

Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grade <b>s</b>
Lesson Title:	Making A Whole
Focus:	Fractions

Materials:	
White boards	Vocabulary Notebooks
Crayolas	dice
Socks	decks of cards (jokers and face cards removed)

Opening

### State the objective

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

Gain prior knowledge by asking students the following questions

What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?

How can you tell that you are on the right track for solving the problem?

What are the basic operations that you need to utilize during math?

Content (the "Meat")	
Problem of the Day Business made a profit of \$240.80. Sue keeps ½ of the profits. She give each of the 5 people who work for her 20% of the other ½ of the profits. How much does each person get?	*Activity → Teachable Moment(s) <i>throughout</i> During the lesson check in with students repeatedly.
<ul> <li>Fact Practice</li> <li>Spokes on a Wheel <ol> <li>Divide students into pairs.</li> <li>On a white board, student draws a small circle with 9 spokes coming out of it. (should look like a bicycle tire)</li> <li>Have students choose to put a 6, 7 or 8 in the center circle.</li> <li>Student rolls two dice and adds the pips (dots).</li> <li>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</li> <li>Process continues until all spokes have an equation.</li> </ol> </li> </ul>	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
Word for Today: percentage	academic math vocabulary
<b>Description:</b> Percentage refers to a fraction when the assumption is made that the	Onen infoughout the day
denominator is 100. So if 100% is whole, 57% indicates that 57 out of the 100 has been found, or correct, or is being used. % is the symbol for percent. Percent fives you an	complete the vocabulary notebook for each word.



opportunity to compare things that do not necessarily have a denominator of 100 to begin with, but when translated into percentage, this allows the comparison to be made. Students complete the Vocabulary Notebook Vocabulary Notebook Sample:		When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out
New Word	My Description	an equation.)
percentage	A way to compare by telling how many out of a hundred	Vocabulary Notebooks can be made from ½ of a composition book.
Personal Connection	Drawing	
I was happy that I had 82% on my social studies test.	82%	
A	ctivity	Focus on having young
Making A Whole         Explain to students that we are going to use cards to create fractions that can be added together to equal a whole number.         Demonstrate: Bring students up to the front as volunteers and show them how to play the game, Making A Whole as described below. Be sure that students can play the game effectively and then have them play with a partner.		small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.
Materials: Deck of cards with jokers and fa	ce cards removed White board	
<ol> <li>Directions:         <ol> <li>Shuffle the deck</li> <li>Deal 6 cards to each player</li> <li>Player one arranges the cards, if powhole number. For example: 3/6 +</li> <li>Player that creates a problem that townake a fraction, he draws a card and</li> <li>Second player does the same.</li> <li>Play continues until one player has</li> </ol> </li> </ol>	ssible to create two fractions that will total a $\frac{1}{2} = 1$ otals 1 receives one point. If he/she cannot d discards one that he/she currently has. a total of 10 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!)
  - Ask students to think about what they did today in math.
  - Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
  - 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)
  - Ask them to comment on something (if anything) they have learned today that was brand new to them.



Component:	Math
Grade Level:	4 <sup>th</sup> - 5 <sup>th</sup> Grade <b>s</b>
Lesson Title:	Making A Whole
Focus:	Fractions

Materials:		
White boards	Vocabulary Notebooks	
Crayolas	Decks of cards	Socks

Opening		
State the objective		
Today we are going to practice using our math vocabulary and skills.		
Gain prior knowledge by asking students the following questions		
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?		
How can you tell that you are on the right track for solving the problem?		
What are the basic operations that you need to utilize during math?		





