

Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Multiplication and Division Time
Focus:	Multiplication and Division

### Materials:

White boards and SocksVocabulary NotebooksCrayolasdice

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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 Use <and> symbols to make the following statements be correct: 387 is less than 421 643 is greater than 631 296 is less than 581</and>	*Activity → Teachable Moment(s) throughout During the lesson check in with students repeatedly. Check in about what is bappening and what they are
Addition Ladder	thinking.
<ol> <li>Give each student a white board (include marker or crayola)</li> <li>Student should draw a ladder like the one below</li> </ol>	Take advantage of any teachable moments.
$ \begin{array}{c}                                     $	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.
3. Have student roll 2 dice, total the pips and then add that number to each of the	



numbers in the ladder, writing the sum to the right of the number.		
Math Vocabulary         Word for Today: dividend         Description: The term dividend is used to identify the number (the total) that is going to be divided in a division problem. For example: dividend ÷ divisor = quotient         16 ÷ 4 = 4         The 16 is the dividend.         Create the entry for the term "dividend" in your Vocabulary.         Vocabulary Notebook Sample:         New Word       My Description         dividend       a dividend is the total amount that you have to separate into groups		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.
	J.a.m.ig	
In the problem $16 \div 4 = 4$ , 16 is the dividend.	16 ÷ 8 = 2	
Activity Multiplication and Division Time! This activity was worked on yesterday. Ask students what they learned about playing the game that is helpful. Have students share strategies. Ask students to work in a different pairing today.		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.
Multiplication and Division Time! This activity will give students an opportunity t		
<ul> <li>Multiplication and Division Time!</li> <li><u>Directions:</u> <ol> <li>Divide the students into pairs.</li> <li>Give each pair a deck of cards—remove a white board and pen/crayon for each st</li> <li>Shuffle the cards and deal them to each 4.</li> <li>Each player turns a card over.</li> <li>Each player writes the Fact Family on his</li> </ol> Example: Cards turned over are a 3 and a four problems on his/her board 3 x 5 = 15 and 5 x 3 = 15 15 ÷ 3 = 5 and 15 ÷ 5 = 3 6. Player who turns white board over with the cards. 7. Students erase white board and play again</li></ul>		



# Closing Review Say: • • 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 Ack students to thick shout what they did teday in meth

- 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. (Aha!)



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Multiplication and Division Time 2
Focus:	Multiplication and Division

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Dice
Socks	Cards(remove face cards, use the joker as a zero)

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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>	
The bakery sold 4,361 cupcakes and 4,631 chocolate chip cookies. Did the bakery sell more cupcakes or cookies? How do you know?	During the lesson check in with students repeatedly.	
Fact Practice	Check in about what is	
Spokes on a Wheel 1. Divide students into pairs.	happening and what they are thinking.	
<ol> <li>On a white board, student draws a small circle with 9 spokes coming out of it (should look like a bicycle tire).</li> </ol>	Take advantage of any teachable moments.	
<ol> <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 + 8 = 15.</li> </ol>	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.	
6. Process continues until all spokes have an equation.	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
<b>Description:</b> Divisor is a term we use to define the number you divide by. In a division problem it is the dividend ÷ divisor = quotient. In a real example it is		often throughout the day. Complete the Vocabulary
18 ÷	6 = 3	notebook for each word.
The 6 is the divisor. Write several problems o divisor.	n the board and have students circle the	students experience the word (Fx, 4 students creating a
Students complete the Vocabulary Notebook f Vocabulary Notebook Sample:	for the term "divisor".	right angle, multiple students acting out an equation).
New Word	My Description	Vocabulary Notebooks can
divisor	number you divide into another number	be made from ½ of a composition book.
Personal Connection	Drawing	
In the problem 20 divided by 5 the divisor is 5.	20 ÷ 4 = 5	
Activity Multiplication and Division Time! This activity will give students an opportunity to practice multiplication facts.		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
<ul> <li>Multiplication and Division Time!</li> <li><u>Directions:</u> <ol> <li>Divide the students into pairs.</li> <li>Give each pair a deck of cards—remove the face cards (you can use the joker as a 0), a white board and pen/crayon for each student.</li> <li>Shuffle the cards and deal them to each player until all of the cards are distributed.</li> <li>Each player turns a card over.</li> <li>Each player writes the Fact Family on his/her white board.</li> </ol> </li> <li>Example: Cards turned over are a 3 and a 5. Each player would write the following four problems on his/her board</li> <li>3 x 5 = 15 and 5 x 3 = 15</li> <li>t 5 ÷ 3 = 5 and 15 ÷ 5 = 3</li> <li>Player who turns white board over with the correct 4 problems first, takes the two cards. Students erase white board and play again.</li> </ul>		Complete" center.



