =$

4th – 5th Grade ;Mixed Number #2 Answer Card

$\frac{6}{7}$	$\frac{15}{26}$	$2\frac{5}{11}$
$\frac{80}{91}$	$1\frac{17}{19}$	$\frac{32}{41}$
$\frac{40}{53}$	$\frac{9}{28}$	4
$2\frac{9}{13}$	$1\frac{3}{5}$	$3\frac{4}{15}$

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grade
Lesson Title:	Mixed Division 2
Focus:	Fractions

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 fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What is meant by a mixed number? If you wanted to change a mixed number into a fraction, what type of a fraction would it become? Why would you want to work with a mixed fraction? How would converting a mixed number to an improper fraction be helpful in the division of fractions? When should you invert the divisor?

Content (the "Meat")

Problem of the Day

The answer to Julie's riddle is 177. First she subtracts 15 from the starting number. Then she added 24. Next she multiplied by 3. What number did Julie start with? How do you know?

Fact Practice

Product Hunt

1. Divide students into pairs
2. Each pair needs a Product Hunt sheet (attached to this lesson plans)
3. Player rolls two, 12-sided dice.
4. Player multiplies the two numbers.
5. If the product is not yet covered, then player may cover the product.
6. Next player repeats steps 1-3.
7. Winner is determined by who has the most numbers covered.

Activity → Teachable 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 students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: simplify

Description: Simplify is a math term that refers to writing a fraction or an equation in its easiest to understand form. When you look at a fraction, while $\frac{75}{150}$ is the same as ½ , it is just easier to get your head around the concept of ½ . When the fraction is written as ½ it has been simplified.

Create an entry of the term composite in the vocabulary notebook.

Vocabulary Notebook Sample:

New Word	My Description
simplify	Write things in is easiest to understand form.
Personal Connection	**Drawing**
My brother says he is 7 ¾ year old, I say he is almost 8.	$\frac{9}{18}$ is $\frac{1}{2}$

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 composition book.

Activity

Fractions

Division of Mixed Numbers

The division of mixed numbers is similar to the process of dividing simple fractions, with some additional preliminary steps.

Sometimes a mixed number will be a whole number and a fraction. For example:

5 ½ is a mixed number. In order to divide a fraction that is a mixed number it is important to first turn the mixed number into an improper fraction. To do that we multiply the denominator times the whole number and then add the numerator. In the example above, you would say 2 x 5 = 10 + 1 for a total of $\frac{11}{2}$. Now you can go through the division process that you have used when it is simply fractions, remembering to invert the divisor or the number on the right and then multiplying. Students should remember to look at numerator and the denominator connected by a piece of the X (\ or /), and then multiplying.

Work several of these problems on the board with students. Explain that the division of fractions is not hard, there are just lots of steps. Make a "recipe" card with the students and list the steps so students can remember the steps and the order.

Mixed Division

Directions:

1. Divide students into pairs.
2. Give each pair a Mixed Division card and Answer Game Board.
3. Working together, pair solves the problems on the Mixed Division Card, and then marks off the answers on the game board.
4. Activity is complete when all answers on the game board are marked off.

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.

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?

Reflection (Confirm, Tweak, Aha!)

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 and 5th Grade Mixed Division

$2 \div 2\frac{1}{3} =$ $3 \div 5\frac{1}{5} =$ $9 \div 3\frac{2}{3} =$

$8 \div 9\frac{1}{10} =$ $4 \div 5\frac{1}{8} =$ $6 \div 3\frac{1}{6} =$

$5 \div 6\frac{5}{8} =$ $3 \div 9\frac{1}{3} =$ $7 \div 1\frac{3}{4} =$

$7 \div 2\frac{3}{5} =$ $4 \div 2\frac{1}{2} =$ $7 \div 2\frac{1}{7} =$

4th – 5th Grade ;Mixed Number #2 Answer Card

$\frac{6}{7}$	$\frac{15}{26}$	$2\frac{5}{11}$
$\frac{80}{91}$	$1\frac{17}{19}$	$\frac{32}{41}$
$\frac{40}{53}$	$\frac{9}{28}$	4
$2\frac{9}{13}$	$1\frac{3}{5}$	$3\frac{4}{15}$

Consult 4 Kids Lesson Plans

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

Materials:

White boards
Vocabulary Notebooks
Crayolas
Decks of cards
Activity at the end of the lesson 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

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

Jill and Jack earned $156 at their neighborhood lemonade stand and divided the money evenly. This week, Jack worked along. He sold popcorn and earned three times as much as he did selling lemonade. How much did Megan earn in all for both weeks? How did you get the answer?

Fact Practice

Draw!

