

Review

Circle the letter of the best answer to each question below.

- How does carbon-14 help scientists determine the age of a fossil?
 - They know how long it takes half the carbon-14 to change into nitrogen.
 - They know that carbon-14 only existed during one period in Earth's history.
 - They put the fossil into a container filled with carbon-14 and observe the reaction.
 - They know how much carbon-14 collects onto rocks every thousand years.
- Today, Planet X is better known as which planet?
 - Neptune
 - Pluto
 - Jupiter
 - Planet X was never found.
- An electron microscope uses _____ to magnify objects too small to be seen with an optical microscope.
 - powerful lasers
 - magnetism
 - a beam of electrons
 - All of the above
- Which of the following is not an important safety rule to follow in the lab?
 - Never bring food or drinks into the lab.
 - Wash your hands every five to ten minutes.
 - Make sure you know how to use all the equipment before you begin.
 - Never look down into a container that is being heated.

Write your answers on the lines below.

5. When you finish an experiment, why is it dangerous to pour any leftover chemicals down the sink?

6. Explain why observation always plays a role in experimenting.

7. In the yeast experiment, one bottle contained yeast and water. The other bottle contained yeast, water, and sugar. What was the variable in this experiment?
- _____
8. How did Ms. Wilson's demonstration with the glass of ice water help Julio solve the mystery of his ruined posters?
- _____
9. Paleontologists at the La Brea Tar Pits found fossilized remains of animals of many different sizes, from insects to mastodons. Why was this important?
- _____
10. What evidence led Wegener to form his hypothesis about continental drift and Pangaea?
- _____
11. What is a placebo?
- _____

Use the words in the box to complete the sentences below.

calculations

hypothesis

vacuum

organisms

vaccine

control

observation

molecules

12. _____ are small pieces of matter made up of two or more atoms joined together.
13. The purpose of a _____ is to give the person who receives it immunity to a disease.
14. A _____ group is used to compare how a variable will affect an outcome.
15. Mathematical _____ play an important role in most types of science.
16. When an experiment isn't possible, scientists rely on _____ to make discoveries.
17. Fossils show the remains of _____ that lived during earlier periods in Earth's history.
18. In order to create a _____, air and any other matter must be removed from the space.
19. An experiment should be carefully designed to prove or disprove a _____.