

## Making Observations

Name:

Period:

Scientists get a lot of ideas about experiments by **observing** the world around them. This means that they are using their senses to gather information. We usually assume that this just involves looking at something carefully, and describing what is seen, but other senses can be used, too.



### Work

For each of the examples below, decide which of the scientist's senses are being used.

hearing sight smell taste touch

\_\_\_\_\_ "That silver-backed gorilla is bigger than all of the others in its family."

\_\_\_\_\_ "The strawberries in this part of the field are very sweet."

\_\_\_\_\_ "Something in this hole is really slimy!"

\_\_\_\_\_ "There must be bats hunting nearby, because the sounds they use for echolocation of their prey are pretty loud."

\_\_\_\_\_ "Yuck. About the only thing I think this flower could attract is flies."

### Lab

You are now going to make some observations of your own of a kind of plant called a succulent. These plants are related to cacti. They require very little water, and have leaves that are very tough to keep from drying out. However, they usually do not have spines, so they should be less painful for you to observe than cacti. You will be using just your senses of sight, smell, and touch. You will NOT be tasting these plants (umm....ewww) or listening to them. Well, you could *try* listening to them, but you probably wouldn't hear anything. [Note: if you think you ever hear plants talking to you, it's time to see a doctor.]

Let's start by having you write down at least five observations about the succulent at your table. You will have to use sight and/or touch more than once. If you like, you may write down more than five.

1)

2)

3)

4)

5)

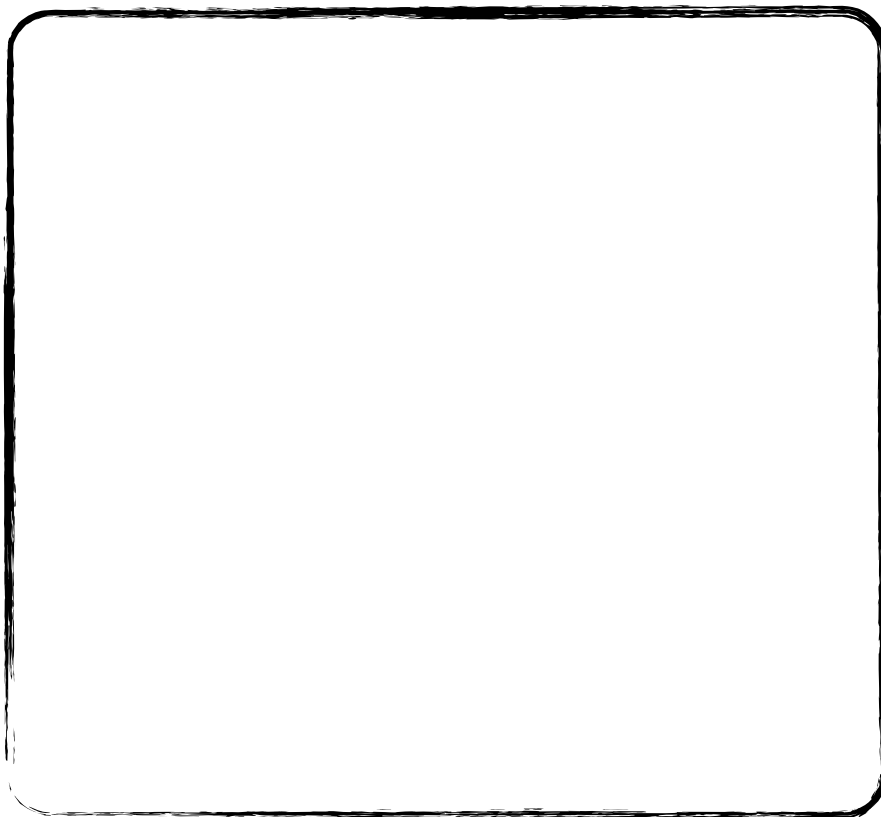
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By describing exactly what you are observing about the succulent, you are making what are called **objective observations**. You are not interpreting or guessing about anything; you are simply describing facts about it. Now, this is pretty easy to do for a plant. As far as we know, plants do not have feelings or thoughts like we do. However, if you wrote down that you thought that the plant was angry, that would be called a **subjective observation**. Such an observation is an opinion, and not everyone may agree with you [*in fact, they might start slowly backing away from you and become very interested in another table's succulent*]. So, for the sake of science, let's keep our observations **objective**, instead of **subjective**.

Let's add some more objective observations to what you already have. In the box below, make a drawing of your succulent. Pay particular attention to the shape of the parts of the plant. Then, use colored pencils to carefully copy the colors of the plant onto your drawing. Make sure that your drawing fills up the box, instead of trying to jam your drawing into a tiny corner. Scientists need to be able to show details in their drawings! If you want to add labels to your drawing, that is OK.



Now use a ruler to measure how wide and how high the plant is. Remember to measure *just the plant*, not the container. Add the measurements to your drawing above by using arrows. See the diagram below for an example on how to do this.

