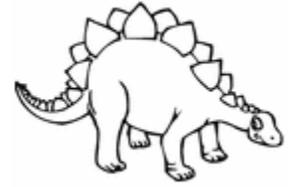


Name _____



Making Observations

Purpose: To practice making qualitative and quantitative observations.

Background Information: One of the most important skills in science is that of OBSERVATION. Most of the time we think of observation as something we do with our eyes; when we see something, we observe it. However, all five of our senses can be used to make observations: sight, hearing, taste, touch, and smell.

A good scientist is observant and notices things in the world. She or he notices what's going on in the world and becomes curious about what's happening. Observing can include reading and studying what others have done in the past because scientific knowledge is collective.

Observations in science are called DATA.

We can make two kinds of observations: those that are FACTS, and those that are OPINIONS. Facts are those things that are true for everybody. A scientist looks seriously at information and attempts to avoid all sources of bias in making observations. Opinions are beliefs based on personal preference.

Data may also be QUALITATIVE or QUANTITATIVE.

Qualitative data is information that is hard to measure, count, or describe in numbers. It describes the qualities or characteristics of something. Examples are colors, tastes, and sounds.

Quantitative data is information that can be expressed in numbers. If information can be counted or measured, then it is quantitative data. Tools are

often used to collect quantitative data. Examples include amounts, temperature, mass, and length.

As you make observations, you may begin to ask questions about those observations.

Observations are usually written down, or recorded in **DATA TABLES** or **DATA CHARTS**. Tables and charts help keep data organized and easy to understand.

Materials:

1 Magic Grow ® capsule	Ruler	Triple Beam Balance
Hand lens		

Procedure:

1. Work with a partner.
2. Observe your capsule. Make sure all of the observations are fact, not opinion.
3. Make a data table to organize quantitative and qualitative.

Data Table: