Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**I CAN make observations and inferences, and a hypothesis, identify variables and apply scientific processes to design and carry out an experiment.**

Period \_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_

**Observations & Inferences**

What is **inferring**? The explanations that we use to EXPLAIN the happenings around us are called **inferences**. **Inferences** are based on observations. The better we are at making observations and communicating observations, the more valid our **inferences** will be. The ability to **infer** helps us understand the world around us. **Inferring** has to be LOGICAL. **Inferences** are subject to change and there may be more than one valid logical explanation to an observation.

Example: Observation 1: You walk into the kitchen, and you see someone in your family with watery eyes that appear to have been crying.

First **inference**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observation 2: Upon further observations, you see onion peels in the sink and discover that your mom is chopping onions over by the stove and placing them in the frying pan.

Second **inference**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Read the observation column. Write your **inference** in the “**inference** column.”

|  |  |
| --- | --- |
| OBSERVATION | **INFERENCE** |
| 1. You observe the sky at noon is getting  dark. |  |
| 2. The principal interrupts class and calls a  student from the room. |  |
| 3. All HEDRICK MIDDLE SCHOOL students  are bringing a lunch from home. |  |
| 4. Ozzy Osbourne, a former rock and roll  band member, has bad hearing. |  |
| 5. You come out of Tinseltown at night and  find the streets are wet. |  |
| 6. During a handshake, you feel the palms of  the person are rough and calloused. |  |
| 7. You come to class, the door is closed,  and the lights are off. |  |
| 8. A siren is heard going past the school. |  |
| 9. A student at Hedrick wears a South  Medford sweatshirt. |  |
| 10. A student is sitting in the hallway during  class time. |  |

Mark with an O if the statement is an observation.

Mark with an I if the statement is an inference.

\_\_\_\_\_1. When I rang the doorbell, no one answered.

\_\_\_\_\_2. Nobody must be home because when I rang the doorbell, no one answered.

\_\_\_\_\_3. I assume the hamburger must have just come off of the BBQ because it was hot.

\_\_\_\_\_4. The hamburger is hot.

\_\_\_\_\_5. She ate a lot of corn.

\_\_\_\_\_6. Corn must be her favorite vegetable because she ate a lot.

\_\_\_\_\_7. I found the pillbug under a moist piece of wood.

\_\_\_\_\_8. Pillbugs must like moist dark places since I usually find them there.

\_\_\_\_\_9. The hawk on top of the telephone pole must like to sit on top of high places to

hunt.

\_\_\_\_\_10. I saw a hawk on top of the telephone pole.

\_\_\_\_\_11. When I dissected the frog, he had ten flies in his stomach.

\_\_\_\_\_12. The frog must really like flies since I found ten flies in his stomach when I

dissected it.

\_\_\_\_\_13. The piece of wood had chewed marks on it.

\_\_\_\_\_14. The chewed piece of wood must mean there are beavers nearby.



Look at this picture and list two observations and make two inferences.

Observations:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inferences:

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at this picture to the left and list two observations and make two inferences.

Observations:

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inferences:

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

