

**Homework**  
**chapter 1 sample test - living things**

**Multiple Choice**

Identify the letter of the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. Which of the following is NOT a characteristic that all living things share?
  - a. a cellular organization
  - b. using energy
  - c. movement
  - d. reproduction
  
- \_\_\_\_\_ 2. A change in an organism's surroundings that causes it to react is called
  - a. a response.
  - b. a stimulus.
  - c. energy.
  - d. development.
  
- \_\_\_\_\_ 3. Which of the following do all living things need to survive?
  - a. water
  - b. oxygen
  - c. sunlight
  - d. carbon dioxide
  
- \_\_\_\_\_ 4. Homeostasis refers to an organism's ability to
  - a. maintain stable internal conditions.
  - b. compete for living space.
  - c. dissolve chemicals.
  - d. obtain energy.
  
- \_\_\_\_\_ 5. Which of the following would you use to identify an organism?
  - a. a domain
  - b. a controlled experiment
  - c. a taxonomic key
  - d. a eukaryote
  
- \_\_\_\_\_ 6. Scientists hypothesize that the first life forms on Earth
  - a. were multicellular organisms.
  - b. lived on land.
  - c. did not need oxygen to survive.
  - d. resembled today's plants.
  
- \_\_\_\_\_ 7. Which of the following was true about the experiment conducted by Miller and Urey?
  - a. The conditions of early Earth were recreated in a flask.
  - b. Oxygen was added to a flask.
  - c. Cells were produced in a flask.
  - d. Unicellular organisms were added to a flask.
  
- \_\_\_\_\_ 8. To survive on Earth, the first cells needed the ability to
  - a. take in oxygen from the atmosphere.
  - b. make their own food.
  - c. use chemicals in their surroundings for energy.
  - d. combine to form multicellular organisms.
  
- \_\_\_\_\_ 9. What is taxonomy?
  - a. the scientific study of how living things are classified

- b. the name of Aristotle's classification system
- c. the process used by geologists to classify rocks
- d. the process of observing an organism's behavior

10. Why do scientists organize living things into groups?

- a. so they can find them in the wild more easily
- b. so that the organisms are easier to study
- c. so they can make sense of the variety of rocks on Earth
- d. so products from living things can be easily found in groceries

11. An organism's scientific name consists of

- a. its class name and its family name.
- b. its kingdom name and its phylum name.
- c. its genus name and its species name.
- d. its phylum name and its species name.

12. Which is the broadest classification level?

- a. family
- b. domain
- c. phylum
- d. species

13. The more classification levels that two organisms share,

- a. the closer together on Earth they live.
- b. the easier it is to tell them apart.
- c. the more characteristics they have in common.
- d. the more distantly related they are.

14.

15.

16. One characteristic used to place organisms into kingdoms is

- a. how they move.
- b. where they live.
- c. their ability to make food.
- d. their ability to reproduce.

17. Which group of organisms includes only multicellular heterotrophs?

- a. protists
- b. bacteria
- c. plants
- d. animals

18. Which is the most abundant chemical found in living cells?

- a. water
- b. carbohydrates
- c. proteins
- d. nucleic acids

19. The experiments of Redi and Pasteur helped to demonstrate that

- a. species gradually change over time.
- b. living things do not arise from nonliving material.
- c. organisms can be placed in groups based on their similarities.
- d. the chemicals of life could have arisen on early Earth.

20. Which classification level is broader than the kingdom level?

- a. order
- b. class
- c. family

- d. domain
- \_\_\_ 21. A plant grows toward the light. The plant's action is an example of
- reproduction.
  - a response.
  - a stimulus.
  - development.
- \_\_\_ 22. Spontaneous generation is a mistaken idea because living things
- exhibit binomial nomenclature.
  - are produced only by living things.
  - do not reproduce.
  - maintain homeostasis.
- \_\_\_ 23.
- \_\_\_ 24. The source of energy for most autotrophs is
- water.
  - the sun.
  - heterotrophs.
  - other autotrophs.
- \_\_\_ 25. Which domain(s) include(s) only prokaryotes?
- Bacteria and Archaea
  - Bacteria only
  - Archaea only
  - Eukarya only
- \_\_\_ 26. Which of the following characteristics do all plants share?
- being unicellular
  - producing flowers
  - being a prokaryote
  - being an autotroph
- \_\_\_ 27. Which kingdoms include both unicellular and multicellular organisms?
- fungi and plants
  - fungi and protists
  - protists and animals
  - protists and plants
- \_\_\_ 28. An organism that makes its own food is called a(n)
- heterotroph.
  - eukaryote.
  - autotroph.
  - prokaryote.
- \_\_\_ 29. Taxonomic keys can be used to help determine the
- size of organisms.
  - needs of organisms.
  - identity of organisms.
  - behavior of organisms.
- \_\_\_ 30. One basis for placing organisms into different domains is
- habitat.
  - the chemical makeup of their cells.
  - color.
  - name.

