Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #\_\_\_\_\_\_

**Notes: Observations and Inferences**

**What is an observation?**

When you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, you become aware of something using one of your \_\_\_\_\_\_\_\_\_\_\_\_. Your five senses are \_\_\_\_\_\_\_\_\_\_\_\_\_, taste, sight, \_\_\_\_\_\_\_\_\_, and sound. To make an observation, you simply describe something as it appears. An observation is a statement describing a \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Quantitative Observations**

It means: (quantity), How many, these observations will always have a number, based on exact \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Examples:**

* + - The room is 8 ­­­­­\_\_\_\_\_\_\_\_\_\_\_ across.
    - Sarah is \_\_\_\_\_\_\_\_-cm tall.
    - Sam \_\_\_\_\_\_\_\_\_ 450 Newtons

**Qualitative Observations**

Sometimes scientists must make very careful observations. Often their senses are not good enough. There are some things that cannot be observed using just your senses. (Examples: radiation, sound waves, planets, cells, etc.)

Qualitative observations/data describe qualities or characteristics like colors, tastes, and sound.

**What is an inference?**

When you \_\_\_\_\_\_\_\_\_\_\_\_, you make a mental judgment based on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Inferences \_\_\_\_\_\_\_\_\_\_\_\_be directly observed. They require thought. For example, if you get up in the morning, look up at the sky and observe \_\_\_\_\_\_\_\_\_\_ clouds, observe the air is \_\_\_\_ and \_\_\_\_\_\_\_\_\_, and observe \_\_\_\_\_\_\_\_\_\_ on the ground, you might \_\_\_\_\_\_\_\_\_\_ that it has recently \_\_\_\_\_\_\_\_\_\_\_\_\_. Note: you did not see rain; you decided that it rained based on your observations. An inference is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_based on your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the facts.

**Examples**

|  |  |
| --- | --- |
| **Observations** | **Inferences** |
|  |  |
|  |  |