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GRAPHING WITH SKITTLES

Data Management

Purpose: To display and interpret statistics through sorting data and making graphs

Skill: Graphing and Interpreting Results

Number of People: One - as many as available bags of Skittles

Directions:

1. Guess how many colors of each skittle there will be in your bag.
2. Open the bag and complete the histogram (bar graph) according to skittle colors. Use a ruler.
3. Draw a circle and make a pie chart to show color frequency.
4. Which graph is easier to make? Which is easier to read?
5. If all the candies were put back in the bag and one was taken out, which color would it most likely be?
6. Compare your graph with a friend's graph. If you combined your Skittles with your friend's Skittles, would the shape of your graph change? Try it out on a piece of graph paper.

EAT YOUR SKITTLES

PREDICTION AND PROBABILITY
Data Management



Purpose: Predict how many times each number will come up if you throw a dice 60 times.

Skill: Practicing predicting and learning about probability

Number of people One or small group

Directions:

1. Predict how many times each number will come up if you throw the die 60 times. Record your prediction.

2. Throw the die 60 times. Keep track of your throws by using the paper provided to cross out a number each time you throw. Also keep track of which number it lands on by marking in the chart provided.

3. Can you make a graph of your findings? Use the graph paper provided. If possible compare your graph to someone else's graph.

4. What do your findings say about the probability of throwing a six? A one? According to your graph, which number is most likely to be thrown?

1	2	3	4	5	6	7	8	9	1	1	1	1	1	1
									0	1	2	3	4	5
1	1	1	1	2	2	2	2	2	2	2	2	2	2	3
6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
3	3	3	3	3	3	3	3	3	4	4	4	4	4	4
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
4	4	4	4	5	5	5	5	5	5	5	5	5	5	6
6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

THE UPSIDE DOWN HAIR GRAPH Data Management



Purpose: To make a graph representing hair length of people in the classroom.

Skill: Graphing, comparisons

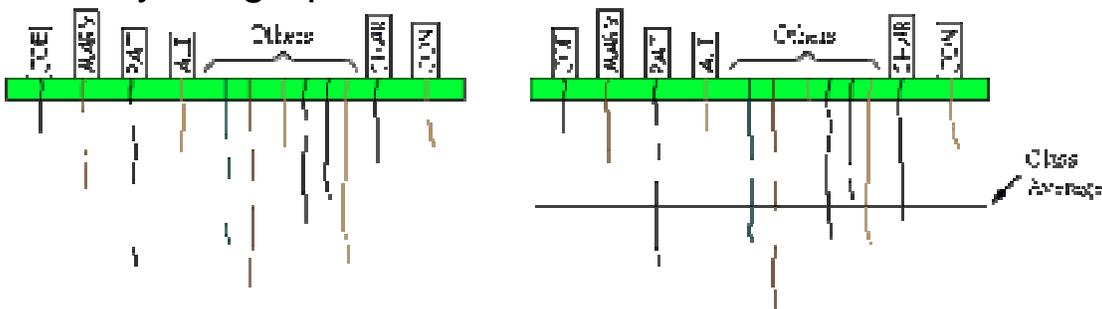
Directions:

1. Collect one hair from the head of a friend. Cut a piece of yarn equal to the length of the hair. Tape it to a line (as shown) and label it with the name of the individual.
2. Repeat this process until you have about 10 pieces of labeled yarn.
3. What do you notice about the chart?

How does it compare to an upside down bar graph?

Can you think of a way to find the average length of hair?

Can you make any generalizations about the length of boys' hair as compared to the length of girls' hair from your graph?



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MAGAZINE DATA

Data Management

Purpose: Analyze and classify data collected from a magazine

Skill: Data analysis with “real” materials

Number of people: One or small group working together.

Another possibility: Gather more magazines and do a similar activity with more students

Directions:

1. Count the number of advertisements in the first twenty-five pages.
2. Think of ways to classify the ads.
 - according to product type
 - number of people in the ad
 - size of ad
 - another choice!
3. Record your findings in a graph format and get a friend to interpret the findings by looking at your graph.
4. If possible, compare your classification and graph with another friend who has also done this activity.

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ORGANIZING BASEBALL CARDS

Data Management

Purpose: To think of as many ways as possible to sort the baseball cards and record findings.

Skill: Classification

Number of people: One or small group

Directions:

1. Examine all the baseball cards
2. Look for similarities and differences
3. Put cards in piles according to how you want to sort them. (by type, by player position, by team, etc.)
4. Record what you have done
5. Sort another way.
6. Which would be the best way to sort cards if you wanted the groups to be as equal as possible?



How I Sorted the Cards:

BY _____

Pile 1: _____; number of cards

Pile 2: _____; number of cards

Pile 3: _____; number of cards

Pile 4: _____; number of cards

Pile 5: _____; number of cards

How I Sorted the Cards:

BY _____

Pile 1: _____; number of cards

Pile 2: _____; number of cards

Pile 3: _____; number of cards

Pile 4: _____; number of cards

Pile 5: _____; number of cards

LEGO GRAPHS

Data Management

Purpose: Use the Lego provided to make graphs that show the results of gathered data.

Skill: Gathering and representing data

Number of people: One or two

Directions:

1. Decide on information you would like to gather from your classmates. Possibilities include:
 - favorite ice cream flavor
 - favorite type of pet
 - favorite cartoon
 - favorite fruit
 - favorite subject in school
2. Narrow the possibilities for answers down to FOUR or FIVE, depending on how many colors of Lego pieces you use. (For example, ask for *strawberry, chocolate, vanilla, or other* ice cream)
3. Use the Lego blocks to “build a graph” according the statistics you gather.
4. Record how the blocks represent the answers so you can explain your graph to another person.