1. Divide students into pairs and give each pair a deck of cards
2. Remove the face cards and jokers from the deck of cards.
3. Shuffle the deck.
4. Decide who will go first.
5. First player draws two cards.
6. Student multiplies the cards.
7. Student writes his/her problem on the white board, writing a complete number sentence.
8. Students take turns drawing and creating problems.

Activity → Teachable 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 students in a "teach to learn" opportunity and have the student become the teacher.

Math Vocabulary

Word for Today: decimal

Description: The mathematical term, decimal is used to describe the place value of digits to

It is important to review academic math vocabulary often throughout the day.

the right of the decimal point, which looks like a period (.). The place value to the right of the decimal point begins with tenths, followed by hundredths, thousandths, ten-thousandths, hundred-thousandths, millionths and so on. When you are reading a number aloud, you say the word "and" to indicate the separation between whole numbers and parts of whole numbers.

Include the word decimal in the math Vocabulary Notebook.

Vocabulary Notebook Sample:

New Word	**My Description**
decimal	a symbol (.) that says everything to the right is less than a whole
Personal Connection	**Drawing**
When you write 25¢ you can write with a decimal point, $.25.	

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.

Activity
Decimals

Decimals

Just like there is place value to the left of the decimal point (ones, tens, hundreds, thousands, ten-thousands, hundred-thousands, millions, ten-millions, hundred-millions and so on, there is place value to the right of the decimal point as well. To the right of the decimal the place value mirrors that to the left with the exception of ones. The distinction is that the place values to the right have the letters "th" on the end. These place values are tenths, hundredths, thousandths, ten-thousandths, hundred-thousandths, and millionths. When you are reading the number, it is important to remember that the words "and" is used to mean the decimal point. We have bad habits around reading the number 613 as six-hundred and thirteen. This would imply that there is a decimal point between the 6 and the 13, and that the 13 should be labeled hundredths. Caution students to use the word "and" only when referring to the decimal point.

When you are reading a decimal, the position of the last number will determine what place is to be said. In the number
.3567, the 7 is in the ten-thousandths place so the number would be read: 3-thousdant five hundred sixty-seven ten-thousandths.

Practice several of these on the board with students so they can get the hang of it. Do not go past millionths. Discuss with students how a decimal is a part of a whole thing, so by the time you've divided something into millionths, you have a very small amount, unless you started with a really large number.

It is also important for students to know which decimal is larger and can indicate that by using the > and < sign. Have students practice this as well.

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.

Decimal Read **Directions:** 1. Divide students into pairs. 2. Give each pair a set of Decimal Read cards and Game Board. 3. Shuffle the cards and place them face down between the students. 4. Player 1 draws a card and either reads the decimal that is there or compares the two decimals as with larger than or less than. 5. Player 2 continues in the same way. 6. Game is over when all of the cards have been played.	

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?

Reflection (Confirm, Tweak, Aha!)

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 Decimal Read

0.64	0.6872	1.472	123.4
59.06	424.013	9.78215	1.643
651.3	82.013	0.0481	62.59
0.45 0.5	0.37 0.295	2.965 2.99	15.40 15.042
0.075 0.0740	0.8009 0.81	7.601 7.6010	11.643 11.75
0.053 0.04	1.904 19.03	4. 81 4.767	12.54 12.539

4th-5th Grade Decimal Read Game Board

sixty-four hundredths	six thousand eight hundred seventy-two ten thousandths	one and four hundred seventy-two thousandths	one-hundred twenty-three and four tenths
fifty-nine and six hundredths	four hundred twenty-four and thirteen thousandths	nine and seventy-eight thousand two hundred fifteen hundred-thousandths	one and six-hundred forty-three thousandths
six hundred fifty-one and three tenths	eighty-two and thousandths	four hundred eighty-one ten thousandths	sixty-two and fifty-nine hundredths
<	>	<	>
>	<	=	<
>	<	>	>

Consult 4 Kids Lesson Plans

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

Materials:

White boards Vocabulary Notebooks

Crayolas Double 9 Dominoes

Activity at the end of the lesson plan Socks (use for erasers)

Opening

State the objective

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

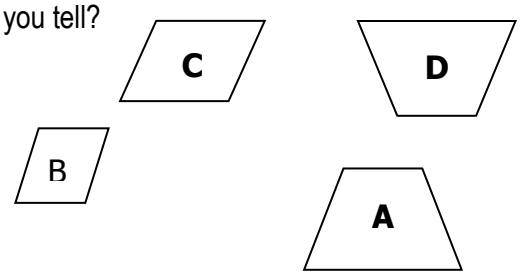
Gain prior knowledge by asking students the following questions

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? Write several numbers on the board that have decimal points. Have the students read them aloud.

