

**Chapter 2 The Nature of Living Things****Section Review 2-1****Characteristics of Organisms**

**Part A:** Complete Table 1 by writing *yes* if the object has the characteristic of life and *no* if it does not have the characteristic. In the last column, write *yes* if the object is living and *no* if it is not alive.

**Table 1**

	One or More Cells	Uses Energy	Response or Movement	Adapted to Environment	Reproduces	Grows & Develops	Living?
1. Oak tree							
2. Candle							
3. Car							
4. Turtle							
5. Clock							
6. Bacteria							
7. Robot							
8. Cockroach							
9. Icicle							

**Part B:** Identify the stimulus and the response for each of the following. Write your answers in the spaces provided.

1. You touch a mimosa plant and its leaves curl up.

Stimulus \_\_\_\_\_ Response \_\_\_\_\_

2. When you go from a light room into a dark room, your pupils get bigger to let more light into your eyes.

Stimulus \_\_\_\_\_ Response \_\_\_\_\_

3. Many flowers open during the day and close at night.

Stimulus \_\_\_\_\_ Response \_\_\_\_\_

4. In some people sneezing is an allergic reaction to pollen.

Stimulus \_\_\_\_\_ Response \_\_\_\_\_

5. Buds often fluff up their feathers when the weather is very cold.

Stimulus \_\_\_\_\_ Response \_\_\_\_\_

**Part C:** Classify each of the following as asexual reproduction or sexual reproduction. Write *A* for asexual reproduction and *S* for sexual reproduction in the spaces provided.

- \_\_\_\_\_ 1. A housefly lays 100 eggs and each hatches into a larva.
- \_\_\_\_\_ 2. You slice a piece of potato from a potato, and try to root it in a glass of water.
- \_\_\_\_\_ 3. A bacteria divides in half by a process called binary fission.
- \_\_\_\_\_ 4. A cat gives birth to a litter of 6 kittens. Each kitten looks different.
- \_\_\_\_\_ 5. A fisher cuts up a starfish and throws the parts back into the ocean. Soon, there are as many starfish as parts that the fisher threw back.

**Part D:** Answer the following questions.

- 1. What is the difference between a unicellular organism and a multicellular organism? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Chapter 2 The Nature of Living Things****Section Review 2-2****Life Processes of Organisms**

**Part A:** *Decide which life process best matches each description. Write the letter in the space provided. Use the letters shown below.*

D = digestion

I = ingestion

P = photosynthesis

C = chemosynthesis

E = excretion

T = transport

- \_\_\_\_ 1. A cell gets rid of carbon dioxide.
- \_\_\_\_ 2. Tubelike cells carry water to the leaves of a plant.
- \_\_\_\_ 3. You chew a carrot.
- \_\_\_\_ 4. A hydra uses its tentacles to bring a piece of food to its mouth.
- \_\_\_\_ 5.  $\text{food} + \text{energy} \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{energy}$
- \_\_\_\_ 6. Bacteria make food using sulfur and not sunlight.
- \_\_\_\_ 7.  $\text{H}_2\text{O} + \text{CO}_2 + \text{sunlight} \rightarrow \text{glucose} + \text{O}_2$
- \_\_\_\_ 8. In your stomach, food is broken down into smaller pieces.
- \_\_\_\_ 9. A plant's leaves give off oxygen and water.
- \_\_\_\_ 10. The mineral calcium is carried to your bone cells in your blood.

**Part B:** *Decide how each of the organisms listed gets nutrients. In the spaces provided, write P if the organism makes its own food by photosynthesis. Write C if the organism makes its own food by chemosynthesis. Write A if the organism eats or uses other organisms as food. If an organism can make its own food and eats other organisms write B.*

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|---------------------------|--------------------------|
| ____ 1. Oak tree          | ____ 6. Venus's fly trap |
| ____ 2. Deep-sea bacteria | ____ 7. Lion             |
| ____ 3. Catfish           | ____ 8. Tulip            |
| ____ 4. Mushroom          | ____ 9. Chicken          |
| ____ 5. Grass             | ____ 10. Tapeworm        |

**Chapter 2 The Nature of Living Things****Section Review 2-3****Needs of Organisms**

**Part A:** *In the space provided, write the need of the organism that is **not** being provided. Use air, water, living space, or proper temperature.*

- \_\_\_\_\_ 1. A polar bear that has been moved to a desert.
- \_\_\_\_\_ 2. Fifty white mice in a pet store cage that is .5 x .5 m. The mice are fed each day.
- \_\_\_\_\_ 3. Deer move into populated areas because heavy snow falls have covered the ground for a long period of time.
- \_\_\_\_\_ 4. A chipmunk curls up in its nest and sleeps through the winter.
- \_\_\_\_\_ 5. The population of deer in an area increases a lot one year. Many of the deer begin to starve.
- \_\_\_\_\_ 6. A plant's leaves are coated with a pollutant and the small openings get clogged where gas exchange occurs.
- \_\_\_\_\_ 7. A fly is sealed in a small plastic box.
- \_\_\_\_\_ 8. The water in a tropical fish aquarium drops 10°.
- \_\_\_\_\_ 9. Many of the watering holes on an African plain dry up.
- \_\_\_\_\_ 10. In a zoological park, the size of the polar bear compound is being enlarged when two more polar bears are placed in the compound.

