

Component	Math
Grade Level:	Kindergarten
Lesson Title:	Building Shapes
Focus:	Building Shapes

### Materials:

White boards Crayolas Socks (for erasers) Pencils Activity at the end of the lesson plan Marshmallows (tiny) Toothpicks

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What are some of the shapes that you know the name of? What does a square look like? How is similar to a rectangle? How are squares and rectangles different? What does a triangle look like? How is a triangle like a square? How is it different? What is your favorite shape? Draw it on your white board.

### Content (the "Meat")

Problem of the Day Today is Tuesday. Yesterday was	*Activity → Teachable Moment(s) <i>throughout</i>	
Tomorrow will be	During the lesson check in	
Fact Practice	with students repeatedly.	
<b>Counting</b> During this next 11 days you will be working with Kindergartners to reinforce number sense	Check in about what is happening and what they are thinking.	
and counting. It is important that Kindergartners understand that when they say a	5	
particular number that the word or words they say actually represents a physical number of objects. For the next 11 days, we will ask children to represent a certain number by	Take advantage of any teachable moments.	
drawing a domino and counting the dots on the domino and then recording the total number of dots.	Stop the class and focus on a student's key learning or understanding. Ask open-	
Directions:	ended questions to	
1. Divide children into pairs.	determine what the rest of	
2. Give each pair a set of dominoes and 2 white boards, pens/crayons.	the group is thinking.	
3. Each child selects a domino and then draws a picture of <b>the domino</b> that shows the number that is represented by the dots on the domino.	Engage students in a "teach to learn" opportunity and	
4. When they have drawn the domino, child should write the number that is represented.	have the student become the teacher.	



Math Vocabulary         Word for Today: trapezoid         Description: A trapezoid is a shape that has 4 sides. However, it is not a square or a rectangle. A trapezoid has 2 sides that are equal in length and are opposite of each other on the sides. The other 2 sides are not the same, one is shorter than the other. A trapezoid looks like this:         When you look at the trapezoid you can see a triangle with a flat top rather than a point on the top.         Ask children to draw a trapezoid on their white boards. Ask them which sides of the trapezoid have the angle of a triangle. Place a piece of paper over half of the trapezoid so the children can see the how the sides mirror each other. Count the number of sides with the students. Ask them where they would need to connect the toothpicks with marshmallows to make the shape.	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).
Activity	Focus on having young
Building ShapesKindergartners need hands-on, concrete experience when it comes to building shapes.There are several key shapes that we will want Kindergartners to build:triangle	people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.
square	
rectangle	
parallelogram	
hexagon	
trapezoid	
One at a time, draw these shapes on the board, and then ask students to create these shapes using marshmallows and flat toothpicks.	
As children make each shape, have them practice saying the name. When finished with all of the shapes probably the end of the second day, have students point to them as you call them out.	
Complete the following chart for each change as well:	
Complete the following chart for each shape as well: Shape # of toothpicks # of marshmallows	



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	Closing	
	Review	
Say:		
• Please recap what we did today.		
• Did we achieve our objectives?		
	Debrief	
What did you like about what we did today in	n math?	
What would you like to do more of the next ti	me we do math?	
What is a number?		
What is a letter?		
Are they the same?		

- 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.



\*Activity  $\rightarrow$  Teachable

Moment(s) throughout During the lesson check in with students repeatedly.

happening and what they are

Stop the class and focus on a

Check in about what is

Take advantage of any

student's key learning or

understanding. Ask open-

determine what the rest of

teachable moments

ended auestions to

the group is thinking.

When possible, engage

opportunity and have the

students in a "teach to learn"

student become the teacher.

thinking.

Component	Math	
Grade Level:	Kindergarten	
Lesson Title:	Title: Building Shapes Data	
Focus:	Building Shapes	

Materials:	
White boards	Activity at the end of the lesson plan
Crayolas	marshmallows (tiny)
Socks (use as an eraser)	toothpicks
Glue sticks	

Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What are some of the shapes that you know the name of? What does a square look like? How is similar to a rectangle? How are squares and rectangles different? What does a triangle look like? How is a triangle like a square? How is it different? What shape did we make yesterday that you really liked? Draw it on your white board.

### Content (the "Meat")

### Problem of the Day

Name the months of the year in order, beginning with January.

#### Fact Practice Counting

During this next 10 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of objects. For the next 10 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.