Content (the "Meat")

Problem of the Day

Study the picture below. Which of the figures are congruent? Which are similar? How can you tell?



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

Activity → Teachable 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 students in a "teach to learn" opportunity and have the student become the teacher.

●● | ●●●	

Multiplication: 2 x 3 = 6

Math Vocabulary

Word for Today: decimal

Description: The mathematical term, decimal is used to describe the place value of digits to the right of the decimal point, which looks like a period (.). The place value to the right of the decimal point begins with tenths, followed by hundredths, thousandths, ten-thousandths, hundred-thousandths, millionths and so on. When you are reading a number aloud, you say the word "and" to indicate the separation between whole numbers and parts of whole numbers.

Include the word decimal in the math Vocabulary Notebook.

Vocabulary Notebook Sample:

New Word	My Description
decimal	a symbol (.) that says everything to the right is less than a whole
Personal Connection	**Drawing**
When you write 25¢ you can write with a decimal point, $.25.	

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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.

Activity
Decimals

Decimals

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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.

to be said. In the number .3567, the 7 is in the ten-thousandths place so the number would be read: 3-thousdant five hundred sixty-seven ten-thousandths.

Practice several of these on the board with students so they can get the hang of it. Do not go past millionths. Discuss with students how a decimal is a part of a whole thing, so by the time you've divided something into millionths, you have a very small amount, unless you started with a really large number.

It is also important for students to know which decimal is larger and can indicate that by using the > and < sign. Have students practice this as well.

Decimal Read

Directions:

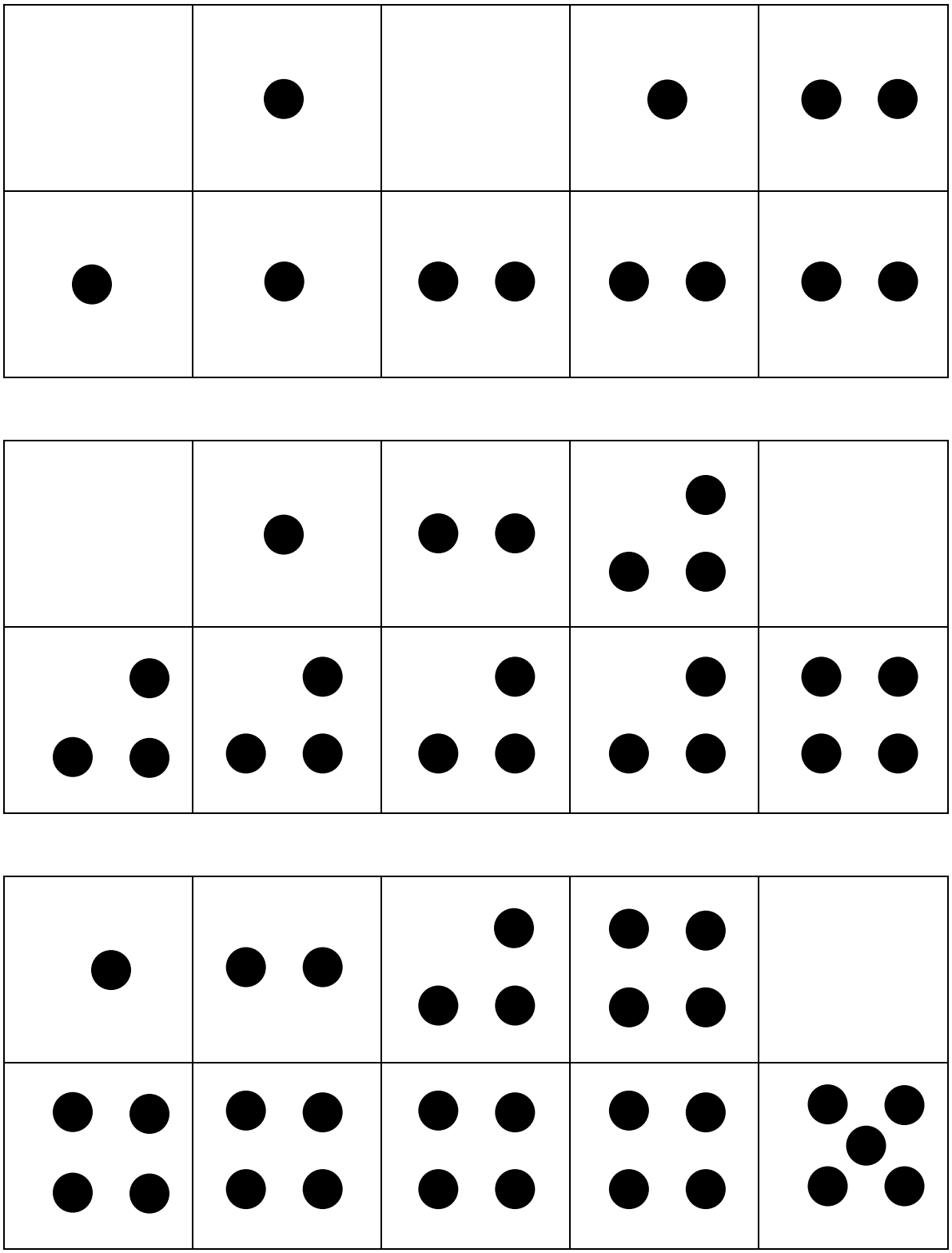
1. Divide students into pairs.
2. Give each pair a set of Decimal Read cards and Game Board.
3. Shuffle the cards and place them face down between the students.
4. Player 1 draws a card and either reads the decimal that is there or compares the two decimals as with larger than or less than.
5. Player 2 continues in the same way.
6. Game is over when all of the cards have been played.

