Skittles Data Analysis



**Gr. 8 Unit Project**.

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Challenge**

The Skittles Company fills skittles bags by weight, not by numbers of skittles. They do have a specific percentage for each of the colours they try to put in the bags. But each bag does not have the exact percentage for the different colours. What is the percentage for each colour:

Red;

Blue;

Yellow;

Green;

Purple;

Orange;

How can the data from all students be organized to find the percentage that the skittles company uses for each colour?

**Organize the Class Data**

1. Find the mean (average) for each colour based on the class data.
2. Find the mode for each colour based on the class data.
3. Find the median for each colour based on the class data.
4. Find the range for each colour based on the class data.

**Questions:**

1. Do all groups have the same average for the Total skittles? Why or why not?
2. Do all groups have the same average for the Red skittles? Why or why not?

c. Based on the average you found for the total number of skittles in a bag, what

number of skittles would you expect to find in a new bag of skittles?

d. Based on the averages that you found for each color, what number of each

color of skittles would you expect to find in a new bag of skittles?

• Red \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ • Green\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

• Blue \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_• Brown\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

• Yellow\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ • Orange\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. Even though you might expect to find this number, why might you find a different

number when you opened a new bag?

f. What percent of each color of skittles do you think the skittles company uses

when bagging its candies?

***ACTIVITY 1: COLLECTING Skittles DATA***

**Skittles Data Record Sheet**

**Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Describe the contents of one bag of skittles before opening it!

2. Open your bag of skittles but DO NOT EAT YOUR DATA! Record the data from

your bag of skittles in the table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Color | Number of  skittles | Fractional  Representation of skittles of this Color | Decimal  Representation of the Fraction | Percent  Representation  of the Decimal |
|  |  |  |  |  |
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| Total |  |  |  |  |

1. Questions to answer:

a. Will everyone in the class have the same total number of candies in a bag of

Skittles? Why or why not?

b. Will the number of red candies be the same in all bags? Why or why not? What

about the other colors?

1. Does the company purposely try to have a certain number of each color in each bag?

**When finished, you may eat your data**

***ACTIVITY 2: ORGANIZING SKITTLES DATA***

**Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Skittles Data Group Record Sheet***

**Record the group data:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NAME** | **RED** | **BLUE** | **YELLOW** | **GREEN** | **Purple** | **ORANGE** |
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**uestions**

1. What was the most number for each color? What was the least?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Color** | RED | BLUE | YELLOW | GREEN | BROWN | ORANGE |
| **Most** |  |  |  |  |  |  |
| **Least** |  |  |  |  |  |  |

***ACTIVITY 2: ORGANIZING SKITTLES DATA***

**Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Skittles Data Group Record Sheet***

**Record the group data:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Name** | RED | BLUE | YELLOW | GREEN | BROWN | ORANGE |
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1. What was the most number for each color? What was the least?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Color** | RED | BLUE | YELLOW | GREEN | BROWN | ORANGE |
| **Most** |  |  |  |  |  |  |
| **Least** |  |  |  |  |  |  |

1. What measure of central tendency gives you the most information about the different colours of skittles?