

Name Answer Key Date _____ Class _____

Living Things ▪ Guided Reading and Study

What Is Life?

This section explains the characteristics of living things and what living things need to survive.

Use Target Reading Skills

Look at the section headings and visuals to see what this section is about. Then write what you already know about living things in the graphic organizer below. As you read, write what you learn.

What You Know
1. Living things grow.
2. Living things made of cells

What You Learned
1. Cells of living things composed of chemicals
2. Cells use energy

The Characteristics of Living Things

1. What is an organism?

an organism is a living thing

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What Is Life? *(continued)*

2. List six characteristics that all living things share.

- a. cellular organization
- b. chemicals of life
- c. use energy
respond
- d. to surroundings
- e. growth and development
- f. reproduction

3. The basic building blocks of all organisms are cells.

4. Is the following sentence true or false? Most cells can be seen only with a microscope, a tool that magnifies small objects. true

5. Is the following sentence true or false? An organism made of many cells is a unicellular organism. false

6. Circle the letter of the most abundant chemical in cells.

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

7. Lipids and proteins are the building materials of cells.

8. Is the following sentence true or false? The cells of organisms use energy for growth and repair. true

9. Circle the letter of a change in an organism's surroundings that causes the organism to react.

- a. growth
- b. response
- ☒ c. stimulus
- d. development

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10. Give one example of a stimulus and one example of a response.

Stimulus: car horn

Response: jumping when startled

11. What is development?

process of change that occurs during an organism's life to produce a more complex organism

12. All organisms can _____, reproduce, or produce offspring that are similar to the parents.

Life Comes From Life

13. Is the following sentence true or false? Flies can arise from rotting meat.

false

14. The idea that living things can come from nonliving sources is called

spontaneous generation

15. What did Francesco Redi show in his experiment?

He showed that flies do not spontaneously arise from decaying meat

16. The factor that a scientist changes in a controlled experiment is the _____

independent variable

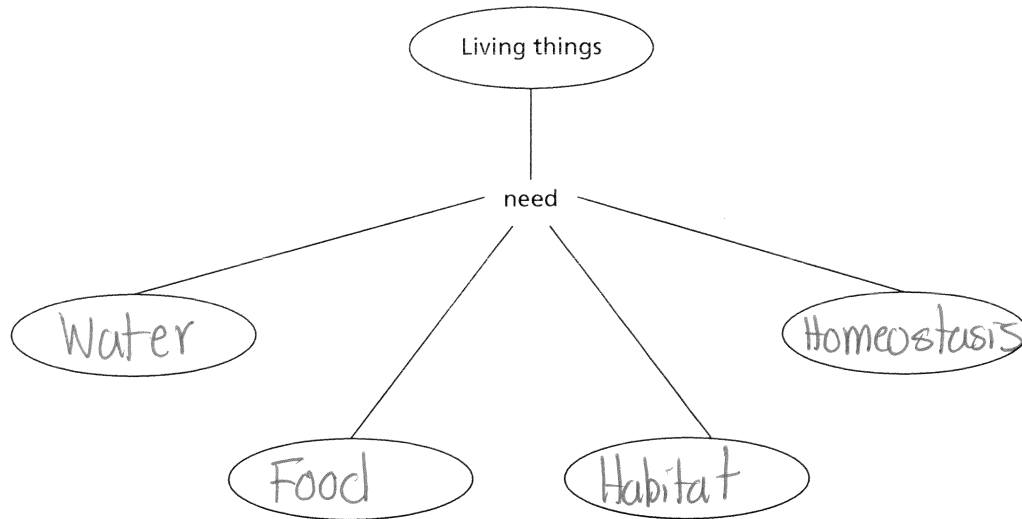
17. Is the following sentence true or false? Louis Pasteur used a controlled experiment to show that bacteria arise from spontaneous generation.

false

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The Needs of Living Things

18. Complete this concept map to show what living things need to survive.



19. Is the following sentence true or false? Living things use food as their energy source to carry out their life functions. true
20. Organisms that make their own food are called autotrophs.
Organisms that cannot make their own food are called heterotrophs.
21. Is the following sentence true or false? Living things can live without water for long periods of time. false
22. What property of water makes it vital to living things?
obtain chemicals from surroundings, break down food,
move substances within bodies, reproduce
23. Is the following sentence true or false? Organisms compete with each other for space to live. true
24. Why must living things have homeostasis, or stable internal conditions?
need specific conditions for cells to function

Living Things • Review and Reinforce

What Is Life?**Understanding Main Ideas**

Answer the following questions on a separate sheet of paper.

1. What are six characteristics all living things share?
2. How did Redi's experiment help disprove the idea of spontaneous generation?
3. What are the four basic needs all living things must satisfy?
4. Describe the difference between growth and development.

Building Vocabulary

From the list below, choose the term that best completes each sentence.

autotrophs	manipulated variable	cell
unicellular	heterotrophs	organisms
spontaneous generation	multicellular	stimulus
response	homeostasis	reproduce

5. A change in an organism's environment that causes the organism to react is called a(n) stimulus.
6. Organisms that make their own food are autotrophs.
7. Multicellular organisms are composed of many cells.
8. Spontaneous generation is the mistaken idea that living organisms arise from nonliving sources.
9. Living things are also called organisms.
10. The cell is the basic unit of structure in an organism.
11. Organisms that get energy by consuming other organisms are heterotrophs.
12. An organism reacts to a stimulus with a(n) response.
13. A controlled experiment is conducted by performing two tests that are identical except for one factor called the manipulated (independent) variable.
14. An organism's ability to maintain stable internal conditions is called homeostasis.
15. To reproduce is to produce offspring that are similar to the parents.
16. Bacteria, the most numerous organisms on Earth, are unicellular organisms.

What is life?

Understanding Mani Ideas – ANSWER KEY

REVIEW & REINFORCE:

1. All living things have cellular organization, contain similar chemical, use energy, respond to their surroundings, grow and develop, and reproduce.
2. Redi's experiment showed that flies do not spontaneously arise from rotting meat but are produced from the eggs of other flies.
3. Living things must satisfy basic needs for water, food, living space, and stable internal conditions.
4. Growth is the process of becoming larger, whereas development is the process of becoming more complex.