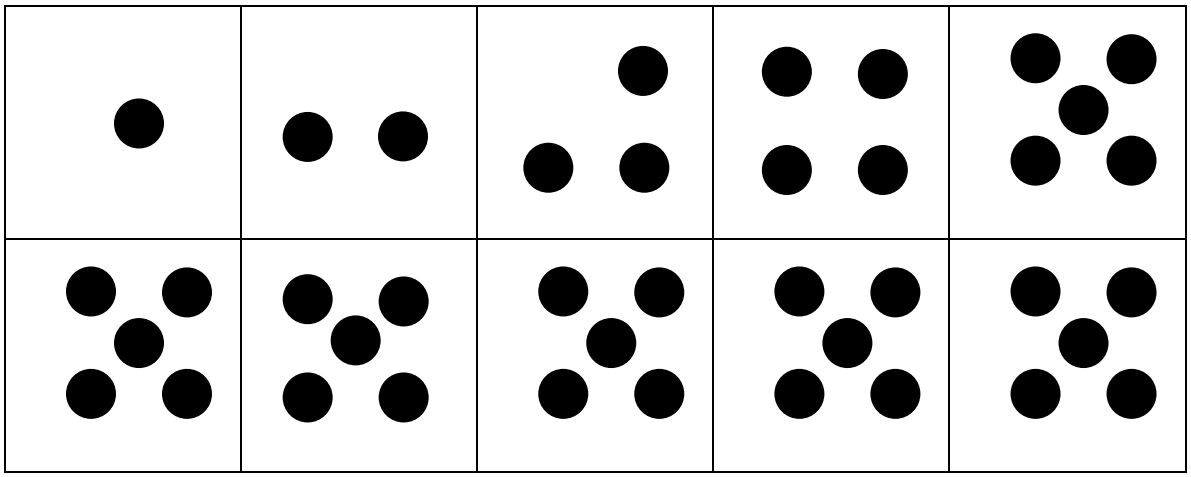
Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new"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

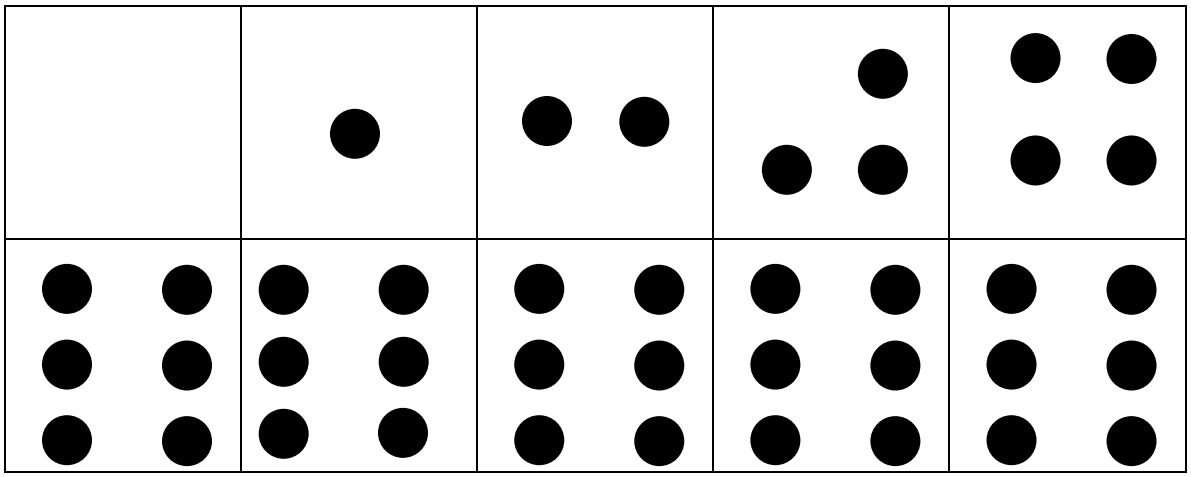
Reflection (Confirm, Tweak, Aha!)