percentage. Remind students of the symbol that represents the word percentage (%). Make several drawing on the board to show different percentages and how to correctly write the number and the symbol ex. 74%, 89%, 94% etc. Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes. Vocabulary Notebook Sample:		Complete the Vocabulary notebook for each word. When possible, have students experience the word. (Ex. 4 students creating a right angle.
New Word percentage	My Description A part of the whole related to 100 parts in the whole	multiple students acting out an equation.) Vocabulary Notebooks can be made from ½ of a composition book.
Personal Connection	Drawing	
I got 100% on my spelling test.		
Activity         Making A Whole         Review with the students how to play the game that they learned how to play yesterday.         Be sure that students can play successfully before having them play on their own.         Materials: Deck of cards with jokers and face cards removed White board         Directions:         1. Shuffle the deck         2. Deal 6 cards to each player         3. Player one arranges the cards, if possible to create two fractions that will total a whole number. For example: $3/6 + \frac{1}{2} = 1$ 4. Player that creates a problem that totals 1 receives one point. If he/she cannot make a fraction, he draws a card and discards one that he/she currently has.         5. Second player does the same.         6. Play continues until one player has a total of 10 points.		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.



C	losing
R	eview
Say:	
<ul> <li>Please recap what we did today.</li> </ul>	
<ul> <li>Did we achieve our objectives?</li> </ul>	
D	ebrief
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 ge	etting ready to do this activity?

### Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)
- Ask them to comment on something (if anything) they have learned today that was brand new to them>



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Fraction War
Focus:	Fractions

Materials:	
White boards	Vocabulary Notebooks
Crayolas	decks of cards
Socks	Fraction Cards (attached)

Opening		
State the objective		
Today we are going to practice using our math vocabulary and skills.		
Gain prior knowledge by asking students the following questions		
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?		
How can you tell that you are on the right track for solving the problem?		
What are the basic operations that you need to utilize during math?		

Content (the "Meat")			
Problem of the Day	*Activity $\rightarrow$ Teachable		
Write a fraction that shows the number of vowels in the word:	During the lesson check in with students repeatedly.		
thermometer	Check in about what is happening and what they are		
Fact Practice	thinking.		
Draw!	Take advantage of any teachable moments.		
1. Divide students into pairs and give each pair a deck of cards.	Stop the class and focus on a		
2. Remove the face cards and jokers from the deck of cards.	student's key learning or		
3. Shuffle the deck.	understanding. Ask open-		
4. Decide who will go first.	ended questions to		
5. First player draws two cards.	the group is thinking		
6. Student multiplies the cards.	When possible ongogo		
<ol> <li>Student writes his/her problem on the white board, writing a complete number sentence.</li> </ol>	students in a "teach to learn"		
8. Students take turns drawing and creating problems.	student become the teacher.		
Math Vocabulary	It is important to review		
Word for Today: fraction	academic math vocabulary		
<b>Description:</b> A fraction is a number that is less than one and has two parts a numerator and often throughout the day.			
a denominator. The denominator tells you have many parts you have to have in order to have Complete the Vocabulary			
the whole thing. If the denominator is 6, then the whole has been divided into 6 parts, if the notebook for each word.			



denominator is 9, then the whole has been divise many of parts of the whole you have. So if the six parts, a numerator of 5 tells me that I have 9 us to divide one thing into equal parts. Have students complete his/her Vocabulary Not Vocabulary Notebook Sample:	When possible, have students experience the word. (Ex. 4 students creating a right angle, multiple students acting out an equation.)	
New Word Fraction	My Description A number that represent less than a whole	Vocabulary Notebooks can be made from ½ of a composition book.
Personal Connection I was able to get only a fraction of the work done.	Drawing	
Activity Fraction War Demonstrate: Show the class how to play the game by bringing up volunteers to demonstrate how to play the game following the directions below. Materials: Fraction addition and subtraction cards. Directions: 1. Shuffle the cards and divide them equally between the 2 players 2. Players turn the top card over simultaneously 3. Player adds or subtracts the problem on the top card and calls out the answer. 4. Player with the highest value collects all of the cards 5. In the case of a tie, a next card is played.		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.		
<ul> <li>Did we achieve our objectives?</li> </ul>		
	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!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)



- 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)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.