### Directions:

- 1. Divide children into pairs.
- 2. Give each pair a set of dominoes and 2 white boards, pens/crayons.
- 3. Each child selects a domino and then draws a picture of **the domino** that shows the number that is represented by the dots on the domino.
- 4. When they have drawn the domino, child should write the number that is represented.



Math Vocabulary Word for Today: hexagon Description: A hexagon is a shape that has 6 sides (this is not a stop sign). A hexagon has sides that are angled like a triangle. You can make 2 trapezoids and put them together on the long side and you will have a hexagon. Ask children to draw a hexagon on their white boards. Ask them which sides of the hexagon have the angle of a triangle. Place a piece of paper over half of the hexagon so the children can see the trapezoid. Count the number of sides with the students. Ask them where they would need to connect the toothpicks with marshmallows to make the shape.	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).
Activity Building Shapes Kindergartners need as hands-on, concrete experience when it comes to building shapes. There are several key shapes that we will want Kindergartners to build:	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
triangle $\Delta$	Complete" center.
square	
rectangle	
parallelogram	
hexagon	
trapezoid	
One at a time, draw these shapes on the board, and then ask students to create these shapes using marshmallows and flat toothpicks.	
As children make each shape, have them practice saying the name. When finished with all of the shapes probably the end of the second day, have students point to them as you call them out.	
Complete the following chart for each shape as well:	
Shape     # of toothpicks     # of marshmallows	

|--|

	Closi	ng
	Revi	ew .
Say:		
•	Please recap what we did today.	
•	Did we achieve our objectives?	

Debrief

What did you like about what we did today in math? What would you like to do more of the next time we do math? Can you count to 20? If yes, then do. If no, then how high can you go. Are numbers and letters the same?

- 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:	Kindergarten
Lesson Title:	Symmetry #1
Focus:	Symmetry

Materials:		
White boards	pencils	
Crayolas	paint	
Socks (for an eraser)	straws	
Paper	construction paper	

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

Draw a picture of a face. Be sure to put on the eyes, the nose, the mouth, and the ears. When you have finished the face, draw a vertical line down the center. Do you have an eye on both sides? Do you have an ear on both sides? Do you have  $\frac{1}{2}$  of a nose on both sides? Do you have  $\frac{1}{2}$  of a mouth on both sides? Although not perfect, you should have the same on both sides. It is like when you look in a mirror and you see the same face looking back at you. When you have a mirrored image it is called symmetry. You drew a face that had symmetry.

Content (the "Meat")					
Problem of the Day Roll 2 dice. How many dots (pips) are on the dice. Draw a picture to show the two dice.	*Activity → Teachable Moment(s) <i>throughout</i>				
Fact Practice Counting 1:1 Correspondence	During the lesson check in with students repeatedly.				
During this next 9 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a	Check in about what is happening and what they are thinking.				
particular number that the word or words they say actually represents a physical number of objects. For the next 9 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.	Take advantage of any teachable moments.				
<ul> <li>Directions: <ol> <li>Divide children into pairs.</li> <li>Give each pair a set of dominoes and 2 white boards, pens/crayons.</li> </ol> </li> <li>Each child selects a domino and then draws a picture of the domino that shows the number that is represented by the dots on the domino.</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.				
<b>4.</b> When they have drawn the domino, child should write the number that is represented.	When possible, engage students in a "teach to learn" opportunity and have the				



	student become the teacher.
Math Vocabulary           Word for Today: symmetry           Description: Symmetry is a word that describes a mirror image, that something is the same on two sides (or nearly the same). Give children a piece of paper. Ask them to make a hamburger fold. Ask them to tell how the rectangles on either side of the fold are the same. Now ask them to fold the paper with a hot dog fold and ask the same question. Ask them to think about their own bodies. What body parts would they find on both sides if they were to do a "hot dog" fold on themselves. Would this be symmetry? (yes) Ask them to think about what would be on both sides if they were to do a hot body fold on themselves. Would this be symmetry? (no)           Activity           Symmetrical Designs           Symmetry is another way of saying mirror image. If you were to take a piece of paper and fold it in half, if the picture or image on the page is symmetrical, what you can see on one side of the page is exactly what you can see on the other.           Today we are going to do an art activity that will demonstrate what is meant by symmetrical.           Materials you will need: white construction paper, folded in half with a hot dog fold, straw for each student, basic colors of tempera paint: red, green, yellow, blue, orange, purple, and black. The tempera paint should be inquid, and you will want in to be liquid enough to be blown across the page. If possible, have an older student for each color to support you. Open the folded paper and on one side of the paper add a drop or two of three different colors that the child selects. The paint should be in three different location on the same side of the page (stay as far from the mid line as you can.           Give the child a straw and have them blow the paint around, trying to stay on	student become the teacher. 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). 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:		
<ul> <li>Please recap wl</li> </ul>	nat we did today.	
• Did we achieve	our objectives?	