# Closing Review Say: • • 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 Ack students to thick shout what they did teday in meth

- 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. (Aha!)



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Magic Squares
Focus:	Problem Solving

### Materials:

White boards Crayolas Socks Decks of cards Vocabulary Notebooks

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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 Can you figure out the number from the clues? I am a four digit number. My first and last Moment(s) throughout digits are the same. The digit in my tens place is 8. The sum of my ones digit and tens During the lesson check in digit is 12. The sum of all four digits is 21. What is the number? How do you know? with students repeatedly. Fact Practice Check in about what is happening and what they are Foreheader thinking. 1. Divide students into trios. Give each trio a deck of cards without face cards and jokers. Take advantage of any 2. Shuffle the deck and give all of the cards to the referee who will be "judging" the contest. teachable moments. 3. On go, players are each handed a card by the referee and WITHOUT looking, put the card Stop the class and focus on a face out on his/her forehead. student's key learning or 4. The referee adds the two numbers together and states the answer. understanding. Ask open-5. Each player looks at the other person's exposed number and names his/her own number. ended guestions to 6. Person who wins (accuracy and time), collects both cards. determine what the rest of 7. Play continues until all cards are gone. the group is thinking. 8. Players can repeat play (if there is another time) with each other so each has an When possible, engage opportunity to be both a player and referee. students in a "teach to learn" opportunity and have the



	student become the teacher.	
Math Vocabulary Word for today: inequality Description: An inequality says that two values are not equal. For example, 7 ≠ 9 says that 7 is not equal to 9. There are a variety of ways to say that two numerals are not equal. The first is ≠ which means does not equal. Another is the pair for greater than and less than comparison, > and <. Another symbol that is similar is ≥ which means grater or equal to and the ≤ which means less than or equal. Being familiar with these symbols is important. Create an entry for the word "inequality" in your Vocabulary Notebook.		It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation). Vocabulary Notebooks can be made from ½ of a
New Word	My Description	composition book.
inequality	things that are not equal, like 9 and 3 aren't equal	
Personal Connection	Drawing	
There is an inequality between the two amounts.		
Act Magic Squares This activity was worked on yesterday. Ask st game that is helpful. Have students share stra pairing today.	ivity tudents what they learned about playing the ategies. Ask students to work in a different	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.
Magic Card Squares		
A Magic Square is an arrangement of single d horizontal, vertical and diagonal lines equal th to 12, 15, 18, 21, or 24. If the Magic Square is to = 12, you will need th 4, 5, 6, 7, and 8 If the Magic Square is to = 15, you will need a If the Magic Square is to = 18 you will need a If the Magic Square is to = 21, you will need a If the Magic Square is to = 24, you will need a (=12)		
Magic Squares <u>Directions:</u> 1. Divide students into pairs.		

- 2. Give each pair a deck of cards, a white board and pen/crayon.
- 3. Pair makes a 3 x 3 Magic Square on his/her white board.



- Pair then selects whether they will create a Magic Square equal to 12, 15, 18, 21, and 24. Pair then selects the playing cards needed.
- 5. Pair then works together to create the Magic Square.

### Closing

### Review

Say:

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

Debrief

### Three Whats

Ask the following three what questions:

What was your key learning for the day?

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

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

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





Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Magic Squares 2
Focus:	Problem Solving

### Materials:

White boards Crayolas Socks Decks of cards Vocabulary Notebooks

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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

Write 5 different 3 digit numbers using the 5 numbers below. Write them in order from smallest to largest.

