

Warm-up Question:

- What kind of information is important to a crime scene investigator? What kind of information do they collect and why?

Qualitative vs Quantitative Observations

Qualitative Observations:

- Use your 5 senses (sight, smell, touch, hearing, taste) to observe the results.
- Descriptive, focuses on quality comparisons
 - o E.g. “softer than”, “slower than”, “stringy”, etc.
- Subjective, may vary from person to person
 - o E.g. colourblind observer will see differently
 - o E.g. different people will choose different descriptive words
- Examples:
 - o Cold to the touch, very fast, sinks to the bottom of a cup of water, pink

Quantitative Observations:

- Made using instruments such as rulers, balances, graduated cylinders, beakers, thermometers
- Measurable (numbers)
- Objective (less potential for human error)
- Examples:
 - o 5°C, 100 km/h, 3 g/mL, light with 700 nm wavelength

NOTE:

- Can describe the same thing with *both types* of observations
- Should describe things in as many ways as possible, using a combination of observation types: the more data the better!
 - o Easier to graph quantitative observations, but qualitative ones are usually important for context

involve measurements or numbers. For instance, colors, shapes, and textures of objects are all qualitative observations.

Examples of Qualitative Observations

Take a look at the photo of this tree:

Use your senses to list some qualitative observations. You can say that the twigs are angled and a bit twisted. The leaves are green and have pointed tips. The fruit is orange in color and somewhat oval. All these are qualitative observations using our sight.

Do you ever watch police dramas or crime-based TV shows? Detectives go to a crime scene, take pictures, and make observations that may very well be the key to catching the criminal. Using our senses, we can make qualitative observations of the photo of this crime scene:

The kitchen is in disarray, and the victim seems to have fallen to



the floor from his or her wheelchair. By gauging the temperature of the skillet on the stovetop and the food lying around, we may get an idea of when the victim fell.

Have you ever seen a police line up? The witness may not have been very observant during the crime, so they might not remember exact descriptions, such as height and weight. However, they may have retained some qualitative observations that will help narrow down the suspects, like gender, nationality, hair color, and perhaps specific features, like a mole or birthmark. Other senses apply here, too; they may recognize the suspect's voice or any distinct odors coming from him.

Other qualitative observations that can be made include:



<https://study.com/academy/lesson/what-is-qualitative-observation-definition-example.html>