### Debrief

What did you like about what we did today in math? What would you like to do more of the next time we do math? What is a number? What is a letter? Are they the same?

- 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:	Kindergarten
Lesson Title:	Symmetry #2
Focus:	Symmetry

### Materials:

White boards Crayolas Socks (for erasers) Glue sticks Activity at the end of the lesson plan

Opening

#### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

Draw a picture of a body. Be sure to put on arms and legs on both side. When you draw a face be sure to include eyes, ears, nose and mouth. When you have finished the drawing, fold the paper in half like a hot dog. Ask children if they have a picture with some symmetry. Ask them to list the things that are the same on both sides. Now have them fold the body in a hamburger fold. Ask them what happened to the symmetry. Look around the room and have children identify things that have symmetry and things that do not. Ask them which letters of the alphabet have symmetry.

Content (the "Meat")				
<b>Problem of the Day</b> What are the next three items in this pattern? Draw your answer.	*Activity <del>→</del> Teachable Moment(s) <i>throughout</i>			
☆☆♪◆☆☆♪◆☆,,,	During the lesson check in with students repeatedly.			
Fact Practice	Check in about what is happening and what they are thinking.			
Counting 1:1 Correspondence	Take advantage of any teachable moments.			
During this next 8 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of objects. For the next 8 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.	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.			
<ol> <li>Divide children into pairs.</li> <li>Give each pair a set of dominoes and 2 white boards, pens/crayons.</li> <li>Each child selects a domino and then draws a picture of the domino that shows the</li> </ol>	When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.			



number that is represented by the dots on the domino.	
<ol> <li>When they have drawn the domino, child should write the number that is represented.</li> </ol>	
Math Vocabulary Word for Today: symmetry	It is important to review academic math vocabulary
<b>Description:</b> Ask children to describe the meaning of symmetry to you. Ask them to	often throughout the day.
recount the experiences they have had the past two days that have helped them to understand symmetry. Look around the room and find things with symmetry (this is an	Complete the Vocabulary notebook for each word.
extension of an earlier activity today). Ask them about the flag and if there is symmetry. (no) Ask them about the letters "o", "m", "s", and "a". Which have symmetry and which do not? Will the way you "fold" the letter in ½ make a difference in symmetry?	When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).
Activity	Focus on having young
Symmetry Symmetrical Designs Symmetry is another way of saying mirror image. If you were to take a piece of paper and fold it in half, if the picture or image on the page is symmetrical, what you can see on one side of the page is exactly what you can see on the other. Today we are going to do another activity that will demonstrate what is meant by symmetrical.	people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.
Symmetry	
<ol> <li>Directions:         <ol> <li>Give each child a piece of graph paper (attached to the lesson plan.</li> <li>Show the child the mid line of the graph paper.</li> <li>Tell the child that using crayons, he/ she will color in some of the squares of the graph paper, using different colors.</li> </ol> </li> <li>Explain that the child can only color on one side of the mid line. (Actually fold the paper pack so he/she cannot even see the other half.</li> <li>When child is finished, he/she should fine another student to trade papers with and he/she should create a mirror image—remember that what is near the midline, stays near the midline, and what is in the corners stays in the corners, and so on.</li> </ol>	



	Closing	
	Review	
Say:		
• Please recap what we did today.		
<ul> <li>Did we achieve our objectives?</li> </ul>		
	Debrief	
What did you like about what we did today in math	?	
What would you like to do more of the next time we	e do math?	
What is a number?		
What is a letter?		
Are they the same?		

- 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.



# Graph Paper—Kindergarten—Symmetry



Component:	Math
Grade Level:	Kindergarten
Lesson Title:	Graphing Skittles
Focus:	Graphing

Materials:	
White boards	Activity at the end of the lesson plan
Crayolas	Skittles for each group
Cereal	

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What do you know about graphing? What can a graph look like? If we were to graph the number of boys and girls in this classroom, what would we need to do? Create the graph and write it on the board.