### 3, 6, 8, 2, 4

### Fact Practice

### Addition 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 add 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 openended 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 W Word for Today: digit Description: The term digit refers to the sy digits, 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 that we us the numeral 678 is made up of three digits, a Create an entry in your Vocabulary Notebook Vocabulary Notebook Sample: New Word digit Personal Connection How many digits are in this numeral?	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.	
3,785	<b>3</b> , 589	
And Magic Card Squares A Magic Square is an arrangement of single horizontal, vertical and diagonal lines equal to 12, 15, 18, 21, or 24. If the Magic Square is to = 12, you will need 4, 5, 6, 7, and 8 If the Magic Square is to = 15, you will need If the Magic Square is to = 18 you will need If the Magic Square is to = 21, you will need If the Magic Square is to = 24, you will need (=12) Magic Squares <u>Directions:</u> 1. Divide students into pairs 2. Give each pair a deck of cards, a white 3. Pair makes a 3 x 3 Magic Square on hi 4. Pair then selects whether they will creat 24. Pair then selects the playing cards	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.	



<ul> <li>5. Pair then works together to create the Magic Square.</li> <li>Following are the guidelines for creating a Magic Square. These are for you NOT the students. After students have creating several Magic Square, have them begin to look for and discover the rules.</li> <li><b>Rules for Creating a Magic Square:</b> Divide the sum of the Magic Square by 3 to find the center number (15 ÷ 3 = 5) 5 is placed in the center. Add 1 to the center square and the write the sum in the top right corner. Subtract 1 from the center square and write the sum to the right of the center square. Add 2 to the center square and write the sum to the right of the center square. Add 3 to the center square and write the sum in the top left corner. Subtract 3 from the center square and write the sum in the top left corner. Add 4 to the center square and write the sum in the top left corner. Add 4 to the center square and write the sum in the top left corner. Add 4 to the center square and write the sum in the top left corner. Add 4 to the center square and write the sum directly under the center. Subtract 4 from the center square and write the sum directly above the center.</li></ul>			to create the Magic Square. or creating a Magic Square. These are for you NOT the creating several Magic Square, have them begin to look for Square: quare by 3 to find the center number (15 ÷ 3 = 5) 5 is placed d the write the sum in the top right corner. Subtract 1 from ence in the bottom left corner. d write the sum to the right of the center square. Subtract 2 ite the difference to the left of the center square. d write the sum in the top left corner. Subtract 3 from the fference in the bottom right corner. d write the sum directly under the center. Subtract 4 from the ifference directly above the center.	
	8	1	6	
	3	5	7	
	4	9	2	

	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 loss losening for the day?	

What was your key learning for the day?

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

What advice would you give to a "new" player getting ready to play this game so he/she could get all the blocks are completed.

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



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Which Way?
Focus:	Multiplication

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Deck of Cards for each pair
Socks	Target (end of this lesson plan)

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of multiplication.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. What are some strategies that you use when you are trying to figure out how to solve a mathematics problem?

What do you know about multiplication? When would you use multiplication?

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

How would you check an answer to a multiplication problem to be sure you are correct

Content (the "Meat")	
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
If the problem is 768 + 427, and your task was to estimate an answer, how would you do that? Please explain.	During the lesson check in with students repeatedly.
Fact Practice Target	Check in about what is happening and what they are thinking.
<ol> <li>Divide students into trios.</li> <li>Each trio needs a deck of cards without face cards and jokers.</li> </ol>	Take advantage of any teachable moments.
<ol> <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> </ol>	Stop the class and focus on a student's key learning or understanding. Ask open-
<ol> <li>Each player makes an equation with some or all of the numbers in the grid to equal the target number. Students may add or subtract.</li> </ol>	ended questions to determine what the rest of the group is thinking.
<ul> <li>6. Each card may be used only one time in the equation.</li> <li>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 6 + 4 = 10, and pick up the 6 and the</li> </ul>	When possible, engage students in a "teach to learn" opportunity and have the



