Name: _____ Class: _____ Date: _____ ID: A

Study Guide for Test on Chapter 1

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. The ways in which people change the world around them to meet their needs or solve practical problems are called
a. science.
b. technology.
c. feedback.
d. systems.

____ 2. What is the goal of technology?
a. to produce and deliver cereal
b. to understand how the natural world functions
c. to study the natural world
d. to improve the way people live

____ 3. Science and technology are
a. the same thing.
b. not important.
c. dependent on each other.
d. completely unrelated.

____ 4. An endoscope is an example of
a. science.
b. technology.
c. brainstorming.
d. prototyping.

____ 5. One positive effect of pesticides is
a. greater food production.
b. creating more work for farmers.
c. pesticides washing into streams.
d. pesticides harming people and animals.

____ 6. What are some reasonable safety precautions for field investigations?
a. None; there are no hazards in the field.
b. Always wear goggles and aprons.
c. Be prepared and use common sense.
d. Always go into the field alone.

____ 7. What is the first thing you should do if an accident occurs?
a. Find the emergency equipment.
b. Notify your teacher.
c. Go to the nearest hospital.
d. Start first aid treatment.

____ 8. Using one or more of your senses to gather information is called
a. observing.
b. inferring.
c. predicting.
d. classifying.

____ 9. Observations that deal with a number or amount are called
a. manipulated observations.
b. quantitative observations.
c. qualitative observations.
d. operational observations.

____ 10. Observations that deal with descriptions that cannot be expressed in numbers are called
a. manipulated observations.
b. quantitative observations.
c. qualitative observations.
d. operational observations.

____ 11. Explaining or interpreting the things you observe based on reasoning from what you already know is called
a. observing.
b. inferring.
c. predicting.
d. classifying.

____ 12. Trying to explain why a cactus needs little water to survive is an example of
a. a prediction.
b. drawing a conclusion.
c. scientific inquiry.
d. classification.

____ 13. Making a forecast of what will happen in the future based on past experience or evidence is called
a. observing.
b. inferring.
c. predicting.
d. classifying.

____ 14. When scientists put things into categories or group together items that are alike in some way; they are
a. inferring.
b. predicting.
c. classifying.
d. making models.

____ 15. When scientists create a representation of a complex process, they are
a. inferring.
b. predicting.
c. classifying.
d. making models.

____ 16. Knowing how to use lab equipment is an example of
a. good lab preparations.
b. performing a lab.
c. being in the filed.
d. completing a lab.

____ 17. In a scientific experiment, a statement that describes how to measure a particular variable or define a particular term is a(n)
a. hypothesis.
b. manipulated variable.
c. operational definition.
d. responding variable.

____ 18. If a beaker breaks, the first thing you should do is
a. clean up the broken glass.
b. ask a classmate for help.
c. read safety symbols for the lab.
d. notify your teacher.

____ 19. Scientists' skepticism should be balanced with an ability to
a. accept new and different ideas.
b. be honest.
c. find solutions to problems.
d. learn more about the topics they study.

____ 20. What scientific attitude is especially important when a scientist's results go against previous ideas?
a. curiosity
b. honesty
c. skepticism
d. creativity

____ 21. Grocery stores organize food according to food type—diary, frozen, bakery, and so on. This is an example of
a. observation.
b. posing questions.
c. classifying.
d. inferences.

____ 22. Scientists can communicate their results
a. at scientific meetings.
b. in scientific journals.
c. by exchanging information on the Internet.
d. all of the above

____ 23. The use of endoscopes to study the functions of the heart shows that
a. advances in science and technology often depend on one another.
b. science is important to technology.
c. science changes the natural world.
d. technology is independent from science.

____ 24. A person who is trained to use both technology and scientific knowledge to solve practical problems is known as a(n)
a. biologist.
b. engineer.
c. forest technician.
d. scientist.

____ 25. To reveal trends in data, the data should be presented in a(n)
a. hypothesis.
b. graph.
c. operational definition.
d. scientific investigation.

Completion
Complete each statement.

26. Products that help people meet their needs or solve practical problems are examples of _____.

27. Technology _____ solve every problem.
28. Just as in the lab, safety is also important when doing activities in the _____.
29. _____, which is the process of grouping together items that are alike in some way, helps a scientist organize information.
30. Scientists who possess the attitude of _____ always report their observations and results truthfully.
31. Scientists who possess the attitude of open-mindedness are capable of accepting _____ ideas.
32. Scientific _____ refers to the diverse ways in which scientists study the natural world and propose explanations based on the evidence they gather.
33. After interpreting data, a scientist will draw _____ about their results.
34. In science, a hypothesis must be _____.
35. An experiment in which only one variable is manipulated at a time is called a(n) _____ experiment.

Short Answer

Use the diagram to answer each question.

Chimpanzee Diet in November

Food	% Diet
Fruit	62.0%
Insects	16.0%
Leaves	16.0%
Miscellaneous	6.0%

36. Describe how the chimpanzee's diet has been classified.
37. Do the data in this table represent quantitative observations or qualitative observations? Explain.

Essay

38. What is the difference between science and technology? How are they related?
39. Compare and contrast the skills of inferring and predicting.
40. Identify the six major stages of the process of scientific inquiry and explain why the process is not a rigid sequence of steps.