

Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	What's My Pattern
Focus:	Math vocabulary, patterns, addition

### Materials: White boards

Crayolas Socks Vocabulary Notebooks Playing 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")					
<b>Problem of the Day</b> Look at the pattern. Copy it and then draw the next 3 shapes. How do you know what to	*Activity → Teachable Moment(s) <i>throughout</i>				
draw?	During the lesson check in with students repeatedly.				
☆☆♥☆☆♥	Check in about what is				
Fact Practice	happening and what they are thinking.				
Target 1. Divide students into trios	Take advantage of any teachable moments.				
<ol> <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> </ol>	Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of				
<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>	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 4.</li> </ul>	students in a "teach to learn" opportunity and have the student become the teacher.				



<ol> <li>After one player finishes his/her turn the remaining deck</li> </ol>					
9. Player with the cards at the end of the game win					
Math Word for Today: pattern Description: A pattern is something that is information begins to repeat itself, then you part of the pattern you can already see. Pa ABCABC, or any other configuration. Students should complete the Vocabulary N Vocabulary Notebook Sample:	It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students				
New Word	My Description	acting out an equation). Vocabulary Notebooks can			
pattern	An organized order to things with a predictable next item	be made from ½ of a composition book.			
Personal Connection	Drawing				
What is the pattern that you can see on the wall paper?	****				
	Activity	Focus on having young			
Demonstrate: Patterns can be made by re pattern must repeat itself exactly to be a pat pattern to them, they are predictable becaus students that they are going to be making p patterns: ABABAB, ABCABC, AABCCAAB	small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.				
Sample ABABAB: ♥☆♥☆♥☆					
ABCABC: ☆♥▼ ☆♥▼ ☆♥▼         AABCCAABCC ♥♥▼ ☆☆♥♥ ☆☆					
Have students share the patterns made with others.					



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!)
<ul> <li>Ask students to think about what they did today in math</li> </ul>
<ul> <li>As the set of the se</li></ul>

- 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:	2 <sup>nd</sup> Grade
Lesson Title:	What's My Rule?
Focus:	Math vocabulary, patterns, basic operations

### Materials: White boards Crayolas Socks

Vocabulary Notebooks

# 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") \*Activity $\rightarrow$ Teachable Problem of the Day Moment(s) throughout Look at this list of numbers. These numbers are not random; they are following a pattern, or a rule. If the pattern continues, what will the next three numbers be? During the lesson check in with students repeatedly. 4, 8, 12, 16, 20, 24, \_\_\_\_, \_\_\_\_, \_\_\_\_ Check in about what is happening and what they are Fact Practice thinking. Take advantage of any Number Hunt teachable moments. 1. Divide students into pairs Stop the class and focus on a 2. Each pair needs a Number Hunt sheet (attached to this lesson plans) student's key learning or 3. Player rolls two, 12-sided dice. understanding. Ask open-4. Player adds or subtracts the two numbers. ended questions to 5. If the number is not yet covered, then player may cover the number. determine what the rest of 6. Next player repeats steps 1-3. the group is thinking. 7. Winner is determined by who has the most numbers covered. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.



Math V Word for Today: pattern Description: A pattern is something that is p information begins to repeat itself, then you of part of the pattern you can already see. Patt ABCABC, or any other configuration. Students should review the entry on the word need to make and additions or changes. Vocabulary Notebook Sample: New Word	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	
pattern	Organizing something so you can predict what will happen next	composition book.
Personal Connection Can you identify the pattern that is on the calendar?		
A What? There are patterns in the way our numbers a things appear in the world. Understanding th next. This predictability makes it easier mak posed. Identify the "rule" or pattern in each p 2, 4, 6,, 5, 10, 15, After doing these two together, have student problems. Ask students to write the pattern a 9, 12, 15, 6, 12, 18, 2 8, 9, 10, 17 25, 30, 35 AABCCBAAB 7, 14, 21, 2	ctivity s My Rule? re written. There are patterns in the way the nese patterns helps us to predict what is coming e sense of the world and to answer the questions roblem. 14, 16 $\_,  35, 40$ s work in pairs to complete the following after they have completed it. 27 4,   27 4,   27	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.