<ol> <li>4.</li> <li>8. After one player finishes his/her turn</li> </ol>	, then the cards taken are replaced by cards from	student become the teacher.
9. Player with the most cards at the en-		
Math	Vocabulary	It is important to review
Word for today: factors Description: The term factor refers to the tw with a product in a multiplication problem. If are 4 and 4, the product is 12. There are oth 1 x 12 = 12 (so 1 and 12 are factors) 2 x 6 = 12 (so 2 and 6 are factors) If we were to look at all of the POSSIBLE factors. Students should complete the Vocabulary Noteproduct Vocabulary Notebook Sample: New Word factors	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 If I have 4 groups of 5 and I multiply to find out how many I have altogether, the	Drawing $2 \times 3 = 6$ Factor	
A Whi Place value is an important concept for stude have ten numerals: 0, 1, 2, 3, 4, 5, 6, 7, 8, a determines the value of the number. In this possible product by rearranging the numeral	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.	
<ul> <li>Which Way?</li> <li><u>Directions:</u></li> <li>1. Divide students into pairs.</li> <li>2. Give each pair a deck of cards, a white</li> <li>3. Students prepare the deck by removing</li> <li>4. Pair shuffles the cards and deals three cards face-down in a pile.</li> <li>5. Each player uses the three cards to cre number.</li> <li>6. Player then multiplies the numbers toge</li> <li>7. Player with the greatest product gets or</li> <li>8. When cards are used they are placed in</li> </ul>		



9. First player who gets 8 points, wins.

### Closing

Review

Debrief

Say:

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

### Three Whats

Ask the following three what questions:

What was your key learning for the day?

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

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

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



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Which Way?
Focus:	Multiplication

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

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operation of multiplication.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. What are some strategies that you use when you are trying to figure out which operation to use to solve a mathematics problem?

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

What do you know about multiplication and when would you use this operation?

### Content (the "Meat")

Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
Write at east 5 different 3 digit numbers using the 5 numbers below. Write them in order from the smallest to the largest.	During the lesson check in with students repeatedly.
7, 9, 1, 4, 3	Check in about what is happening and what they are thinking.
Fact Practice	Take advantage of any teachable moments.
Number Hunt	Stop the class and focus on a
1. Divide students into pairs.	student's key learning or
2. Each pair needs a Number Hunt sheet (attached to this lesson plans).	understanding. Ask open-
3. Player rolls two, 12-sided dice.	ended questions to
<ol><li>Player adds or subtracts the two numbers.</li></ol>	determine what the rest of
5. If the number is not yet covered, then player may cover the number.	the group is thinking.
6. Next player repeats steps 1-3.	When possible, engage
7. Winner is determined by who has the most numbers covered.	students in a "teach to learn" opportunity and have the student become the teacher.



Math	It is important to review	
Word for Today: product	academic math vocabulary	
<b>Description:</b> The term product refers to the are the two numbers that you would multiply example in the problem 6 x 7 = 42, the factor factors and the products in each of the problem $3 \times 9 = 27$ 9 x 8 = 72 9 x 5 = 45 7 x 2 = 14 Create an entry in your Vocabulary Notebool	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	
Vocabulary Notebook Sample:	My Description	composition book.
product	Answer in a multiplication problem	
Personal Connection	Drawing	
I know the product of 6 x 7. It is 42.	Multiplication: 6 × 3 = 18 Factor (or Multiplier) (or Multiplicand)	
A Which Way? This activity was worked on yesterday. Ask game that is helpful. Have students share st pairing today.	ctivity students what they learned about playing the rategies. Ask students to work in a different	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.
Which Way? Place value is an important concept for stude have ten numerals: 0, 1, 2, 3, 4, 5, 6, 7, 8, a determines the value of the number. In this a possible product by rearranging the numerals	ents in the third grade to understand. We only nd 9. It is the arrangement of these numerals that activity, students will work to create the largest s.	
<ul> <li>Which Way?</li> <li><u>Directions:</u> <ol> <li>Divide students into pairs.</li> <li>Give each pair a deck of cards, a white</li> <li>Students prepare the deck by removing</li> <li>Pair shuffles the cards and deals three of cards face down in a pile.</li> </ol> </li> <li>Each player uses the three cards to creat number.</li> <li>Player then multiplies the numbers toge</li> <li>Player with the greatest product gets on</li> </ul>	board, and pen/crayons. tens, face cards, and jokers. cards to each player and stacks the remaining ate one 2 digit number and one single digit ther. e point.	

- 8. When cards are used they are placed in a discard pile.
- 9. First player who gets 8 points, wins.

