



**iTeachly**

## **Making Observations**

Unit 1 Lesson 5

# Making Observations

## Observation:

An observation is an active acquisition of information from a primary source.

Making observations requires using the senses. Observation can also be recording data during an experiment.



# Making Observations

## Types of observations:

### Qualitative observations.

Are observations made using our 5 senses.

- Sight
- Taste
- Touch
- Hearing
- Smell

Examples: color or scent

### Quantitative observations:

Are a way to make an observation is by measurement.  
That kind of observation is known as a

Examples: length or height

# Making Observations

## Sight:

You can obviously use your eyes to make observations. You can see a reaction take place and know that it was a chemical reaction because there was a color change or maybe the substance now has a different look. Maybe even light was produced during the reaction.

If you make observations with your eyes don't forget to write them down.



# Let's ask questions & make observations!

What can you observe here?

What can you see here?

Does the man at the table look like he's in a good mood?

The man at the table is smiling as he reads a book, so yes, it appears that he is in a good mood.

Has the man at the table eaten his dinner yet?

It looks like the man hasn't started eating his sandwich yet, so we can make the inference that no, it does not appear he has eaten his dinner yet.

Do we think the man might let the two friends join him for dinner?

Based on the observations we made my hypothesis would be: **If** I ask the man to join him for dinner, **then** he would say yes."



# Making Observations

## Taste:

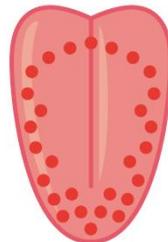
Making observations using a sense of taste is not usually used in a lab setting but can be used if you are doing a science experiment that involves food or drink.

If something tastes spicy, sweet or bitter this can tell you some of the characteristics of the food.

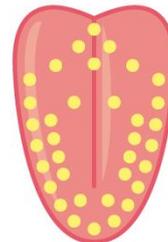
**OUR TONGUES CAN DIFFERENTIATE BETWEEN THESE FLAVOURS**



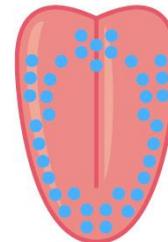
SWEET



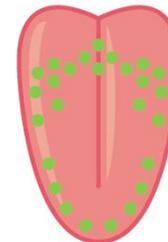
SOUR



SALTY



BITTER

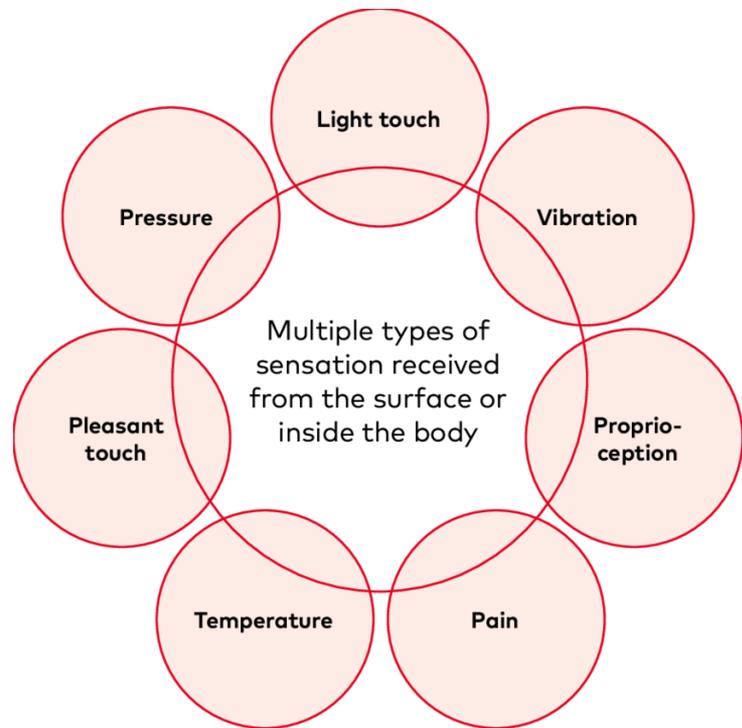


# Making Observations

## Touch:

You can use your sense of touch to describe different textures, densities, or other physical properties of an object.

For example, if you were trying to make a hypothesis about which pillow would best break the fall of an egg from the top of the building you could feel the pillows to see which one was the thickest and softest before making your inferences and hypothesis.



# Making Observations

## Hearing:

Making observations using your hearing or even devices that can detect sound can be very valuable especially if you are trying to determine which materials are good at reflecting or absorbing sound. Our ears are also good at determining pitch and frequency and recognizing what sounds are coming from.



# Making Observations

## Smell:

Sometimes odor can tell you if there is a chemical change taking place. Many chemical reactions produce an odor that let us know something has changed. Some chemicals such as sulfur produce a rotten eggs smell that lets you know what chemicals are being produced.

### Reminder:

If you need to smell something in the lab setting, **waft** it!

Never directly smell any chemicals.



*Correct way of wafting odors.*

# TIME TO THINK

What kind of observations did we make about the scene before?

**Answer: Qualitative Observations!**

What are some **quantitative** observations that we could make about this scene?

**There are 3 people in this scene.**

This is a quantity of persons that is measurable.

**There is only one chair in this scene.**

Also a quantity that is measurable

**What kind of hypothesis statement could we make with this information?**

My hypothesis would be **if** the man let us join him for dinner **then** we would need to find chairs if we wanted to sit at the table.