	Fraction	n Cards	
$\frac{1}{2} + \frac{1}{2}$	$\frac{1}{4} + \frac{1}{4}$	$\frac{1}{4} + \frac{2}{4}$	$\frac{2}{4} + \frac{1}{4}$
$\frac{1}{4} + \frac{3}{4}$	$\frac{1}{8} + \frac{1}{8}$	$\frac{1}{8} + \frac{2}{8}$	$\frac{1}{8} + \frac{3}{8}$
$\frac{1}{8} + \frac{5}{8}$	$\frac{2}{8} + \frac{1}{8}$	$\frac{2}{8} + \frac{2}{8}$	$\frac{2}{8} + \frac{3}{8}$
$\frac{2}{8} + \frac{4}{8}$	$\frac{2}{8} + \frac{6}{8}$	$\frac{3}{8} + \frac{1}{8}$	$\frac{3}{8} + \frac{2}{8}$
$\frac{3}{8} + \frac{3}{8}$	$\frac{3}{8} + \frac{4}{8}$	$\frac{3}{8} + \frac{5}{8}$	$\frac{4}{8} + \frac{1}{8}$
$\frac{4}{8} + \frac{4}{8}$	$\frac{5}{8} + \frac{2}{8}$	$\frac{-6}{-8} + \frac{1}{-8}$	$\frac{7}{8} + \frac{1}{8}$
$\frac{2}{2} - \frac{1}{2}$	$\frac{3}{4} - \frac{1}{4}$	$\frac{3}{4} - \frac{2}{4}$	$\frac{4}{4} - \frac{1}{4}$
$\frac{8}{8} - \frac{1}{8}$	$\frac{8}{8} - \frac{2}{8}$	$\frac{8}{8} - \frac{3}{8}$	<u>8</u> - <u>5</u> 8 - <u>8</u>
$\frac{7}{8} - \frac{1}{8}$	$\frac{7}{8} - \frac{3}{8}$	$\frac{7}{8} - \frac{4}{8}$	$\frac{7}{8} - \frac{6}{8}$



$\frac{-6}{8} - \frac{1}{8}$	$\frac{-6}{8} - \frac{2}{8}$	$\frac{6}{8} - \frac{5}{8}$	$\frac{-6}{8} - \frac{5}{8}$
$\frac{5}{8} - \frac{1}{8}$	$\frac{5}{8} - \frac{3}{8}$	$\frac{5}{8} - \frac{4}{8}$	$\frac{4}{8} - \frac{1}{8}$
$\frac{4}{8} - \frac{2}{8}$	$\frac{3}{8} - \frac{1}{8}$	$\frac{3}{8} - \frac{2}{8}$	$\frac{2}{8} - \frac{1}{8}$



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Fraction War Cards
Focus:	Fractions

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Fraction War Cards from yesterday
Socks	Double 9 Dominoes

Opening	
State the objective	

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

### Gain prior knowledge by asking students the following questions

What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?

How can you tell that you are on the right track for solving the problem?

What are the basic operations that you need to utilize during math?

Content (the "Meat")	
Problem of the Day The kids are going on a field trip. From Mrs. Johnson's room 3.4 bring lunch from home. In Mr. Martin's class, % bring lunches from home. If each class has 32 students, how many kids	*Activity → Teachable Moment(s) <i>throughout</i> During the lesson check in
brought lunch from home?	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 durilisate on part stack and if	Check in about what is happening and what they are thinking.
possible, laminate for use again in the future.	teachable moments.
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	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	It is important to review
Word for Today: fraction	academic math vocabulary often throughout the day.
dice, roll a denominator using two dice (adding the numbers together) and 1 die for the numerator. Roll several fractions and discuss how the denominator informs you about the	Complete the Vocabulary notebook for each word.
number of pieces the whole was split into, and the numerator tells you how many of those	When possible, have



pieces you have.		students experience the
Have students share the Vocabulary Noteboo	word. (Ex. 4 students creating a right angle, multiple students acting out	
Vocabulary Notebook Sample:		
New Word	My Description	an equation.)
Fraction	A number that is less than one whole, has two numbers, a numerator on top and a denominator on the bottom.	be made from ½ of a composition book.
Personal Connection	Drawing	
What fraction of the pizza will you eat?		
Activity		Focus on having young
Fraction War		people "compete" in pairs
<b>Review:</b> Review the game from yesterday. Ask students how to play the game and what sort of things could "trip" a person up.		game is mastered you can
Play the game. Materials: Fraction addition and subtraction cards Directions:		Homework Is Complete" center.
<ol> <li>Shuffle the cards and divide them equally between the 2 players.</li> <li>Discuss turn the ten card over simultaneously.</li> </ol>		
<ol> <li>Players turn the top Card over simultaneously.</li> <li>Player adds or subtracts the problem on the top card and calls out the answer</li> </ol>		
<ol> <li>Player with the highest value collects all of the cards.</li> </ol>		
5. In the case of a tie, a next card is played.		