### Closing

### Review

Say:

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

### Debrief

### Three Whats

Ask the following three what questions:

What was your key learning for the day?

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

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

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





## Number Hunt

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

## Number Hunt

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



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Divide
Focus:	Division

### Materials:

White boards Crayolas Socks Vocabulary Notebooks Double 9 Dominoes

### Opening

State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. What are some strategies that you use when you are trying to figure out which operation to use to solve a mathematics problem?

What are you doing when you divide? Do you start with a total or a portion?

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

Content (the "Meat")	
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>
nickels, and 9 pennies. How much money do you have?	During the lesson check in
Fact Practice Spots and Dots There is a master of Double 9 Dominos attached to this lesson plan. You will need 1 full set	With students repeatedly. Check in about what is happening and what they
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.	are thinking. Take advantage of any teachable moments.
Players sit across from each other. Dominoes are between them, face (or spots) down. Each student draws a domino and writes the addition problem on their white board, adding 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.
Addition: 2 + 3 = 5 Math Vocabulary	It is important to review

**Description:** The term "remainder" refers to the amount left over when you divide things

Math term: remainder



academic math vocabulary

often throughout the day.

Complete the Vocabulary

### equally and there are not enough things left to distribute evenly. For example is you have notebook for each word. 25 cookies and 5 people, you could give each person 5 cookies and you would have one When possible, have left over or one remaining. The 1 would be labeled the "remainder". A remainder can't be students experience the equal to or larger than the divisor. If that were the case, everyone would have an equal word (Ex. 4 students opportunity to have one more. creating a right angle, multiple students acting out Have student review his/her Vocabulary Notebook for the term "remainder" with a peer. an equation). Any corrections that need to be made should be made. Vocabulary Notebooks can Vocabulary Notebook Sample: be made from ½ of a New Word My Description composition book. remainder Amount left over when you have divided a total equally and don't have enough to give everyone 1 more Personal Connection Drawing After we divided the cookies, we had a $19 \div 5 = 3 R 4 = 3 \frac{4}{5}$ remainder of 2. Remainder Activity Focus on having young people "compete" in pairs or Divide! small groups. Once a game This activity was worked on yesterday. Ask students what they learned about playing the is mastered you can utilize it game that is helpful. Have students share strategies. Ask students to work in a different in the "When Homework Is pairing today. Complete" center. Dividing is the inverse of multiplication. Students need to practice division and understand that numbers can be evenly divided, perhaps by more than one number. For example, although 9 x 8 = 72, the product 72 can be divided evenly by 2, 3, 4, and 6 (other possibilities as well). This activity will give students an opportunity to practice division. Divide! Directions: 1. Divide students into pairs. 2. Give each pair a deck of cards, a white board, and pen/crayons. 3. Pair prepares the deck by removing jokers and face cards. 4. Shuffle the cards and deal 3 cards to each player and places the remaining cards in a facedown pile. 5. Player turns two cards over and multiplies them together. **Example:** cards turned over are a 5 and a 8. Multiplied together the product is 4. 6. Players then looked at their cards and determine if they have a card that will divide the product evenly.

7. Player gets one point for each division problem he/she can do.



8.	Example: Player has a 2, 3, and 10. The player can divide 40 by both 2 and 10
	evenly. He/she will then get 2 points.
0	Once play bac finished, all cards are discarded and play begins again (deal 2 card

- 9. Once play has finished, all cards are discarded and play begins again (deal 3 cards, turn 2 over and multiply).
- 10. 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?

- 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**

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Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Quotient and Divide
Focus:	Division

### Materials:

White boards Crayolas Socks Vocabulary Notebooks deck of cards, no face cards or jokers for math fact practice

### Opening

State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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 a division problem?

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

### Content (the "Meat") Problem of the Day \*Activity $\rightarrow$ Teachable Look at the table below. Were more cookies sold on Tuesday and Wednesday or on Moment(s) *throughout* Wednesday and Thursday? How do you know? During the lesson check in with students repeatedly. \$ of Cookies Day Check in about what is Monday 27 happening and what they are Tuesday 73 thinking. Wednesday 56 Take advantage of any Thursday 71 teachable moments. 72 Friday Stop the class and focus on a Fact Practice student's key learning or Draw! understanding. Ask openended questions to 1. Divide students into pairs and give each pair a deck of cards. determine what the rest of 2. Remove the face cards and jokers from the deck of cards. the group is thinking. 3. Shuffle the deck. When possible, engage students in a "teach to learn" 4. Decide who will go first. opportunity and have the 5. First player draws two cards. student become the teacher. 6. Student adds or subtracts the cards.