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Please recap what we did today.
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Debrief
Three Whats
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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>
<ul> <li>Ask them to comment on what they did today was something they already knew how to do (Confirmation)</li> </ul>
<ul> <li>Ask them to comment on what they did today that was like something they had done before except in one</li> </ul>

- Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
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### 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:	2 <sup>nd</sup> Grade
Lesson Title:	Crack the Code
Focus:	Math vocabulary, basic operations, place value

### Materials: White boards Crayolas

Socks

Vocabulary Notebooks 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 Here's one way to show 25. Think of at least 3 different ways to show 25. You can use	*Activity → Teachable Moment(s) <i>throughout</i>				
numbers, pictures, words and other representations to show the number. 5 + 5 + 5 + 5 - 25 During the lesson check with students repeatedly					
Fact Practice Draw!	Check in about what is happening and what they are thinking.				
<ol> <li>Divide students into pairs and give each pair a deck of cards</li> <li>Remove the face cards and jokers from the deck of cards</li> </ol>	Take advantage of any teachable moments.				
<ol> <li>Shuffle the deck.</li> <li>Decide who will go first.</li> <li>First player draws the conde</li> </ol>	Stop the class and focus on a student's key learning or understanding. Ask open-				
<ol> <li>First player draws two cards.</li> <li>Student adds or subtracts the cards.</li> <li>Student writes his/her problem on the white board, writing a complete number</li> </ol>	ended questions to determine what the rest of the group is thinking.				
<ul><li>sentence.</li><li>8. Students take turns drawing cards and creating problems.</li></ul>	When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.				



#### Math Vocabulary

### Word for Today: place value

**Description:** In our number system the position a number is located in will determine its value. Numbers are written in clusters of 3. The number furthest to the right is in the ones place, the middle numeral is in the tens place, and the number to the left is in the hundreds place. If you have a three digit number—528 you are in reality saying 500 + 20 + 8. In other words, the 5 stands for five hundred, the 2 for twenty, and the 8 for simply that—8. As numbers get larger, the pattern of three numbers stays the same, but a comma is inserted to let you know if the number is for thousands, million, billions, trillions, and so on. As an example, 528,000 is said 5 hundred twenty-eight thousand, with the comma representing the word thousand. 528,528,528 would be read: 5 hundred twenty-eight million, 5 hundred twenty-eight thousand, 5 hundred twenty-eight.

Have students review the Vocabulary Notebook entry from yesterday with a partner and make any additions or changes they need to make. Vocabulary Notebook Sample:

New Word	My Description
Place value	The position you place a numeral in to represent hundreds, tens, or ones
Personal Connection	Drawing
Which of the numerals is in the thousands place.	13,428

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.



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9		3	5	2	1		8	4		6	7	
1. 2. 3. 4. 5. 6. 7. 8. 9. 10 11	<ol> <li>The number in the tens place 583</li> <li>The number in the hundreds place: 736</li> <li>The number is in the ones place: 476</li> <li>The number in the ones place: 981</li> <li>The number in the hundreds place: 489</li> <li>The number in the tens place: 431</li> <li>The number in the ones place: 718</li> <li>The number in the hundreds place: 536</li> <li>The number in the hundreds place: 925</li> <li>The number in the tens place: 742</li> </ol>											



Closing			
Review			
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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)			

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



Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	Greater Than Less Than
Focus:	Comparing Numbers using < and >, addition, and math vocabulary

Materials:	
White boards	Decks of cards
Crayolas	Vocabulary Notebooks
Socks	< and > symbols (see cards attached to this lesson plan)