C	Closing	
F	Review	
Say:		
• Please recap what we did today.		
<ul> <li>Did we achieve our objectives?</li> </ul>		
[	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 get	ting ready to do this activity?	

# Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)

• Ask them to comment on something (if anything) they have learned today that was brand new to them>



### **Double 9 Dominoes**

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# Do not use



Do not use









Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Decimal Bingo
Focus:	Decimals

Materials:			
White boards	Decks of cards	deck of cards for each pair	
Crayolas	Vocabulary Notebooks		
Socks	Bingo Cards		

Opening			
State the objective			
Today we are going to practice using our math vocabulary and skills.			
Gain prior knowledge by asking students the following questions			
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?			
How can you tell that you are on the right track for solving the problem?			
What are the basic operations that you need to utilize during math?			

Content (the "Meat")	
<ul> <li>Problem of the Day John and Jorge are going to an amusement park. They plan to eat lunch at the park as well as enjoy the rides. It will cost \$13.00 for admission, \$2.50 for a hot dog, and a soda will cost \$1.75. John says the will only need to take \$16.00. Jorge says they need to each take \$20.00. Who do you agree with and how did you decide? Fact Practice Multiplication War <ul> <li>Divide students into pairs. Give each pair a deck of cards without face cards and jokers.</li> <li>Shuffle the deck and divide the cards evenly between the two players.</li> <li>On go, the players turn over the cards at the same time.</li> <li>Students multiply the 2 numbers that have been turned up.</li> <li>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.</li> <li>At the end of round, students may reshuffle the pile of cards that they have.</li> <li>Play can continue until one player has all cards or time has called.</li> </ul></li></ul>	*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: A decimal is a period that separates whole numbers from numbers that represent a part of a whole. The most common place that we find a decimal is in the writing	It is important to review academic math vocabulary often throughout the day Complete the Vocabulary notebook for each word.



of dollars and cents. To write money, start w there, for example, \$3. Second step is to put we are not looking at "cents", the kind that ca students that pennies, nickels, dimes, quarte dollar. If I have 3 dollars, 1 quarter and 1 din chances to make this new information work. Vocabulary Notebook Sample:	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	A mathematical "period" that separates whole number from a part of the whole	
Personal Connection	Drawing	
I use a decimal point to write 4.25 which says I have 4 whole things and .25 of a fifth one.	4-25	
Ac	Focus on baying young	
	avity	Tocus of having young
Decime Demonstrate how to set up the Bingo Card I board. New bingo cards can be made each to card on the board and demonstrate exactly h	al Bingo by using the answers randomly on the bingo time the game is played. Draw a large Bingo how to set up the card.	people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center
Decime Demonstrate how to set up the Bingo Card I board. New bingo cards can be made each to card on the board and demonstrate exactly he Decimal Bingo	al Bingo by using the answers randomly on the bingo time the game is played. Draw a large Bingo how to set up the card.	people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center
Decima Demonstrate how to set up the Bingo Card B board. New bingo cards can be made each to card on the board and demonstrate exactly he Decimal Bingo Materials: Bingo Cards, Bingo answer shee	al Bingo by using the answers randomly on the bingo time the game is played. Draw a large Bingo how to set up the card.	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" player getting ready to play this game so he/she could get all the blocks are completed.

### Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.