7. Student writes his/her problem on the v		
sentence.		
8. Students take turns drawing cards and		
Math VorWord for Today: quotientDescription: The term "quotient" refers to the aa dividend $\div$ divisor = quotient. $12 \div 3 = 4$ . Individend and the 3 is the divisor).Have students look at the problems below and a $9 \div 3 = 3$ $16 \div 4 = 4$ $49 \div 7 = 7$ $32 \div 8 = 4$ Have student complete his/her Vocabulary Note	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	
Vocabulary Notebook Sample:		composition book.
New Word	My Description	
quotient	The answer in a division problem	
Personal Connection	Drawing 12 divided by 3	
The problem 28 ÷ 7 = 4		
Acti Div	Focus on having young people "compete" in pairs or small groups. Once a game	
Dividing is the inverse of multiplication. Studen that numbers can be evenly divided, perhaps by although 9 x 8 = 72, the product 72 can be divid as well). This activity will give students an oppo	is mastered you can utilize it in the "When Homework Is Complete" center.	
<ul> <li>Divide!</li> <li><u>Directions:</u> <ol> <li>Divide students into pairs.</li> <li>Give each pair a deck of cards, a white bo</li> <li>Pair prepares the deck by removing jokers</li> <li>Shuffle the cards and deal 3 cards to each facedown pile.</li> </ol> </li> <li>Player turns two cards over and multiplies are a 5 and a 8. Multiplied together the product evenly.</li> <li>Player gets one point for each division product or p</li></ul>		



8.	Example: Player has a 2, 3, and 10. The player can divide 40 by both 2 and 10 evenly.	
	He/she will then get 2 points.	
0	Once play has finished all cards are discarded and play begins again (deal 3 cards turn	L

- 9. Once play has finished, all cards are discarded and play begins again (deal 3 cards, turn 2 over and multiply).
- 10. 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?

- 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.



Materials:	
White boards	Vocabulary Notebooks
Crayolas	Deck of cards
Socks	Checker board at end of lesson plan, tokens for checkers

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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

What is the sum of this addition problem: 387 + 694? Tell how you did this problem and how you know you have the correct answer.

### Fact Practice Bump It Up! Add A Zero

- 1. Divide students into pairs.
- 2. Give each pair a white board and a deck of cards (without face cards, jokers, or 10s).
- 3. The object of this fact practice is to sum numbers until you reach 1,000.
- 4. Student draws 2 cards, adds the value of the cards together, multiplies by ten and writes the total on the sheet.
- 5. It is not the other person's turn to do the same.
- 6. When play returns to the first player, the process is repeated, although this time, the totals are added together.
- 7. First person to 1,000 wins.
- Example: Player draws a 7 and a 4. Total is 11. Multiply by 10 (add the zero) equals 110. Next turn, player draws a 3 and a 2 which totals 5. Multiply by 10 and I now add 50 to 110 for a total of 160.

### \*Activity → Teachable Moment(s) *throughout*

and how	During the lesson check in with students repeatedly.	
	Check in about what is happening and what they are thinking.	
s, or 10s).	Take advantage of any teachable moments.	
en and	Stop the class and focus on a student's key learning or	
lime, the	ended questions to determine what the rest of the group is thinking.	
ro) equals I now add	When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.	



