

Vocabulary Quiz Study Guide

Hypothesis- An educated guess based on observations; can be tested.

A hypothesis is an educated guess/prediction about what will happen based on what you already know and what you have already learned from your research. It must be worded so that it is “testable.” The hypothesis can be written as an “If..., then....” statement, such as, “If all light is blocked from a plant for two weeks, then the plant will die.”

Conclusion- A summary based on evidence or facts.

A conclusion is a summary statement based on the results of an investigation. Scientific conclusions are based on verifiable observations.

Based on the results in my investigation, I conclude that if a plant does not receive sunlight for two weeks, then the plant will die.

Observation-The process of obtaining information by using the five senses.

I see a plant with three green, oval-shaped leaves. Each leaf comes to a sharp point at the end.

I hear a fizzing, bubbling sound.

I smell a scent that smells like marshmallows burning.

I feel a texture that is rough like sandpaper.

I taste a bitter taste.

Inference- A logical explanation based on observations; each person has their own perspective.

An inference is a tentative (not certain) explanation based on background knowledge and available data. We use our schema (our past experiences and prior knowledge) to make sense of what we are observing.

Example: Evidence: waves crashing, seagulls calling, the smell of sea air and sunscreen, the sight of bathing suits, beach chairs and umbrellas-
Inference=The scene is a beach.

I infer Mrs. Wippich is happy based on the evidence that she is smiling, laughing, and cheerful.

Quantitative observations/data- Observations based on data; can be expressed using numbers such as length, mass, temperature, distance, and time.

Remember- quantitative= quantity of something

Example- the plant stem is 4 inches long. The rock has a mass of 1 kg. The car rolled 3 feet. It took the cotton ball 5 seconds to fall.

Qualitative observation/data- Observations or data that describe the qualities or characteristics of something.

Remember- Qualitative= quality

Example- The flower's petals are pink with red edges. The rock is grainy with spots of black and white. The rock looks like black glass, shiny and smooth.