Content (the "Meat")				
Content (the "Meat")         Problem of the Day         If you have 5 cookies and you eat 2 of them, how many cookies do you have left? Draw a picture to show your answer.         Fact Practice Counting 1:1 Correspondence         During this next 7 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of objects. For the next 7 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.         .       .         Directions:       1. Divide children into pairs.         2. Give each pair a set of dominoes and 2 white boards, pens/crayons.       3. Each child selects a domino and then draws a picture of the domino that shows the number that is represented by the dots on the domino.         4. When they have drawn the domino, child should write the number that is represented.	*Activity → Teachable Moment(s) throughout During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open- ended questions to determine what the rest of the group is thinking. When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.			
Math Vocabulary	It is important to review			



<b>Description:</b> A graph is a picture that gives you information quickly. Draw a graph on the board or chart that has three columns, one labeled paper, one labeled rock, and the third labeled scissors. Show the children how to make each symbol. Explain that you are going to count to three and then the children will make paper, rock, or scissors. Practice several times so they know how to do this. Then tell children you are going to graph which sign they make. Do the activity and then record the number of children in each group. On the graph record a happy face for each child in each column. Ask them to tell you what information they know by looking at the graph.	nath vocabulary ghout the day. ne Vocabulary
	aving young
<b>Viapining</b>	npete" in pairs or s. Once a game
Graphing	l you can utilize it n Homework Is
Today students will work in groups of 3-4 and make a graph of Skittles. At the end of the exercise, after students have shared the graph that they have made with the group, students may divide the Skittles up among themselves for a treat.	
Skittles Materials you will need: graph paper, small bag of Skittles for each group, crayons, paper plate.	
After children are divided into groups, model for them how they will open the bag of Skittles and then graph the number of Skittles by color. Demonstrate be counting the number of red Skittles and then coloring in that many squares in red. Continue the demonstration by counting the yellow Skittles and coloring in that number of squares in yellow. Continue until all of the Skittles have been charted.	
Ask if the children have questions. Answer them and then distribute the supplies for the children to replicate exactly what was modeled.	
At the end, have children share the bar graphs with the other groups.	



	Closing	
	Review	
Say:		
• Please recap what we did today.		
• Did we achieve our objectives?		
	Debrief	
What did you like about what we did today in ma	h?	
What would you like to do more of the next time	ve do math?	
What is a number?		
What is a letter?		
Are they the same?		

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

Ask students to think about what they did today in math.

- 1. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
- 2. 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)
- 3. Ask them to comment on something (if anything) they have learned today that was brand new to them.



Graph Paper for Skittles, Fruit Loops, Gummy Gears, Button Sort



Component	Math
Grade Level:	Kindergarten
Lesson Title:	Graphing Pennnies
Focus:	Graphing

### Materials:

White boards Crayolas Socks (for erasers) Glue sticks Activity at the end of the lesson plan pennies (real or plastic small container

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What do you know about graphing? What can a graph look like? If we were to graph the number of people wearing white tennis shoes compared to people wearing tennis shoes that have a color, what would that look like. Create the graph on the board. (If most children have white/colored shoes, use another descriptor.)

Content (the "Meat")						
Problem of the Day If you have 8 cookies and someone gives you 3 more cookies, how many cookies do you	*Activity <del>→</del> Teachable Moment(s) <i>throughout</i>					
have all together? Fact Practice Counting 1:1 Correspondence	During the lesson check in with students repeatedly. Check in about what is					
During this next 6 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of	happening and what they are thinking. Take advantage of any teachable moments.					
<ul> <li>objects. For the next 6 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.</li> <li><b>Directions:</b> <ol> <li>Divide children into pairs.</li> <li>Give each pair a set of dominoes and 2 white boards, pens/crayons.</li> <li>Each child selects a domino and then draws a picture of <b>the domino</b> that shows the number that is represented by the dots on the domino.</li> <li>When they have drawn the domino, child should write the number that is represented.</li> </ol> </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.					

