

Making Observations

Guided Notes – Student Edition



Humans are naturally _____. This innate curiosity leads to noticing things around them and being able to perceive things through their _____. This is known as _____ or the process of observing something or someone carefully in order to gain information.

Observation is an essential _____ in science. It often leads to asking _____ and having the desire to _____ answers to these questions. Through observations, scientists are able to propose educated _____ and test it through _____, then formulate _____.



Observation involves the use of _____ in describing an object, a person or an event. Our senses include _____, _____, _____, _____, and _____. We see with our _____, hear with our _____, touch with our _____, smell with our _____, and taste with our _____.

We can also extend our senses and our ability to make observations by using various _____ such as microscopes, telescopes, weighing scales, rulers, and thermometers. These tools allow for more _____ and _____ observations. Tools also help gather information about things beyond our capability to experience firsthand.

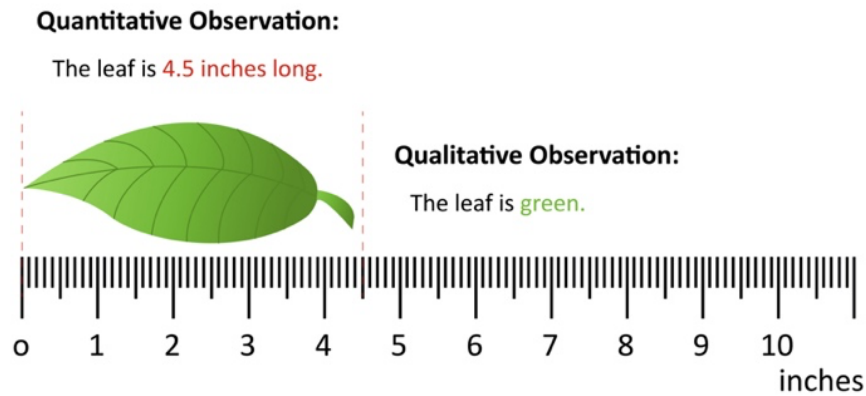
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Qualitative vs. Quantitative Observations

There are two types of observation: _____ and _____.

- _____ observation is a subjective gathering of information which focuses more on quality rather than its quantity. Thus, it mainly uses the _____ alone in describing an object, a person, or an event.
- _____ observation is an objective gathering of information which focuses on numbers or measurements. This requires the use of _____ to provide an accurate observation.



In quantitative observation, the specific length of the leaf is obtained through the use of a ruler. On the other hand, the qualitative observation highlights the color which is a physical quality of the leaf.

Uses of Observation

Observations are used to gather _____. Besides raising questions for investigations, observations play another role in scientific investigations which is to gather evidence or provide _____ information that supports a certain _____.

Observations yield what scientists called _____. Whether the observation is an experimental result or just noticing a certain event through senses – they are all data. Scientists _____ and _____ data in order to figure out how those data inform their educated guess and conclusion.



Name: _____ Period: _____ Date: _____

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Scientists interpret whether the data _____ one idea over others, help _____ an idea, or _____ an entirely new explanation. Though data may seem complex and be represented by detailed graphs or complex statistical analyses, it is important to remember that at the most basic level, they are simply _____.

Observation as a Skill

Like most skills, observation improves with _____ and _____. One can be more scientific in observing when observations are prompted by appropriate _____ or when they are _____ with growing background knowledge on the subject or object under observation.

Observation is an essential _____. It is a good way to learn something new or expand our knowledge. It is the key to understanding _____ and _____ as well as _____ between them.

The ability to make good observations is also essential to the _____ of the other science process skills such as communicating, classifying, measuring, inferring, and predicting. Making good observations requires one's appropriate use of _____ and scientific _____ in gathering information.