

Introduction to Science Notes

Observations:

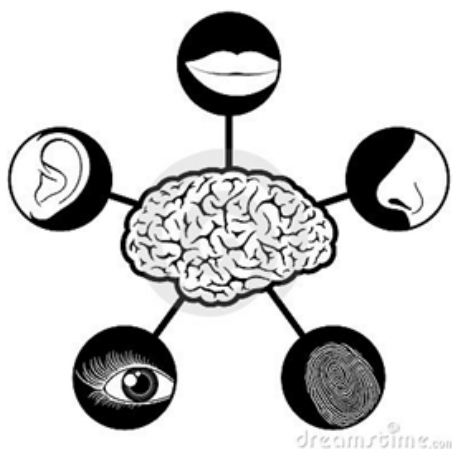
When you observe, you become aware of something using one of your senses. Your five senses are smell, taste, sight, touch, and sound.

In an observation, you simply describe something as it appears.

An observation is a statement describing a fact.

Qualitative observations

use your senses to
observe the results.



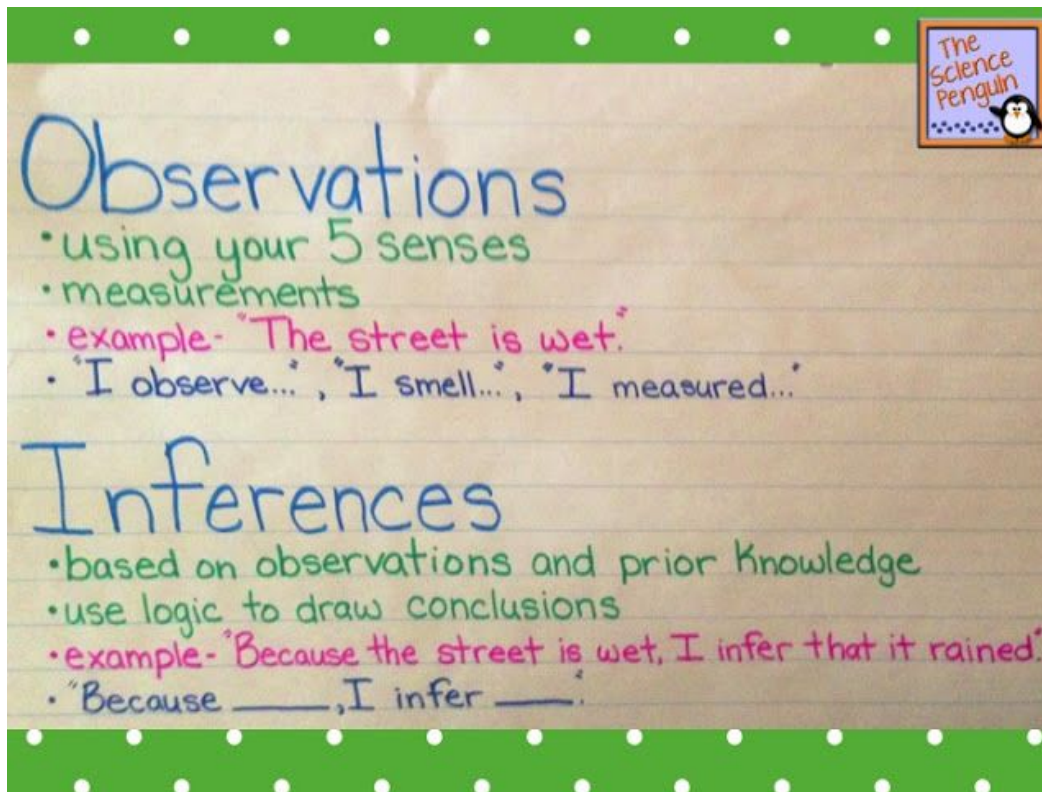
QuaNtitative observations

are made with instruments
such as rulers, balances,
graduated cylinders, beakers,
and thermometers.

These results are measurable.
(numbers)



Observation vs. Inferences




What is a hypothesis?

Hypothesis

- A hypothesis is a *prediction* of some sort regarding the possible outcomes of a study.

THE PURPOSE OF A HYPOTHESIS



A hypothesis should always:

- explain what you expect to happen
- be clear and understandable
- be testible
- be measurable
- contain an independent and dependent variable

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Variables

Science experiments use...

Independent Variable

the one factor that is changed by the person doing the experiment

Dependent Variable

the factor which is measured in the experiment

Constants/Controls

All the factors that stay the same in an experiment



INDEPENDENT VARIABLE



What I **CHANGE**



DEPENDENT VARIABLE

What I **OBSERVE**



CONTROLLED VARIABLE

What I **KEEP THE SAME**

Science Tools