#### Opening

### State the objective

Today we are going to practice using our math vocabulary and math 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>
You will see three numbers in order from the least to the greatest. After you have looked at them, tell why this order is correct.	During the lesson check in with students repeatedly.
29, 21, 19	Check in about what is happening and what they are thinking.
Fact Practice Addition War	Take advantage of any teachable moments.
<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 add 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>	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 V Word for Today: < and > Description: These two symbols mean grea They are used to compare numbers. The p two numbers. If numbers are equal, these s Vocabulary Notebook Sample:	It is important to review academic math vocabulary often throughout the day Complete the Vocabulary notebook for each word. When possible, have students experience the word	
New Word <a href="https://www.endlocality.com"></a> Personal Connection	My Description Symbols for the concept of greater than and less than Drawing	(EX. 4 students creating a right angle, multiple students acting out an equation) Vocabulary Notebooks can be made from ½ of a composition book
Compare the numbers by using the symbols < and >.	<a>and&gt;</a>	
A Demonstrate: We are going to practice de than another number. Here is a deck of car Here are the cards that have the greater that that lets you know which direction is up. Ask for 2 volunteers to come up so we can 1. Deal each player 5 of the number of 2. Place the remainder of the cards fa 3. Place the < > cards face down next	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>1 urn up the tirst card. This is the "comparison number"</li> <li>Player draws a &lt; or &gt; card and must play a number from his/her hand that is &lt; or &gt; the beginning number. If player can play a number, the next player repeats the steps, but the number the first player played is now the "comparison number". If the player cannot play, then he/she must draw a card.</li> <li>First player to play all of his/her cards, wins.</li> </ol>		



Closing			
Review			
Sav.			
- Diagon recon what we did today			
<ul> <li>Please letap what we did loudy.</li> <li>Did we achieve our chiestives?</li> </ul>			
• Diu we achieve our objectives?			
Debrief			
Three Whats			
Ask the following three what guestions:			
What was your key learning for the day?			
What opportunities might you have to do this same thing in the "real world"?			
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 ne/sne could get all the blocks			
are completed.			
Reflection (Confirm, Tweak, Aha!)			
Ask students to think about what they did today in math			
<ul> <li>Ask them to commont on what they did today was something they already know how to do. (Confirmation)</li> </ul>			
• Ask them to comment on what they did to day was something they aready knew how to do. (Committation)			
• 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. (I weak)			

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



<	<	<
∪p ↑	UP 1	∪p ↑
<	<	<
UP 1	UP 1	UP 1
>	>	>
UP ↑	UP î	UP 1
>	>	>
UP ↑	UP î	UP ↑



Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	Odds Evens Exactly 10
Focus:	Math vocabulary, identifying even and odd numbers

#### Materials: White boards

Crayolas Socks Vocabulary Notebooks Dice

### 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

Count backwards by 2's starting at the number 19. Write the numbers as you say them. When you are finished, are the numbers you wrote down "odd" or "even"? Tell how you know.

#### Fact Practice

#### Spokes on a Wheel

- 1. Divide students into pairs
- 2. On a white board, student draws a small circle with 9 spokes coming out of it (should look like a bicycle tire)
- 3. Have students choose to put a 6, 7 or 8 in the center circle
- 4. Student rolls two dice and adds the pips (dots)
- 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
- 6. Process continues until all spokes have an equation

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

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask 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 Word for Today: odd and even number Description: Every number is either an od is one that you say when you count by 2's. 22, 24, 26, 28, 30 and so on. An odd num counting by 2's. For example: 1, 3, 5, 7, 9 Students complete the Vocabulary Notebo Vocabulary Notebook Sample:	It is important to review academic math vocabulary often throughout the day Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students	
New Word Odd and Even	My Description Describes numbers that can be divided by 2 (even) and those which can't (odd)	acting out an equation) Vocabulary Notebooks can be made from ½ of a composition book.
Personal Connection I like odd numbers better than even numbers.	Drawing 5, 7, 9, 11, 13	
Activity Odds, Evens, and Exactly 10 Demonstrate: On the board or chart paper make a grid with three columns. Label the columns. Label the first one "odd" the second one "even", and the third one "exactly 10". Once you have set up the "game board", ask students to do the same on either the white board or a piece of paper. Teach the volunteers how to play the game. 1. Player rolls 3 dice. 2. Player totals the 3 dice. 3. If the total is even, the equation goes in the "Evens" column. If the total is odd, the equation goes in the "Odds" column. If the equation totals exactly 10, it is written in the "Exactly 10" column. 4. Players take turns until they have rolled at least 10 times. 5. Winner of the game is the person with the most in the Exactly 10 column.		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.