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Math Vocabulary Word for Today: graph Description: A graph is a picture that gives you information quickly. Draw a graph on the board or chart that has three columns, one labeled walk, one labeled ride, and the third labeled bus. Explain that you are going to graph the way children get to school. Ask children to share how they get to school. Do the activity and then record the number of children in each group. On the graph record a happy face for each child in each column. Ask them to tell you what information they know by looking at the graph.	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).
Activity Graphing Graphing is a process that allows you to make sense of information. For example, you could make a graph of how many children walk to school, are driven in a car, and maybe even ride the bus. You could also make a graph that would show how many children are more in each month. If you use a bar graph it is easy to tell which item has the most, which the least, and everything in between. Today students will work in groups of 3-4 and make a graph pennies—heads or tails. At the end of the exercise, after students have shared the graph that they have made with the group, students will collect the pennies that they used and return them to you. (If you don't want to use real pennies, you can use plastic pennies purchased through Lakeshore or other school supply store. <b>Penny Graphs</b> Materials you will need: graph paper, 2 oz Dixie cup of pennies for each group, crayons, paper plate. After children are divided into groups, model for them how they will take one penny at a time and flip it, having it land on either heads or tails. Each time the coin shows heads, the children will draw a penny in the graphing square for heads. Each time the coin shows tails, the children have questions. Answer them and then distribute the supplies for the children to replicate exactly what was modeled. At the end, have children share the bar graphs with the other groups.	Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

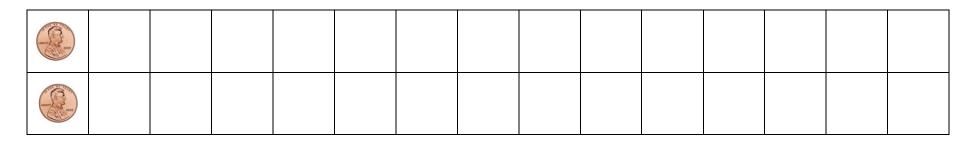


	Closing
	Review
Say:	
Please recap what we did today.	
<ul> <li>Did we achieve our objectives?</li> </ul>	
	Debrief
What did you like about what we did today in math?	
What would you like to do more of the next time we of	do math?
What is a number?	
What is a letter?	
Are they the same?	

- 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.



Kindergarten: Penny Graph Heads



Tails

ONE CENTY							
ONE CENT							



Component	Math
Grade Level:	Kindergarten
Lesson Title:	Graphing Fruit Loops
Focus:	Graphing

Materials:	
White boards	decks of cards
Crayolas	Activity at the end of the lesson plan
Socks (use for erasers)	Fruit Loops
Glue sticks	small Dixie cups

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What do you know about graphing? What can a graph look like? If we were to graph the color of your eyes, what colors would we need to include in our graph? How would we set that up? How would we find out how many people there were in each category? What other things could we graph?

Content (the "Meat")							
<b>Problem of the Day</b> Count aloud from 1 – 30. Pick one of the numbers that you said and draw a picture to show	*Activity → Teachable Moment(s) <i>throughout</i>						
that number.	During the lesson check in						
Fact Practice	with students repeatedly.						
Counting 1:1 Correspondence	Check in about what is						
During this next 5 days you will be working with Kindergartners to reinforce number sense	happening and what they are thinking.						
and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of objects. For the next 5 days, we will ask children to represent a certain number by drawing	Take advantage of any teachable moments.						
a domino and counting the dots on the domino and then recording the total number of dots.	Stop the class and focus on a student's key learning or						
Directions:	understanding. Ask open-						
1. Divide children into pairs.	ended questions to determine what the rest of						
2. Give each pair a set of dominoes and 2 white boards, pens/crayons.	the group is thinking.						
3. Each child selects a domino and then draws a picture of <b>the domino</b> that shows the	When possible, engage						
<ul><li>number that is represented by the dots on the domino.</li><li>4. When they have drawn the domino, child should write the number that is represented</li></ul>	students in a "teach to learn" opportunity and have the student become the teacher.						