**Part B:** *Decide whether or not each sentence is an example of homeostasis. Write **yes** or **no** in the spaces provided.*

- \_\_\_\_\_ 1. A person perspires in hot weather.
- \_\_\_\_\_ 2. A bicyclist swerves to avoid being hit by a car.
- \_\_\_\_\_ 3. Small leaf openings, that get rid of excess water, close during a drought.
- \_\_\_\_\_ 4. A bird loses many of its feathers in the spring.
- \_\_\_\_\_ 5. You turn up the room thermostat when you are cold.
- \_\_\_\_\_ 6. A German Shepherd dog sheds its fur during the summer.
- \_\_\_\_\_ 7. A cut on your skin heals rapidly.
- \_\_\_\_\_ 8. A cat scratches its neck.

**Chapter 2 The Nature of Living Things****Chapter Test****Multiple Choice**

*In the space provided, write the letter of the answer that best completes each statement.*

- \_\_\_\_ 1. Which of the following is a characteristic of all organisms?  
(a) absorb nutrients directly from the environment (b) use energy  
(c) carry on photosynthesis (d) are multicellular
- \_\_\_\_ 2. The growth of a plant toward the sun is an example of  
(a) a stimulus (b) chemosynthesis (c) a tropism (d) locomotion
- \_\_\_\_ 3. The removal of waste products from the cells of an organism is  
(a) transport (b) nutrition (c) respiration (d) excretion
- \_\_\_\_ 4. The theory that living things could be produced from nonliving things is called  
(a) Redi's theory (b) spontaneous generation  
(c) asexual reproduction (d) Pasteur's theory
- \_\_\_\_ 5. The process of breaking down food into usable forms is called  
(a) nutrition (b) chemosynthesis (c) ingestion (d) digestion
- \_\_\_\_ 6. In cells, respiration produces  
(a) oxygen (b) food (c) energy (d) glucose
- \_\_\_\_ 7. All of the following are life processes of organisms *except*  
(a) reproduction (b) nutrition (c) respiration (d) excretion
- \_\_\_\_ 8. During photosynthesis,  
(a) carbon dioxide is produced as a waste product.  
(b) glucose is broken down into carbon dioxide and water.  
(c) plants use sunlight as energy to produce glucose.  
(d) plants use chemical energy to produce chlorophyll.
- \_\_\_\_ 9. Fission and budding are two types of  
(a) sexual reproduction (b) asexual reproduction  
(c) spontaneous generation (d) transport
- \_\_\_\_ 10. The ability of an organism to keep conditions inside its body constant is called  
(a) competition (b) hibernation (c) locomotion (d) homeostasis

**Fill In**

*In the space provided, write the word or words that best completes each statement.*

11. The process of taking food into the body is called \_\_\_\_\_.
12. Animals must eat plants in order to obtain \_\_\_\_\_.
13. Organisms get everything they need to survive from the \_\_\_\_\_.

14. The period of time an organism lives is its life \_\_\_\_\_.
15. The struggle between organisms for the available living space in an environment is called \_\_\_\_\_.
16. Bacteria that live deep in the ocean use \_\_\_\_\_ to make food.

**True/False**

If the statement is true, write **true** in the space provided. If the statement is false, change the underlined word or words to make the statement true.

- \_\_\_\_\_ 17. During photosynthesis plants give off water and carbon dioxide as waste products.
- \_\_\_\_\_ 18. In asexual reproduction, cells from two parent organisms join to form a new organism.
- \_\_\_\_\_ 19. The production of saliva by a dog who smells its dinner is called a response.
- \_\_\_\_\_ 20. When environmental temperatures increase, the life processes of most organisms speed up.
- \_\_\_\_\_ 21. Humans are unicellular organisms.
- \_\_\_\_\_ 22. The life process of transport takes place when an organism eats and breaks down food.

**Part C: Answer the following questions.**

1. Predict what would happen if a pea plant were placed in a dark closet for three weeks. Explain your answer.

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2. Why do organisms need food? \_\_\_\_\_

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3. a. Explain why respiration and photosynthesis are sometimes described as opposite processes.

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- b. Give a simple formula for respiration and photosynthesis to illustrate your answer. \_\_\_\_\_

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