# Bingo Cards

В	N	G	0
	Free		



### Problem and Answer Cards

0.5	0.1	0.3	0.6	0.4
<u>+0.5</u>	<u>+0.6</u>	<u>+0.5</u>	<u>+0.9</u>	<u>+0.2</u>
45.3	82.3	17.3	54.3	14.6
<u>+10.2</u>	<u>+101.4</u>	<u>+22.8</u>	<u>+45.2</u>	<u>+25.6</u>
2.6	118.1	12.3	7.5	33.2
<u>+24.3</u>	<u>+67.6</u>	<u>+54.1</u>	<u>+29.4</u>	<u>+32.2</u>
1.5	63.4	7.5	108.2	1.2
<u>-0.8</u>	<u>-57.8</u>	<u>-3.6</u>	<u>-94.7</u>	<u>-0.6</u>
25.1	99.1	2.1	480.3	79.4
<u>-16.4</u>	<u>-24.9</u>	<u>-0.9</u>	<u>-358.9</u>	<u>-5.9</u>
1.2	826.1	512.4	3.5	50.3
<u>-0.5</u>	<u>-745.9</u>	<u>-460.8</u>	<u>-1.6</u>	<u>-19.4</u>

Answer Cards



1.0	0.7	0.8	1.5	0.6
55.5	183.7	40.1	99.5	40.2
26.9	185.7	66.4	36.9	65.4
0.7	5.6	3.9	13.5	0.6
8.7	74.2	1.2	121.4	73.5
0.7	80.2	51.6	1.9	30.9



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Decimal Bingo 2
Focus:	Decimals

Materials:		
White boards	Decks of cards	Socks
Crayolas	Vocabulary Notebooks	Decimal Bingo materials from yesterday

Opening	
State the objective	
Today we are going to practice using our math vocabulary and skills.	
Gain prior knowledge by asking students the following questions	
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?	
How can you tell that you are on the right track for solving the problem?	
What are the basic operations that you need to utilize during math?	

Content (the "Meat")	
Problem of the Day Cupcakes, decorated cookies, donuts, and chocolate chip cookies are sold at the corner	*Activity → Teachable Moment(s) <i>throughout</i>
bakery. The prices are \$2.50, \$1.75, \$1.90, and \$1.15. How much does each item cost.	During the lesson check in with students repeatedly.
Chocolate chip cookies cost more than donuts	Check in about what is
Decorated cookies cost the most	happening and what they are
Neither the donuts or the cupcakes cost \$1.75	thinking.
Fact Practice	l ake advantage of any teachable moments.
Fore-header	Stop the class and focus on a
<ol> <li>Divide students into trios. Give each trio a deck of cards without face cards and jokers.</li> </ol>	student's key learning or understanding. Ask open-
<ol> <li>Shuffle the deck and give all of the cards to the referee who will be "judging" the contest</li> </ol>	ended questions to determine what the rest of
<ol> <li>On go, players are each handed a card by the referee and WITHOUT looking, put the card face out on his/her forehead.</li> </ol>	When possible, engage
4. The referee multiplies the two numbers together and states the answer.	students in a "teach to tearn"
<ol> <li>Each player looks at the other person's exposed number and names his/her own number.</li> </ol>	student become the teacher.
6. Person who wins (accuracy and time), collects both cards.	
7. Play continues until all cards are gone.	
<ol> <li>Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee.</li> </ol>	
Math Vocabulary	It is important to review



Word for today: decimalDescription: Review the information that you shared with students yesterday. Explain to students that numbers written to the right of a decimal point are labeled tenths, hundredths, thousandths, ten-thousandths, and hundred-thousandths. Explain that the letters "th" share the information that it is a decimal. Also share that when reading these number, the decimal point is read by saying the word "and". Have students share the Vocabulary Notebooks in pairs, discussing the word, making any additions or changes. Vocabulary Notebook Sample:New WordMy Description A point that looks like a period that separates a whole number from a part of a whole		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.
Personal Connection I use a decimal point when I write information about money: \$14.67.	Drawing	
Activity Decimal Bingo Review yesterday's game as you will play it again today. You will use the same material as yesterday. Decimal Bingo Materials: Bingo Cards, Bingo answer sheet, tokens or paper to mark spaces		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.
<ol> <li>Directions:         <ol> <li>Student makes Bingo Card by placing the answers randomly on his/her card.</li> <li>Leader draws a problem card, writes the problem on the board.</li> <li>Students find the answer to the problem and then if that answer is one that they selected, then that number is covered.</li> <li>Winner calls Bingo when they have.</li> </ol> </li> </ol>		



