

Name _____ Date _____ Period _____

Chemistry Foundations Ws #1: Observations and Theories

Directions: Read the article on "Observations, Theories, and the Planets" and answer the questions.

1. Why are we able to make more accurate measurements of the behavior of the sun and stars now than we were able to 4000 years ago?
2. How did the Egyptians around 2000 BC think that the sun moved across the sky?
3. What device in England helped people to observe that the patterns in the sky were related to season?
4. How did Eudoxus, born in 400 BC try to explain the movement of the planets?
5. What did Ptolemy add to Eudoxus's theory to make it more complete?
6. Why was Ptolemy model assumed to be correct for so long?
7. How did the acceptance of an inaccurate model hinder advancements in astronomy?
8. What happened that allowed the Copernican theory to be more widely accepted?
9. The same basic _____ can be made by different people in different times and places, but the explanations or _____ will inevitably change.
10. What is the difference between an observation and a theory?

Use the following list for questions 11 & 12.

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|------------------------------------|--|
| a. My pencil is yellow | g. The flower has 18 petals. |
| b. School is too long. | h. Most trees are green in the summer. |
| c. The room temperature is 25.0°C. | i. My nose is 3.5 cm long. |
| d. Every class is 51 minutes | j. My dog weighs 12.8 pounds. |
| e. An apple is over 95% water | k. The density of gold is 19.32 g/ cm ³ . |
| f. Chemistry is an easy subject | l. It was really hot this summer. |
11. Which letters represent qualitative observations?
 12. Which letters represent quantitative observations?