

Name \_\_\_\_\_

## Observations, Inferences and Predictions

**Purpose:** To practice making observations, inferences, and predictions.

**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.

An INFERENCE is an assumption or conclusion based on an observation. It is a logical interpretation based on observations and prior knowledge.

A PREDICTION is an educated guess based on observations and previous knowledge. Predictions may or may happen, but they are always reasonable.

**Materials:** Set of pictures (PowerPoint)

### Procedure:

1. Work with your partner.
2. Read the directions.
3. Observe the first picture.
  - a. What do you observe?
  - b. What can you infer?
  - c. Record your observations, inferences, and predictions.
4. Observe the second picture.
  - a. Now what do you think?
  - b. Record your observations, inferences, and predictions
5. Observe the last picture.
  - a. Record your observations, inferences, and predictions.

Data:

| <b>Animal Tracks Observations</b> |                      |                       |                      |
|-----------------------------------|----------------------|-----------------------|----------------------|
|                                   | <b>First Picture</b> | <b>Second Picture</b> | <b>Third Picture</b> |
| <b>Observations</b>               |                      |                       |                      |
| <b>Inferences</b>                 |                      |                       |                      |
| <b>Predictions</b>                |                      |                       |                      |

**Double check what you wrote in the observation box.**

1. Are they all **OBSERVATIONS** (not inferences or predictions)?

If what you wrote was really an inference or prediction, rewrite it in the correct box.

2. Are they all **FACTS** (not opinions)?

If what you wrote is an opinion, cross it out by putting one line through the statement.