Closing	
Review	
Sav:	
Please recap what we did today	
<ul> <li>Did we achieve our objectives?</li> </ul>	
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!)	
<ul> <li>Ask students to think about what they did today in math.</li> </ul>	
• Ask them to comment on what they did today was something they already knew how to do. (Confirmation)	
<ul> <li>Ask them to comment on what they did today that was like something they had done before except in one</li> </ul>	
particular way which was new to them (Tweak)	
<ul> <li>Ask them to comment on something (if anything) they have learned today that was brand new to them</li> </ul>	



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Dueling Decimals
Focus:	Decimals

White boards Voca	bulary Notebooks
Crayolas 6-side	ed dice; 12-sided dice
Socks decks	s of cards

Opening	
State the objective	
Today we are going to practice using our math vocabulary and skills.	
Gain prior knowledge by asking students the following questions	
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?	
How can you tell that you are on the right track for solving the problem?	
What are the basic operations that you need to utilize during math?	

Content (the "Meat")	
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
Julie believes that the answer to the problem below written in its simplest form if 6/9.	During the lesson check in with students repeatedly.
5/9 + 1/9 =	Check in about what is happening and what they are
Is she correct? Why or why not?	thinking.
Fact Practice	Take advantage of any
Fact Family	teachable moments.
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	Stop the class and focus on a student's key learning or
members:	understanding. Ask open-
$9 \times 4 = 36$	ended questions to
$4 \times 9 = 50$ 36 ÷ 4 = 9	the group is thinking
$36 \div 9 = 4$	When possible engage
	students in a "teach to learn"
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.	opportunity and have the student become the teacher.
Math Vocabulary	It is important to review
Word for Today: simplest form	academic math vocabulary
<b>Description:</b> Simplest form is a term we use when we talk about fractions. When a fraction is	often throughout the day.
written in its simplest form there is no common number that can be divided into the numerator	Complete the Vocabulary



and/or the denominator with the exception however 2/4 is not, because both the nume Have students begin with a whole piece of will divide the paper into (not more than 12 pieces. This number will become the deno pieces for the numerator. Record the fract Have students share the Vocabulary Notek additions or changes. Vocabulary Notebook Sample: New Word Simplest form	of 1. For example ½ is in its simplest form, erator and the denominator can be divided by 2. paper. Have them decide how many pieces they ). Then have them divide the paper into that many ominator. Have them select various numbers of ion, written in the simplest form. books in pairs, discussing the word, making any <b>My Description</b> Refers to writing numbers in its most simple form, making it easier for other to understand what we are thinking	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 When I am finished adding fractions I want to put the answer into its simplest form.	Drawing <b>200/400 is 1/2</b>	
Duel Demonstrate how to play this game by as them the rules of the game as written below Materials: Deck of cards without tens, jok 2, 3, and 4 of hearts from the deck and hol Directions: The object of this game is to create the larg Shuffle the remaining cards. Player one draws a card from the 4 hearts indicate where to place the decimal. Exam •-1 •-2 •-3 • If player draws the 3 of hearts, then the de board. Player then draws one of the other cards (f the 3 in the number grid on his/her white by After the number is placed, player two reported 3 • Player one draws another card and places	Activity ing Decimals king volunteers to come to the front and teaching <i>N</i> . ers, and face cards removed. Separate the ace (1), d them separately. White board gest number. (either an ace or 1, 2, 3, or 4. This number will <u>ple:</u> - 4 cimal would be in this location on his/her white for example a 3. Player must decide where to place bard. eats the process. it on the grid (the card that is already on the card	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.



can NOT be moved.

When all three numerals are placed, the largest number wins.

