

Observing

Jane Goodall has spent countless hours among the chimpanzees—quietly following them, taking notes, and carefully observing. **Observing** means using one or more of your senses to gather information. Your senses include sight, hearing, touch, taste, and smell. By using her senses, Jane learned what chimpanzees eat, what sounds they make, and even what games they play! During her time in Gombe, Jane made many surprising observations. For example, she observed how chimpanzees use stems or long blades of grass as tools to “fish” out a tasty meal from termite mounds.

Like Jane, you use your senses to gather information. Look around you. What do you see? What do you hear and smell? You depend on your observations to help you make decisions throughout the day. For example, if it feels chilly when you wake up, you’ll probably dress warmly.

Observations can be either quantitative or qualitative. **Quantitative** observations deal with a number, or amount. Seeing that you have eight new e-mails in your inbox is a quantitative observation. **Qualitative** observations, on the other hand, deal with descriptions that cannot be expressed in numbers. Noticing that a bike is blue or that a grape tastes sour are qualitative observations.

Claims

One day, Jane Goodall saw something peculiar. She watched as a chimpanzee peered into a hollow in a tree. The chimp picked off a handful of leaves from the tree and chewed on them. Then it took the leaves out of its mouth and pushed them into the tree hollow. When the chimp pulled the leaves back out, Jane saw the gleam of water. The chimp then put the wet leaves back in its mouth.

What was the chimpanzee doing? Jane reasoned that the chimpanzee might be using the chewed leaves like a sponge to soak up water. Seeing the chimp chew on leaves, put them in the hollow, and then squeeze the liquid out is an example of an observation. But Jane went beyond simply observing when she reasoned why the chimpanzee was doing these things. When you explain or interpret the things you observe, you are making a **claim**.

Making claims doesn’t mean guessing wildly. Claims are based on reasoning from what you already know. Jane knew that chimpanzees, like all other animals, need water, and that rainwater collects in tree hollows. She reasoned that the chimp was using chewed leaves to get the water out of the tree.

You, too, make claims all the time. Because your brain processes observations and other information so quickly, you may not even realize when you have made a claim. For example, if you see your friend smile after getting back an exam, you might automatically claim that she got a good grade. Claims are not always correct, however. Your friend’s smile might not have anything to do with the test.

You need evidence to support your claim. Evidence can come making observations, collecting data from an experiment, or reading about science, or from a science expert.