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Review
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Please recap what we did today
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Three Whats
Ask the following three what questions:
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what opportunities might you have to do this same thing in the real world?
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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)
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:	2 <sup>nd</sup> Grade
Lesson Title:	Pick One
Focus:	Math vocabulary, comparing numbers, addition

Materials.		
White boards D	ecks of cards	< / > cards (attached to this lesson plan.)
Crayolas V	ocabulary Notebooks	
Socks D	eck 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")	
Write si neighbo	Problem of the Day x numbers that are greater than 25 on your white board. Share them with your or and explain why you know that these number are more than 25.	*Activity → Teachable Moment(s) <i>throughout</i> During the lesson check in
	Fact Practice	with students repeatedly.
Forehe	ader Divide students into trios. Give each trio a deck of cards without face cards and	Check in about what is happening and what they are thinking.
2.	Shuffle the deck and give all of the cards to the referee who will be "judging" the	Take advantage of any teachable moments.
3.	On go, players are each handed a card by the referee and WITHOUT looking, put the card face out on his/her forehead	Stop the class and focus on a student's key learning or understanding. Ask open-
4.	The referee adds the two numbers together and states the answer	ended questions to
5.	Each player looks at the other person's exposed number and names his/her own number	determine what the rest of the group is thinking.
6.	Person who wins (accuracy and time), collects both cards	When possible, engage
7. 8.	Play continues until all cards are gone. Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee	students in a "teach to learn" opportunity and have the student become the teacher.



Math Vocabulary		It is important to review
Word for Today: Review of the symbols < and >		academic math vocabulary
Description: These two symbols mean greater (or bigger) than and less (or smaller) than. They are used to compare numbers. The pointed end always points to the smallest of the two numbers. If numbers are equal, these symbols would not be used.		Complete the Vocabulary notebook for each word.
Have students share the Vocabulary Notel additions or changes.	books in pairs, discussing the word, making any	When possible, have students experience the word (Ex. 4 students creating a
Vocabulary Notebook Sample:		right angle, multiple students
New Word	My Description	acting out an equation)
< and >	Ha way to compare numerals by saying they are greater or less than another value	be made from ½ of a composition book.
Personal Connection	Drawing	
7 is > than 5 but 7 is < 9.	<and></and>	
1	Activity	Focus on having young
L P	Activity ick One	Focus on having young people "compete" in pairs or small groups. Once a game
P Demonstrate: Tell students that the activity greater than or less than another number. cards that does not have 10s, face cards of Deal each player 3 cards. The players eac cards. For example, if the player draws a 4 645, or 654. After each player has made h player one draws a  card. If player 1 dr number is less that player 1's, he/she wins greater than player 1's (which means that h 1 wins the three cards. Repeat play several times until students un out the winner as the volunteers turn the w card. The person who draws the  cards switc Pass out the supplies Divide students into pairs	Activity ick One y for today is predicting whether a number will be Ask for 2 volunteers. Show students the deck of r jokers. Show them the < and > cards as well. ch make a three digit number by arranging the 4, 5, and 6, he/she can make 456, 465, 546, 564, iis/her number and written it on the white board, aws a less than card, if the opposing player's the 3 cards. If the opposing player's number is Player 1 has the number "less than", then Player inderstand the game. Have the "audience" call hite board for all to see and then draws the	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.
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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>Ack them to comment on what they did today that was like comothing they had done before execut in one</li> </ul>

- 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.



<	<	<
UP 1	UP 1	UP ↑
<	<	<
UP ↑	UP 1	UP 1
>	>	>
UP 1	UP 1	UP ↑
>	>	>
UP ↑	UP î	UP 1



Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	Hundred's Chart
Focus:	Math vocabulary, addition, subtraction, odd numbers and even numbers

Materials:
White boards
Crayolas
Socks

Vocabulary Notebooks Hundred's Chart (attached to this 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?