Closing
Review
Say:
<ul><li>Please recap what we did today.</li><li>Did we achieve our objectives?</li></ul>
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!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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).
- Ask them to comment on something (if anything) they have learned today that was brand new to them.



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Dueling Decimals 2
Focus:	Decimals

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Copies of activities at end of Lesson Plan
Socks	Decks of cards

Opening		
State the objective		
Today we are going to practice using our math vocabulary and skills.		
Gain prior knowledge by asking students the following questions		
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?		
How can you tell that you are on the right track for solving the problem?		
What are the basic operations that you need to utilize during math?		

Content (the "Meat")	
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
It's Valentine's Day. 3/10 of the students received paper valentines. 1/10 received a candy treat. The others received both paper valentines and	During the lesson check in with students repeatedly.
a candy treat. What fraction (in its simplest form) got both paper and candy valentines?	Check in about what is happening and what they are
Fact Practice	UIIIIKIIIY. Taka advantaga af any
Multiples	teachable moments.
<ul> <li>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).</li> <li>1. Roll one or two dice (if you roll two add the numbers together to determine the factor in the fact practice)</li> <li>2. Mark all multiples of the number and then pass off to the next person.</li> <li>3. Player may mark the same number.</li> </ul>	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: simplest form	It is important to review academic math vocabulary often throughout the day.



Description: Remind students of the conversative simplest form. Remind them that this mean same number other than 1.         Review the entry from yesterday. Have studen make any changes in the Vocabulary Notebook         Vocabulary Notebook Sample:         New Word         Simplest form         Personal Connection         Please rewrite those fractions in the simplest form.	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.
Action         Dueling         Review with students how to play this game and etc. form last week.         Dueling Decimals         Materials:       Deck of cards without tens, jokers, at 2, 3, and 4 of hearts from the deck and hold the Directions:         The object of this game is to create the largest         Shuffle the remaining cards.         Player one draws a card from the 4 hearts (eith indicate where to place the decimal. Example: $\bullet$ -1 $\bullet$ -2         If player draws the 3 of hearts, then the decimate board.         Player then draws one of the other cards (for exithe 3 in the number grid on his/her white board After the number is placed, player two repeats	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.
Player one draws another card and places it on can NOT be moved. When all three numerals are placed, the larges	



	Closing
	Review
Say:	
<ul> <li>Please recap what we did today.</li> </ul>	
<ul> <li>Did we achieve our objectives?</li> </ul>	
	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	t getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)
- 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



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Tic Tac Toe
Focus:	Fractiona

Materials:			
White boards	Vocabulary Notebooks	Materials from yesterday	
Crayolas	two, 12-sided dice for each pair		
Socks	Product Hunt Work Sheet		

Opening		
State the objective		
Today we are going to practice using our math vocabulary and skills.		
Gain prior knowledge by asking students the following questions		
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?		
How can you tell that you are on the right track for solving the problem?		
What are the basic operations that you need to utilize during math?		

Content (the "Meat")			
Problem of the Day         You've been saving quarters for a long time and you have them in your piggy bank. If piggy banks were all the same size and held the same number of quarters, would you rather have 3 1/10 banks or 37/10 banks? Why?         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.	<ul> <li>*Activity → Teachable Moment(s) throughout</li> <li>During the lesson check in with students repeatedly.</li> <li>Check in about what is happening and what they are thinking.</li> <li>Take advantage of any teachable moments.</li> <li>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.</li> <li>When possible, engage students in a "teach to learn" opportunity and have the</li> </ul>		
Math Vocabulary	It is important to review		
Word for Today: equivalent Description: Review the word equivalent from yesterday. Talk with students about what equivalent means. Ask students to divide themselves into two equivalent groups. Ask students if they should consider just numbers, or number of girls and boys, people who are	academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word.		