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Math Vocabulary Word for Today: graph Description: A graph is a picture that gives you information quickly. Take one of the suggestions from the children during the earlier time frame. Ask the children to guide you step by step through the graph creation process. If they give a faulty instruction, either question the step at the time, or try to do what they have said and when you run into a snag, ask them to help you figure it out and then go back and start again. Children will learn as much from "not giving" the correct directions as they will from "giving" the correct instructions.	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).
Activity	Focus on having young
Graphing	people "compete" in pairs or small groups. Once a game
<b>Graphing</b> Graphing is a process that allows you to make sense of information. For example, you could make a graph of how many children walk to school, are driven in a car, and maybe even ride the bus. You could also make a graph that would show how many children are more in each month. If you use a bar graph it is easy to tell which item has the most, which the least, and everything in between.	is mastered you can utilize it in the "When Homework Is Complete" center.
Today students will work in groups of 3-4 and make a graph of Fruit Loops. At the end of the exercise, after students have shared the graph that they have made with the group, students may divide the Fruit Loops up among themselves for a treat.	
<b>Fruit Loops</b> Materials you will need: graph paper, small Dixie cup of Fruit Loops for each group, crayons, paper plate.	
After children are divided into groups, model for them how they will take the Fruit Loops out of the cup one at a time and then graph the number of Fruit Loops by color. Demonstrate be counting the number of red Fruit Loops and then coloring in that many squares in red. Continue the demonstration by counting the yellow Fruit Loops and coloring in that number of squares in yellow. Continue until all of the Fruit Loops have been charted.	
Ask if the children have questions. Answer them and then distribute the supplies for the children to replicate exactly what was modeled.	
At the end, have children share the bar graphs with the other groups.	



	Closing
	Review
Say:	
Please recap what we did today.	
• Did we achieve our objectives?	
	Debrief
What did you like about what we did today in mat	h?
What would you like to do more of the next time w	we do math?
What is a number?	
What is a letter?	
Are they the same?	

- 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.



Graph Paper for Skittles, Fruit Loops, Gummy Gears, Button Sort



Component	Math	
Grade Level:	Kindergarten	
Lesson Title:	Graphing Gummy Bears	
Focus:	Graphing	

### Materials:

White boards Crayolas Socks (for erasers) Glue sticks decks of cards Gummy Bears

Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What do you know about graphing? What can a graph look like? If we were to graph the color of your eyes, what colors would we need to include in our graph? How would we set that up? How would we find out how many people there were in each category? What other things could we graph?

Content (the "Meat")					
Problem of the Day Look at the following numbers and tell what number would come before and after the	*Activity → Teachable Moment(s) <i>throughout</i>				
number:	During the lesson check in with students repeatedly.				
88 5	Check in about what is happening and what they are thinking.				
11	Take advantage of any teachable moments.				
17	Stop the class and focus on a student's key learning or				
19	understanding. Ask open- ended questions to				
Fact Practice	determine what the rest of the group is thinking.				
Counting 1:1 Correspondence	When possible, engage				
During this next 4 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of	students in a "teach to learn" opportunity and have the student become the teacher.				





objects. For the next 4 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.	
<ul> <li>Directions: <ol> <li>Divide children into pairs.</li> <li>Divide children into pairs.</li> <li>Give each pair a set of dominoes and 2 white boards, pens/crayons.</li> <li>Each child selects a domino and then draws a picture of the domino that shows the number that is represented by the dots on the domino.</li> <li>When they have drawn the domino, child should write the number that is represented</li> </ol></li></ul>	
Math Vocabulary Word for Today: graph Description: A graph is a picture that gives you information quickly. Take one of the suggestions from the children during the earlier time frame. Ask the children to guide you step by step through the graph creation process. If they give a faulty instruction, either question the step at the time, or try to do what they have said and when you run into a snag, ask them to help you figure it out and then go back and start again. Children will learn as much from "not giving" the correct directions as they will from "giving" the correct instructions.	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).
Activity Graphing Graphing Graphing is a process that allows you to make sense of information. For example, you could make a graph of how many children walk to school, are driven in a car, and maybe even ride the bus. You could also make a graph that would show how many children are more in each month. If you use a bar graph it is easy to tell which item has the most, which the least, and everything in between.	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.
Today students will work in groups of 3-4 and make a graph of Gummy Bears. At the end of the exercise, after students have shared the graph that they have made with the group, students may divide the Gummy Bears up among themselves for a treat.	
Materials you will need: graph paper, Dixie cup of Gummy Bears for each group, crayons, paper plate.	
After children are divided into groups, model for them how they will take the Gummy Bears out of the cup and then graph the number of Gummy Bears by color. Demonstrate be counting the number of red Gummy Bears and then coloring in that many squares in red. Continue the demonstration by counting the yellow Gummy Bears and coloring in that number of squares in yellow. Continue until all of the Gummy Bears have been charted.	
Ask if the children have questions. Answer them and then distribute the supplies for the children to replicate exactly what was modeled.	



At the end, have children share the bar graphs with the other groups.