2		
3. Have student roll 2 dice, total the numbers in the ladder, writing the s	e pips and then add that number to each of the um to the right of the number	
Math V Word for Today: odd number and even r Description: Every number is either an od is one that you say when you count by 2's. 22, 24, 26, 28, 30 and so on. An odd numb counting by 2's. For example: 1, 3, 5, 7, 9, Students review the entry made into the Vor changes or additions that are necessary Vocabulary Notebook Sample: New Word Odd and even	<b>/ocabulary</b> <b>number</b> d number or an even number. An even number For example: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, er is one that you do not say when you are 11, 13, 15, 17 19, 21, 23, 25, 27, 29 cabulary Notebook with a partner, making any <b>My Description</b> Odd number: 1, 3, 5, 7 Even number: 2, 4, 6, 8	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.
Personal Connection Can you count in odd numbers?	Drawing 3, 5, 7, 9, 11	
A Hundr Demonstrate: Show students a Hundred's you the purpose of the chart. Explain to stu determine all of the different ways to identify numbers from 1 – 20. Have several different volunteer circle the numbers that are said w 18, 20) with a blue crayola. Have students now skip count by 3's, 4's, 5' the numbers in red. Ask them how many nut Repeat the process with 4s, 4, 8, 12, 16, 20 20, 25, 30, 35, 40, 45, 50, (color yellow) and 100 (be sure to go 100) (color orange) At the end, ask students to tell you how man (the answer is 50 of each). Students may b even if it is circled. Remind them that even 2's, not other numbers. Hundred's Chart is attached.	ctivity red's Chart Chart. Talk about the chart and have them tell dents that they will be working in pairs to y even numbers. Have a chart up with the at colors of crayons. Using a blue crayola, have then counting by 2's (2, 4, 6, 8, 10, 12, 14, 16, 's, and 10"s. When they skip count by 3's, circle umbers are circled more than once? 0, 24, 28, 30, 32, 36, (color purple) , 5, 10, 15, d finally 10s 10, 20, 30, 40, 50, 60, 70, 80, 90, hy numbers are EVEN and how many are ODD e confused and want to count a number as numbers are those you say when counting by	Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.



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

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

- 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.



### Hundreds Chart

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



Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	Place Value
Focus:	Math vocabulary, basic operations, place value

Materials:	
White boards	Vocabulary Notebooks
Crayolas	cards without tens, face cards and jokers
Socks	Set of Smallest / Largest Cards for each group

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 Jorge says the 3 tens equal 30 ones. Is he right? Tell how you know.	*Activity → Teachable Moment(s) <i>throughout</i>	
<ol> <li>Fact Practice Bump It Up! Add A Zero</li> <li>Divide students into pairs</li> <li>Give each pair a white board and a deck of cards (without face cards, jokers, or 10s)</li> <li>The object of this fact practice is to sum numbers until you reach 1,000.</li> <li>Student draws 2 cards, adds the value of the cards together, multiplies by ten and writes the total on the sheet.</li> <li>It is not the other person's turn to do the same</li> <li>When play returns to the first player, the process is repeated, although this time, the totals are added together.</li> <li>First person to 1,000 wins.</li> <li>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.</li> </ol>	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	It is important to review	
Word for Today: place value	academic math vocabulary often throughout the day.	



