This quiz (bigger than a quiz, smaller than a test) will be multiple choice, short answer, (like questions on this study guide,) and picture questions. There will be two types of picture questions, just like the ones here. Students should be able to recognize the definitions of observation, qualitative and quantitative observations, and inference.

An observation is a fact that you can prove by using your five senses. Your five senses are: taste, touch, smell, hearing, sight.

A qualitative observation is observing the “quality” of an object. This means that you are describing what you observe. For example, the color something is, how it feels, the shape, etc. Uses adjectives that are specific.

A quantitative observation is a measurement made with instruments such as rulers, scales, cylinders, beakers and thermometers. Quantitative goes with the word quantity – the number of something. The results are measurable and the answer must have a number. A quantitative observation could be she has 2 eyes, she is 120 pounds, she is 5 feet, 6 inches and her shoe size is 7. These observations always have a NUMBER in them.

A possible explanation of an observation is an inference. To make an inference you need to use your life experiences, background knowledge, and observations. Inferences can be based on evidence that you collect during your investigations. Scientists gather and interpret evidence and draw conclusions based on this evidence.

Look at the picture below, then read each statement and circle observation OR inference.

(Please note - On the quiz, there will be different pictures.)

There are 5 fish in the picture. Observation Inference
There are 2 snails at the bottom of the aquarium. Observation Inference
The small fish are the babies of the big fish. Observation Inference
The big fish are looking for food. Observation Inference
Three fish are facing the same direction (to the right) Observation Inference
There are 2 plants in the aquarium. Observation Inference
The snails like to eat seaweed. Observation Inference
You observe that someone is sweating, what could you infer from this observation?

You observe a chocolate candy bar laying on the sidewalk on a hot day. You make an inference that the chocolate is melted. What could you do to TEST that inference?

Look at the picture below and write 3 qualitative and 3 quantitative observations. Then write 2 inferences.

3 Qualitative Observations
a. 
b. 
c. 

3 Quantitative Observations
a. 
b. 
c. 

2 Inferences about what is happening in this picture.
a. 
b. 

The button is small. Is this a quantitative or qualitative observation? Why?