### Modified True/False

Indicate whether the sentence or statement is true or false. If false, change the identified word or phrase to make the sentence or statement true.

- \_\_\_ 31. Growth is the process of change that occurs during an organism's life to produce a more complex organism.  
\_\_\_\_\_
- \_\_\_ 32. A horse is a(n) heterotroph. \_\_\_\_\_
- \_\_\_ 33. Hypotheses about the first forms of life on Earth are consistent with evidence obtained from fossils of organisms that lived about 3.5 billion years ago. \_\_\_\_\_
- \_\_\_ 34. The scientific study of how organisms are classified is called binomial nomenclature.  
\_\_\_\_\_
- \_\_\_ 35. Alligators and crocodiles are classified in the same order and therefore probably have different evolutionary histories. \_\_\_\_\_
- \_\_\_ 36. In the name *Acer rubrum*, the word *rubrum* designates the species. \_\_\_\_\_
- \_\_\_ 37. Each genus of organisms is divided into classes. \_\_\_\_\_
- \_\_\_ 38. Mushrooms, molds, and mildew are members of the fungi kingdom. \_\_\_\_\_
- \_\_\_ 39. Archaea and Bacteria are two domains of eukaryotes. \_\_\_\_\_
- \_\_\_ 40. In a controlled experiment, a scientist carries out two tests that are identical in every respect except for one factor. \_\_\_\_\_

### Completion

Complete each sentence or statement.

41. A(n) \_\_\_\_\_ organism is a living thing that is composed of many cells.
42. An organism reacts to a stimulus with a(n) \_\_\_\_\_.
43. Organisms that make their own food are called \_\_\_\_\_.
44. An organism's ability to maintain stable internal conditions despite changes in its surroundings is called \_\_\_\_\_.
45. Most of today's organisms could not have lived on Earth 3.6 billion years ago because there was no \_\_\_\_\_ in the air then.
46. A(n) \_\_\_\_\_ consists of paired statements about the characteristics of different organisms.
47. Scientists think that the first life forms on Earth probably were unicellular heterotrophs, did not need oxygen to survive, and lived in Earth's \_\_\_\_\_.
48. Traces of ancient organisms that have been preserved in rock or other substances are known as \_\_\_\_\_.
49. The process of grouping things based on similarities is called \_\_\_\_\_.
50. Biologists find \_\_\_\_\_ useful because this scientific study gives them much information about an organism based on its classification.
51. \_\_\_\_\_ is study of living things.

52. Each individual living thing is called an .....
53. The first word in an organism's scientific name is its \_\_\_\_\_.
54. \_\_\_\_\_ developed a naming system that grouped organisms on the basis of their observable features.
55. \_\_\_\_\_ is the process by which living organisms increase in size.
56. Each genus of organisms contains one or more \_\_\_\_\_.
57. An owl and a bat share the same kingdom and phylum; an owl and a robin share the same kingdom, phylum, and class. The owl and \_\_\_\_\_ have more characteristics in common.
58. Archaea are not classified with \_\_\_\_\_, the other prokaryote domain, because they have different chemical makeups.
59. The \_\_\_\_\_ kingdom is the only kingdom of eukaryotes that contains both autotrophs and heterotrophs and both unicellular and multicellular organisms.
60. Multicellular organisms are found in the protist, fungi, animal, and \_\_\_\_\_ kingdoms.

### Essay

73. Computers use energy and respond to certain stimuli, such as commands from the user. Why, then, are computers not considered living things?
74. How do organisms differ in the ways they obtain their energy source, or food?
75. Explain why the organisms that require oxygen today owe their existence to the early autotrophs on Earth.
76. Use an example to explain why the common names of organisms are sometimes confusing. How can using scientific names help avoid the confusion?
77. What are Linnaeus' two major contributions to taxonomy?
78. A person tells you that two organisms belong to the same family but to different classes. Can that information be correct? Explain.
79. Why is the protist kingdom sometimes called the "odds and ends" kingdom?
80. List the eight characteristics of living things.