this age or that. Ask them to determine in wha Have students share the Vocabulary Notebook additions or changes. Vocabulary Notebook Sample:	When possible, have students experience the word. (Ex. 4 students creating a right angle,	
New Word	My Description	multiple students acting out
		an equation.)
equivalent	Things that are equal are equivalent	Vocabulary Notebooks can
Personal Connection	Drawing	composition book.
My 4 quarters are equivalent to your 10 dimes.		
Act	ivity	Focus on having young
Tic Ta	ac Toe	people "compete" in pairs or
Review the game from yesterday and talk about	t the equivalent fractions, decimals, and	small groups. Once a game
percentages. Have students pick new partners materials from vesterday	in the "When Homework Is	
Directions:	Complete" center.	
1. The first column must contain a fraction	n card, the second column a decimal card, and	
the third column the percentage card.		
<ol> <li>When player one places his/her first ca determined.</li> </ol>	rd, the equivalence value of the row has been	
3. For example, if the first person plays .5	in the center of the Tic Tac Toe, then if the	
second player wants to block right or le		
is equal to .5.		
4. Likewise, if the second player wants to		
card other than $\frac{1}{2}$ , since that is being u	ised in the center row.	
		·
	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!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)
- 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



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	How Many Do You Have?
Focus:	Review

### Materials:

Post Its

Dice

Prizes (these can be time, a leadership role, opportunities to be the "teacher"

### Opening

### State the objective

Today we are going to have fun playing a game.

### Content (the "Meat")

### Activity

### How Many Do You Have?

- 1. Divide students in groups of 3 4
- 2. On the Post-It, each group writes a number between 5 and 70
- 3. Post the numbers in numeric order on the white board or a chart.
- 4. Roll 5 dice one time and one time only
- 5. Teams are to use any math that they know (+, -, X, ÷, use of parenthesis, exponents) to make each of the numbers on the Post Its.
- 6. Give Teams 20-25 minutes to complete the task
- 7. Team that has the most correct equations, wins the prize

### Closing

### Review

Say:

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



Reflection (Confirm, Tweak, Aha!)

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.



Component:	Math
Grade Level:	4 <sup>th</sup> & 5 <sup>th</sup> Grades
Lesson Title:	Tic Tac Toe Equivalents
Focus:	Fractions, Decimals, Percentage Equivalents

Materials:		
White boards	Vocabulary Notebooks	Tic Tac Toe Game Pieces
Crayolas	Cards	
Socks	Tic Tac Toe Board (attached to this	s lesson plan)

Opening		
State the objective		
Today we are going to practice using our math vocabulary and skills.		
Gain prior knowledge by asking students the following questions		
What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?		
How can you tell that you are on the right track for solving the problem?		
What are the basic operations that you need to utilize during math?		

Content (the "Meat")			
Problem of the Day Julie needs to have 3 equivalent fractions for <sup>3</sup> / <sub>4</sub> . What would these be?	*Activity → Teachable Moment(s) <i>throughout</i>		
3/4 =///	During the lesson check in with students repeatedly.		
<ul> <li>Fact Practice</li> <li>Target <ol> <li>Divide students into trios.</li> <li>Each trio needs a deck of cards without face cards and jokers.</li> <li>Place the cards face up in a TicTac Toe Grid.</li> <li>Turn up a 10<sup>th</sup> card which will be to the side and becomes the target number (aces count as 1)</li> <li>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.</li> <li>Each card may be used only one time in the equation.</li> <li>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.</li> <li>After one player finishes his/her turn, then the cards taken are replaced by cards from the remaining deck.</li> <li>Player with the most cards at the end of the game win.</li> </ol> </li> </ul>	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: equivalent	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 omposition book.
ocus on having young
eople "compete" in pairs or mall groups. Once a game s mastered you can utilize it n the "When Homework Is Complete" center.
ot Vr tu vo renun note or to renun note



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?		
Poflection (Confirm Tweek Abol)		
REHECTION (CONTINUIT, I WEAK, ANA!)		

- Ask students to think about what they did today in math.
- Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 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)
- Ask them to comment on something (if anything) they have learned today that was brand new to them.



Fraction	Decimal	Percent



1⁄4	.25	25%
1/2	.5	<b>50%</b>
3⁄4	.75	75%
1⁄8	.125	12.5%
1⁄3	.33	33%
2⁄3	.67	67%
3/8	.375	37.5%
<mark>5/</mark> 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%