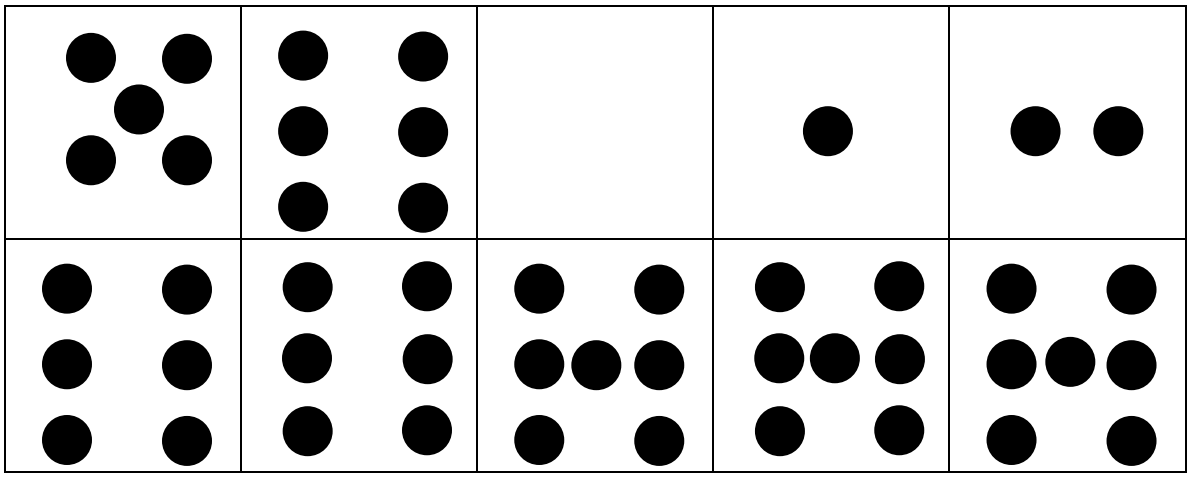
1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to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

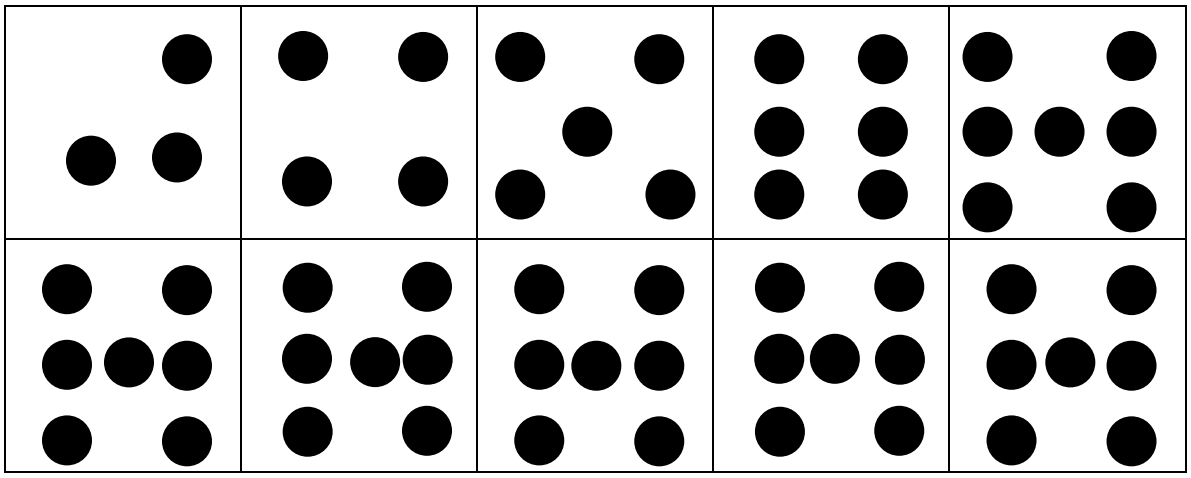
Double 9 Dominoes

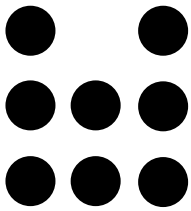
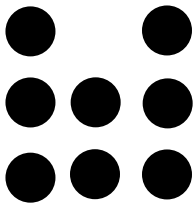
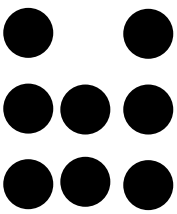
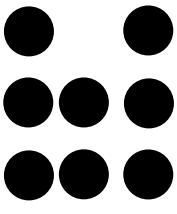
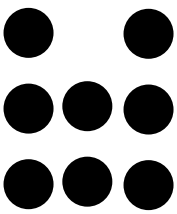