Math Vo Word for Today: estimation	It is important to review academic math vocabulary	
<b>Description:</b> The term "estimation" refers to m something there are. In other words, it is a clos thought or calculation involved. If you wanted t handfuls of jelly beans, you could take one han handful, and then multiply by 10 so you can est 10 handfuls. Create the entry for the word "estimation" in the <b>Vocabulary Notebook Sample:</b>	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	
New Word estimation	My Description making an educated guess about how much	be made from ½ of a composition book.
Personal Connection	Drawing	
In his estimation there are 100 jelly beans in the jar.		
Acti Checkers This activity was worked on yesterday. Ask stu game that is helpful. Have students share strat pairing today.	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.	
<b>Checkers</b> Practice of multiplication and division facts is in automaticity. This activity takes the game Chec practice math facts while playing Checkers. In the product or quotient for the math fact in that		
<ul> <li>Checkers <ul> <li><u>Directions:</u></li> <li>1. Divide students into pairs.</li> <li>2. Give each pair a Checkers Board (attache (can be scraps of paper), a white board an</li> <li>3. Pair tapes two pieces of the Checkers Board board.</li> <li>4. Player 1 moves his/her checker into a spatake that space.</li> <li>5. Player 2 then takes his/her turn.</li> <li>6. Play continues just like Checkers.</li> </ul></li></ul>	d to this lesson plan), red and black checkers ad pen/crayons. ard together and puts his/her markers on the ce, saying the product or quotient in order to	



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. (Aha!)



This side of the checker board is for Player A. This half of the checker board will be joined to the half of the checker board for Player B. They join on the opposite side. The top row of this side that begins with 84 ÷ 7 and ends with 48 ÷ 4, joins with Player B so that 48÷4 joins 81 ÷ 9. Player A will place the checkers on the shaded squares in the 3 rows closest to this direction.

84 ÷ 7 =	54 ÷ 6 =	36 ÷ 6 =	48 ÷ 4 =
6 ÷ 3 =	121 ÷ 11 =	54 ÷ 9 =	35 ÷ 7 =
24 ÷ 12 =	25 ÷ 5 =	100 ÷ 10 =	72 ÷ 6 =
21 ÷ 3 =	56 ÷ 8 =	36 ÷ 9 =	28 ÷ 4 =
15 ÷ 5 =	60 ÷ 12 =	108 ÷ 9 =	10 ÷ 2 =
20 ÷ 4 =	9 ÷ 3 =	63 ÷ 9 =	110 ÷ 11 =
24 ÷ 6 =	88 ÷ 11 =	132 ÷ 12 =	18 ÷ 9 =
14 ÷ 7 =	72÷ 8 =	18 ÷ 3 =	49 ÷ 7 =



81 ÷ 9 =	48 ÷ 8 =	45 ÷ 5 =	48 ÷ 6 =
63 ÷ 7 =	108 ÷ 12 =	144 ÷ 12 =	72 ÷ 9 =
12 ÷ 4 =	40 ÷ 5 =	70 ÷ 10 =	16 ÷ 2 =
132 ÷ 11 =	8 ÷ 4 =	72 ÷ 12 =	120 ÷ 12 =
30 ÷ 5 =	77 ÷ 7 =	56 ÷ 7 =	24 ÷ 3 =
32 ÷ 4 =	12 ÷ 6 =	16 ÷ 4 =	27 ÷ 3 =
20 ÷ 5 =	36 ÷ 3 =	28 ÷ 7 =	42 ÷ 6 =
32 ÷ 8 =	64÷ 8 =	18 ÷ 6 =	96 ÷ 8 =

This side of the checker board is for Player B. This half of the checker board will be joined to the half of the checker board for Player A. They join on the opposite side. The top row of this side that begins with 81 ÷ 9 and ends with  $48 \div 6$ , joins with Player A so that 81 ÷ 9 joins 48÷4. Player B will place the checkers on the unshaded squares in the 3 rows closed to these directions.



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Checkers
Focus:	Division

Materials:	
White boards	Vocabulary Notebooks
Crayolas	dice (6-sided and 12-sided for each pair)
Socks	Checker Board at the end of the game, tokens to use as checkers

### Opening

### State the objective

Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

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

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. 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 Copy the shape below. Draw lines of symmetry on each one. Remember that some	*Activity → Teachable Moment(s) <i>throughout</i>
shapes may have more than one line of symmetry.	During the lesson check in with students repeatedly.
	Check in about what is happening and what they are thinking.
Fact Practice	Take advantage of any
Fact Family	teacnable moments.
A Fact Family is 3 numbers which have a relationship in addition and subtraction. For example, the number 9, 4, and 13 have a particular relationship in math. This family has four members: 9 + 4 = 13 4 + 9 = 13	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.
13 - 9 = 4 13 - 4 = 9	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.	student become the teacher.



