What do you get in a bag of skittles?

Grade Level:	2nd – 5th
Duration:	30 – 60 mins
Classification:	classroom
Subject(s):	Data collection
Categories (STEM):	Science, Technology, Math
Keywords:	Data, bar graphs, pie charts

Introduction:

Summary:	Students will learn how to collect, display, and analyze data using candy.
Description:	Students will sort out the number of each color in a bag of skittles to analyze data and make informed predictions.

Online Resources:

https://public.tableau.com/app/profile/redraider2k/viz/WhatDoYouGetinaBagofSkittles/ExampleDashboard?_gl=1*1bw14kb*_ga*MTQwOTg0ODg3Ny4xNzEwNTM4MDY2*_ga_8YLN0SNXVS*MTcxMTA3ODgwMS41LjAuMTcxMTA3ODgwMS4wLjAuMA..

Materials:

| Material	Quantity	Reusable?
Skittles	1 2oz. bag per 3-4 students	No
Paper	1 sheet per 3-4 students	No
Markers	1 set per 3-4 students	Yes
Pens/Pencils	1 per 3-4 students	Yes
Additional candy for consumption	Depends on class size	No

*Based on a class of 25

Directions:
1. Have each group open their bag of skittles and divide the bag into each color.
2. Count how many skittles there are of each color and the total number of skittles.
3. Display the data in a bar graph – Label the x-axis with the color, and the y-axis with the number of skittles. Students can also use markers to match the color of the skittles to the graph.
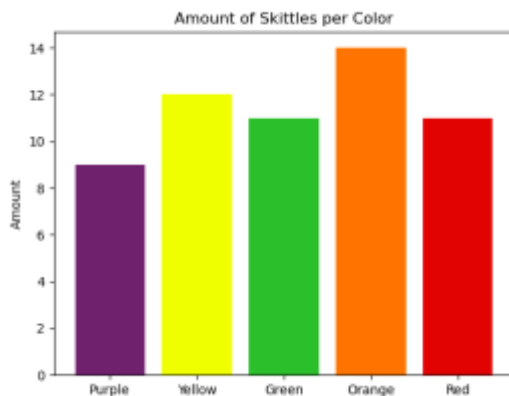
4. Display the data in a pie chart – Divide the number of each color by the total number of skittles to determine the percentage of each color in the bag. Then, have students draw a circle and draw slices into the pie chart to represent each color's percentage. (The percentages should sum up to 100%)

My Skittles Bag

- Red, 14
- Orange, 10
- Yellow, 13
- Green, 18
- Purple, 16

Total Candies= 71
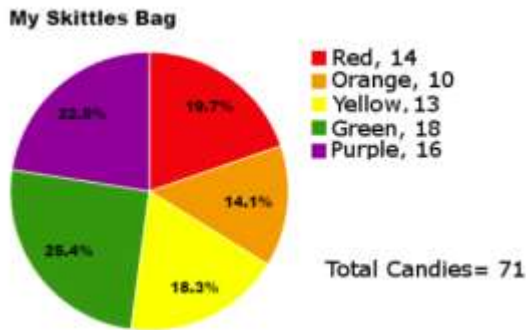
5. Have students compare their group's data to other groups' data.

Discussion Questions:
1. What color is the most common? Least common?
2. Does the total number of skittles vary across bags?
3. Does the amount of each color vary across bags?
4. Was the bar graph or the pie chart more helpful in answering which colors are the most and least common? Why?
5. What further information or data would be helpful in improving the accuracy of our conclusions?
6. Are there ways to improve the visualizations we've created? Is there a better way to show the data that would make it easier to make conclusions?
7. What can we do with the data that we've collected?
    a. We can determine trends in the colors of the skittles and make predictions about the colors in a bag of skittles in the future.

What is happening?
As more and more data are collected about the colors of skittles in many different bags, trends will start to form and we can form predictions.

Activity Extensions:
- Compare to industry standards

Applications:
- Majors
    o Computer Science
    o Data Science
    o Statistics
    o Engineering
    o Business Analytics
    o Economics
- Jobs
    o Data Analyst
    o Marketing Analyst
- Hobbies
    o Board games

- Real World Applications
  - Marketing trends