<b>Description:</b> In our number system the position a number is located in will determine its value. Numbers are written in clusters of 3. The number furthest to the right is in the ones place, the middle numeral is in the tens place, and the number to the left is in the hundreds place. If you have a three digit number—528 you are in reality saying 500 + 20 + 8. In other words, the 5 stands for five hundred, the 2 for twenty, and the 8 for simply that—8. As numbers get larger, the pattern of three numbers stays the same, but a comma is inserted to let you know if the number is for thousands, million, billions, trillions, and so on. As an example, 528,000 is said 5 hundred twenty-eight thousand, with the comma representing the word thousand. 528,528,528 would be read: 5 hundred twenty-eight million, 5 hundred twenty-eight thousand, 5 hundred twenty-eight.		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:		
New Word	My Description	
Place value	Ones, tens, hundreds, thousands, ten thousands place	
Personal Connection	Drawing	
The place a numeral is in determines the value of the numeral.	4,387	
Activity Place Value         Demonstrate:       Show students three cards. Ask them to help you arrange the cards to be the smallest number possible. Write it on the board. Ask students if they agree and why they believe this is the smallest number. Now ask them to help you arrange the cards to be the largest possible number. Repeat the process. Now ask students to help you make any three digit number using the cards.         Explain that this is the process they will go through. Tell them that they will be in groups of 2- 3 students. They will know who "wins" each number by drawing a smallest or largest card, indicating which player will win the cards—the one with the smallest number or the largest number when compared.         Directions:       1. Shuffle the two decks of cards. Place each face down in the center.         2. Each player receives 3 number cards. He/she makes a three digit number.         3. Players read the 3 digit number to each other.         4. One player draws a card from the smallest/largest deck. The player with the larger or smaller number wins all 6 cards. If the numbers are exact, then those cards are put back in the deck of numbers.         5. Repeat until all number cards are gone.		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.



Closin	g		
Review	N		
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.



Smallest and Largest Cards

smallest	smallest	smallest
smallest	smallest	smallest
smallest	smallest	smallest
largest	largest	largest
largest	largest	largest
largest	largest	largest



Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	STRETCH It Out
Focus:	Math vocabulary, basic operations, number notation

### Materials: White boards

Crayolas Socks Vocabulary Notebooks 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") \*Activity > Teachable Problem of the Day Moment(s) throughout Sometimes we read story problems that must be solved by the creation of a number sentence. Today we are going to write a story problem that the following number sentence represents. During the lesson check in with students repeatedly. Check in about what is 13 + 9 =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. determine what the rest of 6. Student adds or subtracts the cards. the group is thinking. 7. Student writes his/her problem on the white board, writing a complete number When possible, engage students in a "teach to learn" sentence. opportunity and have the 8. Students take turns drawing cards and creating problems. student become the teacher.



Math Vocabulary Word for Today: expanded notation Description: Expanded notation is a way to write a number that represents each numeric value of the place the numeral is in. Example: 324 in expanded notation is 300 + 20 + 4. In expanded notation, the numerals to the right of the number are represented by 0 which holds the place of the other numbers. Have students complete his/her Vocabulary Notebook. Vocabulary Notebook Sample:		It is important to review academic math vocabulary often throughout the day. Complete the Vocabulary notebook for each word. When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students
New Word	My Description	acting out an equation). Vocabulary Notebooks can
Expanded notation	Writing a number so you can see what it is by separating hundreds, tens, and ones	be made from ½ of a composition book.
Personal Connection	Drawing	
We had an assignment to write the numbers in expanded notation.	<u>200 + 60 + 2</u>	
Activity S-T-R-E-T-C-H It Out!		Focus on having young people "compete" in pairs or small groups. Once a game
<b>Demonstrate:</b> Numbers can be written in expanded notation. This is helpful for students when they are learning about place value. Sometimes the numeral 4 is much more than simply $\odot \odot \odot = 4$ . In the number 41, the 4's value is 40, in 411, the 4's value is 400, and so on. Today we are going to write numbers in expanded notation. Model: $368 = 300 + 60 + 8$		is mastered you can utilize it in the "When Homework Is Complete" center.
<ol> <li>Divide students into pairs, giving ex you have them)</li> </ol>	ach pair 3 6-sided dice (9 sided would be perfect if	
<ol> <li>Student rolls a number and decided how to arrange the die so the number can be read. For example, if the roll is 3, 6, and 7, the number could be 367 or any other arrangement of those numbers.</li> </ol>		
<ol> <li>Students write the number and then write the number in expanded notation. 367</li> </ol>		
<ul> <li>would become 300 + 60 + 7 = 4,367</li> <li>Pair should roll 10 different numbers, writing the number in both the standard and expanded notation formats.</li> </ul>		
5. Pairs then select one number to share with the group in both formats.		