	Closing
	Review
Say:	
•	Please recap what we did today.
•	Did we achieve our objectives?
	Debrief
What o	did you like about what we did today in math?
What v	would you like to do more of the next time we do math?
What i	is one more than 6?
What a	are the numerals?

- 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.



Graph Paper for Skittles, Fruit Loops, Gummy Gears, Button Sort



Component	Math	
Grade Level: Kindergarten		
Lesson Title:	Lesson Title: Sorting and Graphing Buttons	
Focus: Sorting		

Materials:	
White boards	activity at end of the lesson plan
Crayolas	buttons
Socks (use for erasers)	2 oz. Dixie cup
Glue sticks	Graph paper

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What does it mean when you say that you are going to "sort" something? How would you go about deciding how you would sort items? What is an attribute? How would you use an attribute to make sorting easier?

Content (the "Meat")						
Problem of the Day On the white board or chart paper draw 3 clock faces, one showing 3:00, one showing 5:00,	*Activity → Teachable Moment(s) <i>throughout</i>					
and 1 showing 1:00. Ask children to identify the time on each clock and explain how they know.	During the lesson check in with students repeatedly.					
Fact Practice Counting 1:1 Correspondence	Check in about what is happening and what they are thinking.					
During this next 3 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of	Take advantage of any teachable moments.					
objects. For the next 3 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.	Stop the class and focus on student's key learning or understanding. Ask open-					
Directions:	ended questions to determine what the rest of					
1. Divide children into pairs.	the group is thinking.					
<ol> <li>Give each pair a set of dominoes and 2 white boards, pens/crayons.</li> <li>Each shild selects a domino and then draws a picture of the domino that shows the</li> </ol>	When possible, engage					
<ol> <li>Each child selects a domino and then draws a picture of the domino that shows the number that is represented by the dots on the domino.</li> </ol>	students in a "teach to learn'					
<b>4.</b> When they have drawn the domino, child should write the number that is represented.	opportunity and have the student become the teacher.					



Math Vocabulary Word for Today: sort Description: The word sort refers to a way of putting items into categories. There are many ways to sort items—color, size, shape, other attributes could be shiny, rough, light, heavy or any other attribute that it would make sense to sort by. To begin sorting, you need to look closely at the items, looking for the smallest of details. Today children are going to sort buttons. Show them several buttons. Ask them what attributes they see. List those on the board or a piece of chart paper. Share with children that there is no right or wrong attribute, they just need to decide on what attributes they are going to use.	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).
Activity Sorting Sorting Sorting is a way of looking at common objects and seeing not only the whole object but attributes of that object. For example, we will be looking at buttons. Some buttons have 2 holes while others have 4. Some buttons are small while others are large. Some buttons are round, while others are square. Some buttons are smooth while others have a bumpy surface. Some buttons are white while others are red. Demonstrate by taking out a handful of buttons (You may purchase these at local stores including Wal Mart). Hold up one button as ask students to identify attributes of the button (large, 2 holes, shiny, green). The challenge would then to see how many other buttons have those attributes. You might find a lot of green, large, 2 holed buttons, but few that are shiny. If that is the case, then you would remove shiny from the attribute list. Take out a second button and do the same thing, having students identify attributes and then finding other buttons that have the same attributes. (Color is an easy way to divide up the buttons but encourage children to think of criteria that is less obvious.) <b>Button Sort</b> Materials you will need: 2 oz Dixie cup of assorted buttons for each group, graph paper. After children are divided into groups, ask the children to divide the buttons into categories that will include all of the buttons. Have students sort the buttons and record that information on a graph. (2 holes, color, shiny)	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.
Ask if the children have questions. Answer them and then distribute the supplies for the children to replicate exactly what was modeled. At the end, have children share the bar graphs with the other groups.	



	Closing
	Review
Say:	
•	Please recap what we did today.
٠	Did we achieve our objectives?
	Debrief
What d	lid you like about what we did today in math?
What v	vould you like to do more of the next time we do math?
What is	s a number that is one less than 13? One less than 8? One less than 16?

- 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.



Graph Paper for Skittles, Fruit Loops, Gummy Gears, Button Sort



Component	Math
Grade Level:	Kindergarten
Lesson Title:	Graphing Cats
Focus:	Sorting

### Materials:

White boards

Crayolas Socks Activity at end of lesson plan

### Opening

### State the objective

Today we are going to learn some math vocabulary—words that we need to use when we talk about telling time. We are also going to practice some of the math skills that we will need to be excellent at math.

