Building Blocks

Grade Level:	1st – 3rd
Duration:	30-60 mins
Classification:	classroom
Subject(s):	Data collection
Categories (STEM):	Science, Technology, Math
Keywords:	Data, bar graphs

Introduction:

Summary:	Students will learn how to collect and display data.
Description:	Students will sort out the number of each color, size, or shape in a handful of Legos to display data.

Resources: view pdf document in SRM database

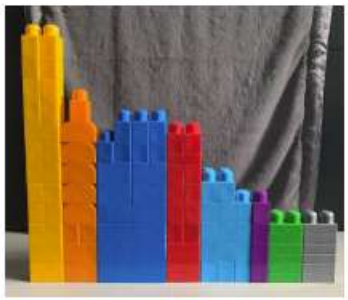
Materials:

Material	Quantity	Reusable?
Blocks/Legos	A handful per 3-4 students	Yes
Paper	1 sheet per 3-4 students	No
Pens/Pencils	1 per 3-4 students	Yes
Markers	1 set per 3-4 students	Yes

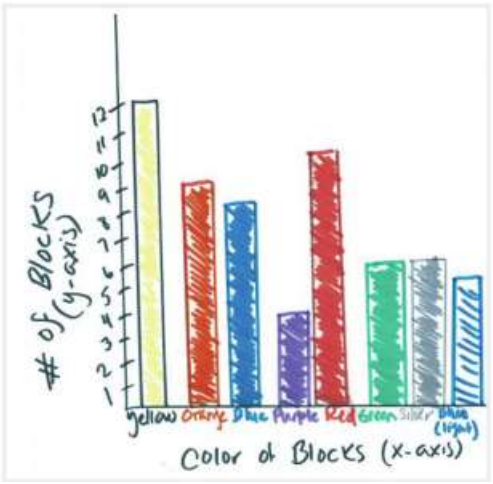
*based on a class of 25 students

Directions:

1. Give groups of students a handful of Legos of different colors, shapes, and sizes. Have them sort the Legos based on one of these categories.
2. Have the students count the Legos of each color/shape/size.
3. Summarize the data using bar graphs:
    a. Students can form a physical bar graph using the Legos. For example, if they sorted the Legos based on color, the bar graph could look like this:



    b. Students can also form a bar graph on paper using markers. Label the x-axis with the color of the Legos, and the y-axis with the number of each color/shape/size. The bar graph will look similar to this:



4. Have the students sort out the Legos based on the other categories if time allows.

Discussion Questions:

1. What color is the most common? Least common?
2. What size is the most common? Least common?
3. What shape is the most common? Least common?

What is happening?

Students are collecting data about Legos to learn how to summarize data.

Applications:

- Majors
  - Computer Science
  - Data Science
  - Statistics
  - Engineering
  - Business Analytics
  - Economics
- Jobs
  - Data Analyst
  - Marketing Analyst
- Hobbies
  - Board games
  - Legos
- Real World Applications
  - Marketing trends