It is important to review academic math vocabulary

often throughout the day.

Complete the Vocabulary

students experience the word

right angle, multiple students

Vocabulary Notebooks can

(Ex. 4 students creating a

acting out an equation).

be made from  $\frac{1}{2}$  of a

composition book.

notebook for each word.

When possible, have

### Math Vocabulary

### Word for Today: rounding

**Description:** The term "rounding" refers to process used in estimation when you ask yourself which number another number is "closest" to. For example, if you were just thinking about the number "9", is that number closest to 0 or 10. The answer, of course would be that it is closest to 10. However, if I asked you if the number "9" is closest to 0 or 100, the answer would be that it is closer to 0. So when you are rounding a number, you have to know what you are comparing the number to. The general rule is that you think about what you are comparing a number to, you look at the number one place to the right, and if the number in that spot is 5, 6, 7, 8, or 9 you round up, and if the number is 1, 2, 3, or 4, you round down.

If the question is this: Is 278 closer to 200 or 300, you would take a look at the number to the right of hundreds (in this case 7), and you would know to round up to 300, and that 278 is closer to 300 that it is to 200.

Have student create and entry in his/her Vocabulary Notebook for the term "rounding". Any corrections that need to be made should be made.

Vo	cabulary Notebook Sample:		
N	ew Word	My Description	
	rounding	5 or higher round up, 4 or lower, leave alone	
P	ersonal Connection	Drawing	
	Do you know how to round the number 386 to the hundred's place?	386 rounded is 400	
	Act Cheo	ivity ckers	Focus on having young people "compete" in pairs or small groups. Once a game
Practice of multiplication and division facts is important until students have them memorized to automaticity. This activity takes the game Checkers and gives students an opportunity to practice math facts while playing Checkers. In order to move to a space, student must provide the product or quotient for the math fact in that square.		is mastered you can utilize it in the "When Homework Is Complete" center.	
Dir	ections:		
1.	Divide students into pairs.		
<ol> <li>Give each pair a Checkers Board (attached to this lesson plan), red and black checkers (can be scraps of paper), a white board and pen/crayons.</li> </ol>			
3.	3. Pair tapes two pieces of the Checkers Board together and puts his/her markers on the board.		
4.	4. Player 1 moves his/her checker into a space, saying the product or quotient in order		
	to take that space.		
5.	Player 2 then takes his/her turn.		
6.	Play continues just like Checkers.		



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. (Aha!)



This side of the checker board is for Player A. This half of the checker board will be joined to the half of the checker board for Player B. They join on the opposite side. The top row of this side that begins with 84 ÷ 7 and ends with 48 ÷ 4, joins with Player B so that 48÷4 joins 81 ÷ 9. Player A will place the checkers on the shaded squares in the 3 rows closest to this direction.

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14 ÷ 7 =	72÷ 8 =	18 ÷ 3 =	49 ÷ 7 =



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30 ÷ 5 =	77 ÷ 7 =	56 ÷ 7 =	24 ÷ 3 =
32 ÷ 4 =	12 ÷ 6 =	16 ÷ 4 =	27 ÷ 3 =
20 ÷ 5 =	36 ÷ 3 =	28 ÷ 7 =	42 ÷ 6 =
32 ÷ 8 =	64÷ 8 =	18 ÷ 6 =	96 ÷ 8 =

This side of the checker board is for Player B. This half of the checker board will be joined to the half of the checker board for Player A. They join on the opposite side. The top row of this side that begins with 81 ÷ 9 and ends with  $48 \div 6$ , joins with Player A so that 81 ÷ 9 joins 48÷4. Player B will place the checkers on the unshaded squares in the 3 rows closed to these directions.



Component	Math
Grade Level:	3 <sup>rd</sup> Grade
Lesson Title:	Student Activity Choice
Focus:	Review

### Materials:

Game Boards and materials from this week.

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. Students will be able to choose from the games learned in the past two weeks.

### Content (the "Meat")

### Activity

### Choice of 5 activities

Over the past 11 days students have played 5 different games. Give students an opportunity to play one of these games.

- Magic Squares
- Multiplication and Division Time
- Which Way?
- Divide!
- Checkers

### Closing

### Review

Say:

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

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