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

What does it mean when you say that you are going to "sort" something? How would you go about deciding how you would sort items? What is an attribute? How would you use an attribute to make sorting easier? What would be some attributes of a dog that you could use to help you sort?

### Content (the "Meat")

#### Problem of the Day

Beginning at 10, count backwards to 0. Write the numbers in the order you say them.

#### Fact Practice Counting 1:1 Correspondence

During this next 3 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of objects. For the next 3 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.

### **Directions:**

- 1. Divide children into pairs.
- 2. Give each pair a set of dominoes and 2 white boards, pens/crayons.
- **3.** Each child selects a domino and then draws a picture of **the domino** that shows the number that is represented by the dots on the domino.
- 4. When they have drawn the domino, child should write the number that is represented.

### \*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 Vocabulary Word for Today: sort Description: The word sort refers to a way of putting items into categories. There are many ways to sort items—color, size, shape, other attributes could be shiny, rough, light, heavy or any other attribute that it would make sense to sort by. To begin sorting, you need to look closely at the items, looking for the smallest of details. Today children are going to sort buttons. Show them several buttons. Ask them what attributes they see. List those on the board or a piece of chart paper. Share with children that there is no right or wrong attribute, they just need to decide on what attributes they are going to use.	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).
Activity Graphing Which Cat Do You Like the Best? Graphing is a process that allows you to make sense of information. For example, you could make a graph of how many children walk to school, are driven in a car, and maybe even ride the bus. You could also make a graph that would show how many children are more in each month. If you use a bar graph it is easy to tell which item has the most, which the least, and everything in between.	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.
Cat Graph Materials you will need: pictures of cats (attached to this lesson plan) and graph paper. One by one go through the different cats and ask the students which one is a favorite for them. Once you have reviewed all of the cats, have children select the cat that is their favorite and place it on the chart. When all children have placed a cat on the graph, then count the number for each cat. Create a graph that shows the results.	

	Closing
	Review
Say:	
• Please recap what we did today.	
• Did we achieve our objectives?	
	Debrief
What did you like about what we did today in n	ath?
What would you like to do more of the next tim	e we do math?
What is a number?	
What is a letter?	
Are they the same?	



- 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.



# Cat Graph



Component	Math
Grade Level: Kindergarten	
Lesson Title: Student Activity Choice	
Focus:	Review

### Materials:

White boards

materials you will need for all of the games you have played the past 10 days

Crayolas

Socks (use or erasers)

# Opening State the objective Today we are going to learn some math vocabulary—words that we need to use when we talk about numbers and shapes. We are also going to practice some of the math skills that we will need to be excellent at math. Gain prior knowledge by asking students the following questions Count from 10-1 backwards Count from 20 backwards Using your fingers show each of these numbers: 6, 3, 2, 8, 9, 7 Count from 1-10 forwards Count from 1-20 forward Practice the Penny, Nickel, Dime, and Quarter Chants Count by 10's to 100 Count by 5's to 50

Content (the "Meat")				
Problem of the Day Look at the chart. How many children like yellow best? Green best? Blue best?	*Activity <del>→</del> Teachable Moment(s) <i>throughout</i>			
	During the lesson check in with students repeatedly.			
	Check in about what is happening and what they are thinking.			
yellow       green       blue       #         Fact Practice       Counting 1:1 Correspondence	Take advantage of any teachable moments.			
During this next 3 days you will be working with Kindergartners to reinforce number sense and counting. It is important that Kindergartners understand that when they say a particular number that the word or words they say actually represents a physical number of				



objects. For the next 3 days, we will ask children to represent a certain number by drawing a domino and counting the dots on the domino and then recording the total number of dots.	
<ul> <li>Directions:</li> <li>1. Divide children into pairs.</li> <li>2. Give each pair a set of dominoes and 2 white boards, pens/crayons.</li> <li>3. Each child selects a domino and then draws a picture of the domino that shows the number that is represented by the dots on the domino.</li> <li>4. When they have drawn the domino, child should write the number that is represented.</li> </ul>	
Math Vocabulary Word for Today: review the words from this week	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).
Activity Today is a review day. Students should select from the following list of activities: Building Shapes Symmetry Skittles Penny Graphs Fruit Loops Gummy Bears Button Sort Cat Graph	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

What did you like about what we did today in math? What would you like to do more of the next time we do math? What is a number? What is a letter? Are they the same?

- 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.