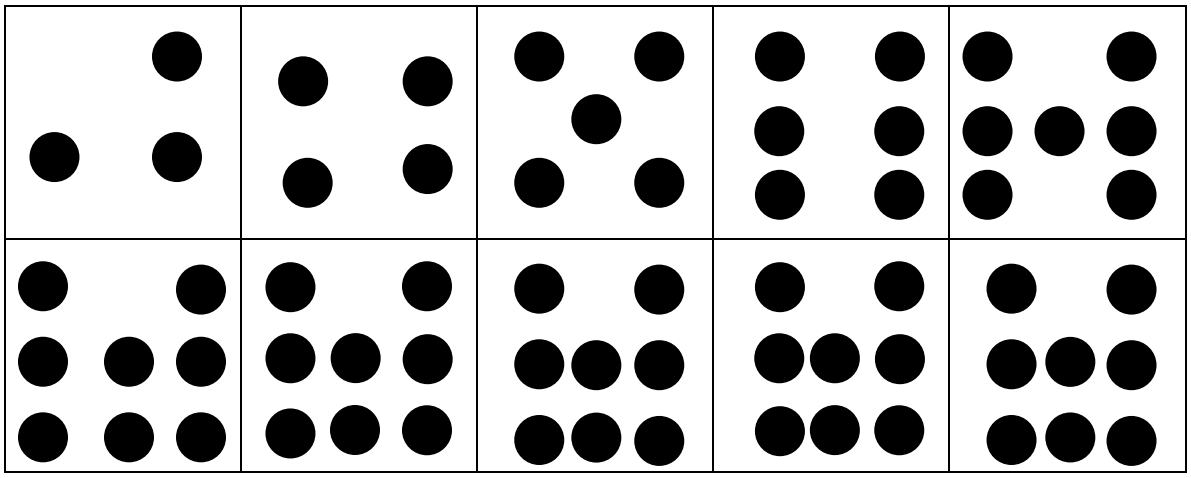


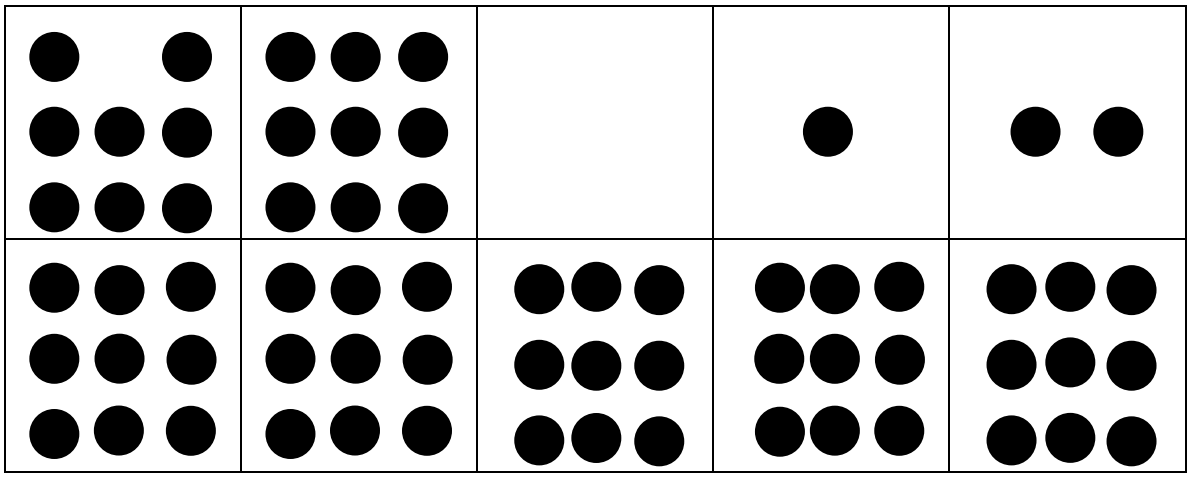


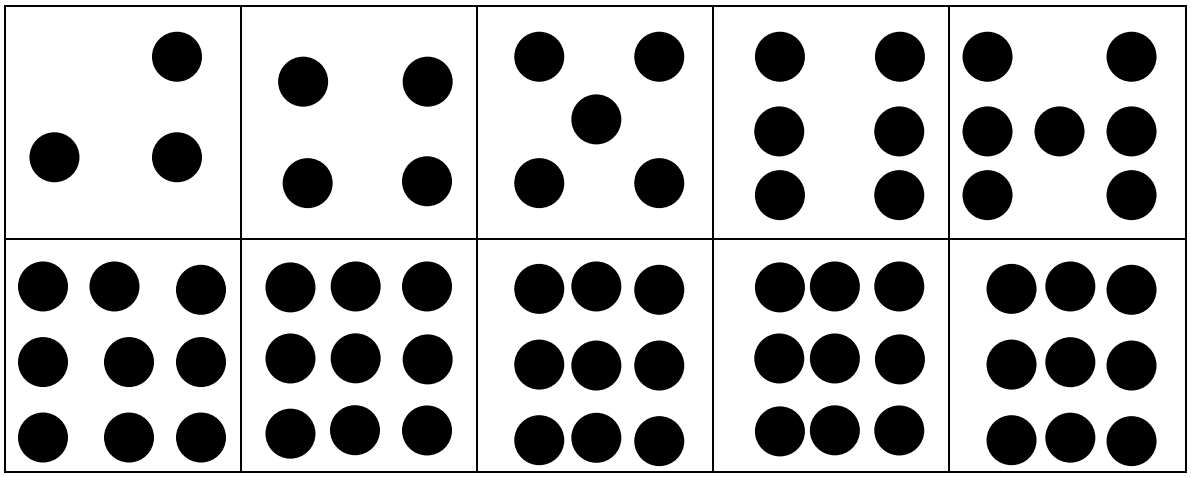




Do not use				
Do not use				







4th – 5th Grade Decimal Read

0.64	0.6872	1.472	123.4
59.06	424.013	9.78215	1.643
651.3	82.013	0.0481	62.59
0.45 0.5	0.37 0.295	2.965 2.99	15.40 15.042
0.075 0.0740	0.8009 0.81	7.601 7.6010	11.643 11.75
0.053 0.04	1.904 19.03	4. 81 4.767	12.54 12.539

4th-5th Grade Decimal Read Game Board

sixty-four hundredths	six thousand eight hundred seventy-two ten thousandths	one and four hundred seventy-two thousandths	one-hundred twenty-three and four tenths
fifty-nine and six hundredths	four hundred twenty-four and thirteen thousandths	nine and seventy-eight thousand two hundred fifteen hundred-thousandths	one and six-hundred forty-three thousandths
six hundred fifty-one and three tenths	eighty-two and thousandths	four hundred eighty-one ten thousandths	sixty-two and fifty-nine hundredths
<	>	<	>
>	<	=	<
>	<	>	>

Consult 4 Kids Lesson Plans

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

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
What do you know about adding decimals? What does it mean to align decimals? If one number has 3 digits to the right of the decimal point and you are adding another number that has only 2 digits to the right of the decimal, what will you do to align the decimals? What do you say when you read a number with a decimal point in it. What are the place values of the numbers to the right of the decimal point?

Content (the "Meat")	
Problem of the Day If you have two dollar bills, 6 quarters, 2 dimes and 2 nickels, do you have enough money to buy a $3.50 pencil box?	***Activity → Teachable 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 students in a "teach to learn" opportunity and have the student become the teacher.
Fact Practice **Fact Family** A 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 X 4 = 36 4 X 9 = 36 36 ÷ 4 = 9 36 ÷ 9 = 4 Students should roll 2 dice and create a Fact Family by writing the members of the family on the white board. Student should roll a total of 5 times, creating 5 Fact Families	
Math Vocabulary **Word for Today: align decimals**	It is important to review academic math vocabulary often throughout the day.

Consult 4 Kids Lesson Plans

Description: The term "align decimals" refers to the process of lining up decimals if you are going to add or subtract. This means that the decimals must be right under one another in a vertical set-up of the problem. Aligned decimals look this way:

.546
+12.320

To align the decimals you can add zeros to the right of the last digit. Students should enter the term in Vocabulary Notebook.

Vocabulary Notebook Sample:

New Word	My Description
align decimals	vertical alignment of the decimal point
Personal Connection	**Drawing**
I will write the numbers .54 and .34 with the decimals aligned so I can add.	.345 +.261

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.