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!)
<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)
• Ask them to comment on what they did today that was like something they had done before except in one

- 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:	2 <sup>nd</sup> Grade
Lesson Title:	Expanded and Contracted Notation
Focus:	Expanded Notation

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Double 9 Dominoes
Socks	four 6-sided dice per pair

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 Look at these numbers written in expanded notation. Combine them into the standard form.	*Activity → Teachable Moment(s) <i>throughout</i>	
Look at these numbers written in expanded notation. Combine them into the standard form. 50 + 3 = 200 + 40 + 7 900 + 8 500 + 70 + 3 Fact Practice Spots and Dots There is a master of Double 9 Dominos attached to this lesson plan. You will need 1 full set for each pair of students in your class. It is recommended that you duplicate on card stock and if possible, laminate for use again in the future. Players sit across from each other. Dominoes are between them, face (or spots) down. Each student draws a domino and writes the addition problem on their white board, adding the numbers represented by the spots Example: Domino drawn is Addition: $2 + 3 = 5$	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 V	It is important to review	
Word for Today: expanded notation	academic math vocabulary	
Description: Expanded notation is a way to value of the place the numeral is in. Example expanded notation, the numerals to the right of the place of the other numbers. Have students share the Vocabulary Noteboor additions or changes.	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).	
New Word	My Description	Vocabulary Notebooks can
Expanded notation	Writing a number by showing all parts in an expanded form	be made from ½ of a composition book.
Personal Connection	Drawing	
Write the number in expanded notation.	300 + 40 +8	
Ad	tivity	Focus on having young
Expand a Demonstrate: Write the following numbers of 731, (900 + 30 + 1), Ask students to expand the numbers that are the numbers that are already in expanded not Write each number in BOTH formats as stude	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>Divide students into pairs</li> <li>Give each pair a deck of cards with th</li> <li>Ask students to draw four cards, arra then to write that number in both the students should create 10 numbers</li> <li>Invite pairs of students to share the n</li> </ol>		



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!)
<ul> <li>Ask students to think about what they did today in math</li> </ul>
<ul> <li>Ask them to comment on what they did today was something they already knew how to do (Confirmation)</li> </ul>
Ask them to comment on what they did today that uses like comething they had done before execut in one

- 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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Component:	Math
Grade Level:	2 <sup>nd</sup> Grade
Lesson Title:	Tic Tac Toe 2 2
Focus:	Math

#### Materials:

Enlarged Tic Tac Toe Boards—one for each pair of students (duplicate on 11" x 17" if you can 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")	teams
Activity	
Tic Tac Toe	
1 Divide students in arouns of 2	

- 1. Divide students in groups of 2
- 2. Give each pair a Tic Tac Toe Board (enlarge from this lesson plan)
- 3. In order to place an "X" or and "O" in a space, students must be able to complete the math problem in the space
- 4. Students should apply "paper, rock, scissors" to determine who will go first (best 2 out of 3)
- 5. Winner receives a High Five

		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



# Tic Tac Toe Math—2<sup>nd</sup> Grade

Order the numbers below from the largest to the smallest (place the largest number on top and the smallest number on bottom. 789 897 987 876	Complete this problem	n: 1 <b>7</b> 1 <u>4</u>	Separate these numbers into odds and evens: 639 468 900 321 735 957	
Complete this problem	Each of the numbers it, either in the ones, t place. Match the 7 to represents.	below has a 7 in ens or hundreds the place value it	Write the following number in expanded notation: <b>749</b>	
301	471	ones		
<u>-187</u>	714	tens		
	417	hundreds		
Write this number that is written in expanded notation in the standard form.	What are the next thre pattern? Write them of	ee figures in this on the lines.	Write a number sentence for this story	
400 + 30 + 7	₩₩		Johanna has 11 T-Shirts. Their new friend Ruby has 19 T-Shirts. How many T-Shirts do the girls have together?	