

Sept. 29

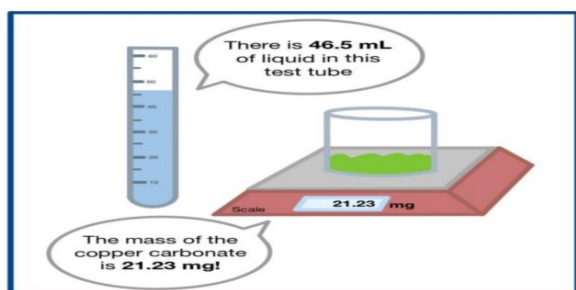
Data

Quantitative data is anything that can be counted or measured; it refers to numerical data.

Qualitative data is descriptive, referring to things that can be observed but not measured—such as colors or emotions.

Quantitative Data

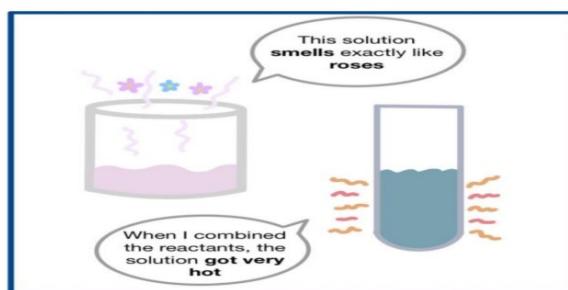
Based on numbers (measurement or counting)



vs

Qualitative Data

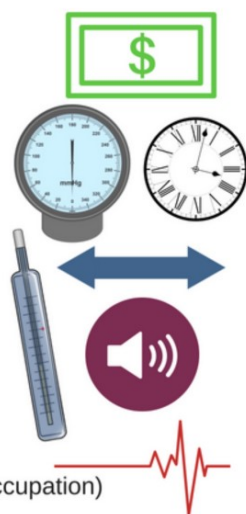
Based on observations (involves the senses)



Quantitative and Qualitative Data Examples

Quantitative Data

- money
- time
- speed
- movement
- height
- length
- area
- volume
- weight
- temperature
- humidity
- pressure
- sound level
- categories (age, gender, occupation)
- positioning
- status



Qualitative Data

- verbal and written feedback
- narrative story
 - first-hand (direct experience)
 - second-hand (telling someone else)
 - third-hand (outside story-teller)
- visual images, drawings, or models
- experiential sensations
- descriptions of

- colors	- feelings
- textures	- intuition
- smells	- sensations
- tastes	- choices
- appearance	- values
- beauty	- beliefs



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Qualitative vs. Quantitative

Read the following examples and then decide if each statement is Qualitative (QL) or Quantitative (QNT).


1. QL The candy was sour.
2. QNT The bug was 5 cm long.
3. QL The flower is red.
4. QNT The mass of the beaker was 122 g.
5. QNT My fingernail is 2 cm long.
6. QL The slug was slimy.
7. QL The laptop is white.
8. QNT She is 150 cm tall.
9. QL His hair is black.
10. QNT You have 3 sisters.




Quiz outline

- know the variables of the experiments
- Know the 7 steps in order to an experiment

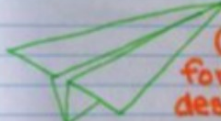
Variables



Independent:
size of paper

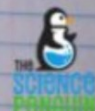


Dependent:
distance the plane flies



Controlled:
force of throw,
design, paper type

Independent	Dependent	Controlled
<ul style="list-style-type: none">what is being testedthe thing in an experiment that is changed	<ul style="list-style-type: none">resultchanges based on the independent variable	<ul style="list-style-type: none">things we keep the same



Air Plane Experiment

Of Blocks

	Small Plane	Big Plane	Med
Trial #1	D 685cm } A 100cm	D 370 } A 55cm	D 856 } A = 140
Trial #2	D 560cm } A 110cm	D 990 } A 300cm	D 300 } A = 75cm
Trial #3	D 925 } A 170cm	D 628 } A 3nm	D 400 } A = 52cm