



# DATA

## DEFINITION

**Data is information we collect to learn about something. We use data to help us understand and make decisions.**

## CHARACTERISTICS

- **Data comes in numbers or words.**
- **We can put data in order and look at it to find patterns or connections.**
- **Data can be shown in different ways, like pictures, charts, or stories.**

## EXAMPLE(S)

### **Number Data:**

- **How tall plants are in a garden**
- **How many students are in our class**
- **The temperatures we measure each day**

### **Word-Based or Descriptive Data:**

- **Watching how animals act**
- **Describing what the weather is like**

## NON-EXAMPLE(S)

### **Personal Opinions or Beliefs:**

- **What we think or feel about something**
- **Ideas we have that are personal to us**

### **Predictions about the Future:**

- **Guesses about what might happen later**
- **Trying to imagine what will come next**



# MEASUREMENT



## DEFINITION

**Measurement means comparing something to a standard to find out how big, long, heavy, or full it is.**

## CHARACTERISTICS

- We use tools like rulers, scales, thermometers, and measuring cups to find out measurements.
- Measurement uses special units like inches, centimeters, grams, liters, or degrees Fahrenheit.
- We need to measure carefully to get the right answer.

## EXAMPLE(S)

- Using a ruler to measure fossils in inches.
- Pouring milk into a measuring cup to cook using cups or ounces.
- Weighing things to find out how heavy they are in pounds or grams.
- Using a thermometer to see how hot or cold it is outside in Fahrenheit or Celsius.

## NON-EXAMPLE(S)

- Guessing how heavy or long something is without using a tool to measure.
- Talking about things being big or small without measuring them first.
- Using words to describe things that we can't measure like pretty or purple .



# QUARTER INCH

## DEFINITION

**A unit of measurement equal to one-fourth of an inch. Written as  $1/4$ " or 0.25 inches.**

## CHARACTERISTICS

- A quarter inch is smaller than a half inch but bigger than an eighth of an inch.
- People use it a lot in woodworking, building, sewing, and other crafts to measure things carefully.
- You can see quarter-inch marks on rulers, tape measures, and other tools we use to measure things.

## EXAMPLE(S)

- Four quarter inches make one inch, just like four quarters make one dollar.

**Professionals measure by quarter inches for important reasons:**

- Cutting paper to be 2 and  $3/4$  inches wide for crafts.
- Marking a line on wood to drill 1 and  $1/4$  inches from the edge.
- Sewing with a seam allowance of  $1/4$  inch.

## NON-EXAMPLE(S)

- Things that are shorter or longer than a quarter inch.
- Talking about weight or how much space something takes up, not just how long it is.
- Measurements from another system called the metric system.



# LINE PLOT

## DEFINITION

**A line plot is like a picture with dots or Xs on a line. Each dot or X shows how many times something happens or how much of something there is. It helps us see and understand information by looking at pictures.**

## CHARACTERISTICS

- **Line plots are easy to understand.**
- **They help organize and show small amounts of information.**
- **Each point on the line plot shows one thing we measured or counted.**

## EXAMPLE(S)

### **Some Reasons to Make a Line Plot:**

- **Showing how many books each student read in a month or a year.**
- **Finding out the sizes of fossils we found.**
- **Checking the math scores of all students.**
- **Seeing how tall our stuffed animals are.**

## NON-EXAMPLE(S)

### **Different types of graphs such as:**

- **Pie charts**
- **Bar graphs**
- **Scatterplots**
- **Histograms**
- **Stem and Leaf plots**



# FOSSIL



## DEFINITION

**Fossils are the old, preserved remains or signs of plants, animals, or other living things from a long time ago. They can be bones, shells, or even marks in rocks.**

## CHARACTERISTICS

- Fossils are old things from animals or plants that have been saved.
- They can be bones, teeth, shells, footprints, or marks in rocks. We find them in layers of special rocks.
- Fossils help us learn about Earth's history and how living things changed over time.
- They can show us what old animals or plants looked like, how they acted, where they lived, and who they were friends with.

## EXAMPLE(S)

- Dinosaur bones found in rock layers
- Imprints of old plants or leaves preserved in special rock.
- Old life forms found in tar pits, like the La Brea Tar Pits in California.
- The bones, teeth, and other fossils found at Hands On! Discovery Center in Gray.

## NON-EXAMPLE(S)

- Modern shells or animal bones found on the ground .
- Man-made or 3D-printed recreations of fossils.
- Fossil fuels such as oil, natural gas, and coal.