Activity

Decimals

Addition of Decimals

Adding decimals is exactly like adding whole numbers with one exception. It is essential that you line up decimal point. To do this the problems must be written vertically. So if the problem is 3.5 + .456 + 23.47 = it is important to rewrite the problem vertically with the decimal aligned. It would look like this:

3.500
.456
23.470

As you can see, zeros have been added to the end of the numbers to be sure that the decimal points do line up. Adding zeros to the end of a number to the right of a decimal point will not change its value. If you were to eliminate the extra zeros and still align the decimal point, that would be fine, but for students, adding the zeros is usually helpful. In this problem, the next step would be to locate the decimal point in the answer and then add normally. 0 + 6 + 0 = 6; 0 + 5 + 7 = 12, write the 2 and carry the 1; 5 + 4 + 4 + 1 = 14, write the 4,carry the 1;3 + 3 + 1 = 7; and s plus nothing = 2. So the answer would be 27.426 or twenty-seven and four hundred twenty-six thousandths.

Work several of these problems on the board with students. Create a recipe checklist so the student will not forget one of the steps. Bring students up to work through the process. When students have an understanding of the process they are ready to play the game.

Adding With Decimals

Directions:

1. Divide students into pairs.
2. Give each pair an Adding With Decimals card and game board. Also give students a white board.
3. Shuffle the cards and place face down between the students.

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.

4. Player 1 draws a card, completes the problem (using the white board), and locates the correct answer on the game board. Player marks the answer with a token. 5. Player 2 continues in the same way. 6. Game is over when all cards have been played.	

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?

Reflection (Confirm, Tweak, Aha!)

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 Adding Decimals Cards (Please cut apart)

0.264 + 0.875 =	36.88 + 52.09 =	1.64 + 3.54 =	1.37 + 6.39 =
0.496 + 0.785 =	52.91 + 72.68 =	748.2 + 9.5 =	2.96 + 6.30 =
2.95 + 16.3 =	9.48 + 7.6 =	5.6421 + 2.2538 =	2.5 + 3.04 =
2.09 + 3.08 + 8 =	3.859 + 4.96 + 0.426 =	6.38 + 3.9 +0.426 =	4.95 + 6 + 1.8 =

4th – 5th Grade Adding Decimals Answer Card

1.138	88.97	5.17	7.76
1.281	125.59	757.7	9.26
19.25	17.08	7.8959	5.54
13.17	11.819	10.706	12.75

Consult 4 Kids Lesson Plans

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

Materials:

White boards Vocabulary Notebooks

Crayolas Decks of cards

Activity at the end of the lesson 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
What do you know about adding decimals? What does it mean to align decimals? If one number has 3 digits to the right of the decimal point and you are adding another number that has only 2 digits to the right of the decimal, what will you do to align the decimals? What do you say when you read a number with a decimal point in it. What are the place values of the numbers to the right of the decimal point? Write several decimal addition problems on the board horizontally and have students come up and write the problems vertically, aligning the decimal points and then completing the addition.

Content (the "Meat")	
Problem of the Day If Linda knows how to multiply 3 digits by 2 digits, how would she explain how to do the problem step by step to someone else?	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly.
Fact Practice **Multiples** 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 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.	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 Vocabulary	It is important to review academic math vocabulary

Word for Today: align decimals

Description: The term "align decimals" refers to the process of lining up decimals if you are going to add or subtract. This means that the decimals must be right under one another in a vertical set-up of the problem. Aligned decimals look this way:

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+12.320

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Vocabulary Notebook Sample:

New Word	My Description
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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.

Activity

Decimals

Addition of Decimals

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Adding With Decimals

Directions:

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2. Give each pair an Adding With Decimals card and game board. Also give students a white board.

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.

3. Shuffle the cards and place face down between the students. 4. Player 1 draws a card, completes the problem (using the white board), and locates the correct answer on the game board. Player marks the answer with a token. 5. Player 2 continues in the same way. 6. Game is over when all cards have been played.	

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?

Reflection (Confirm, Tweak, Aha!)

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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 Adding Decimals Cards (Please cut apart)

0.264 + 0.875 =	36.88 + 52.09 =	1.64 + 3.54 =	1.37 + 6.39 =
0.496 + 0.785 =	52.91 + 72.68 =	748.2 + 9.5 =	2.96 + 6.30 =
2.95 + 16.3 =	9.48 + 7.6 =	5.6421 + 2.2538 =	2.5 + 3.04 =
2.09 + 3.08 + 8 =	3.859 + 4.96 + 0.426 =	6.38 + 3.9 +0.426 =	4.95 + 6 + 1.8 =

4th – 5th Grade Adding Decimals Answer Card

1.138	88.97	5.17	7.76
1.281	125.59	757.7	9.26
19.25	17.08	7.8959	5.54
13.17	11.819	10.706	12.75

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grade
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 day. Students should select from the following list of activities: **Dividing Fractions** **Domino Fractions** **Mixed Division** **Decimal Read** **Adding With Decimals**

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

Reflection (Confirm, Tweak, Aha!)

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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