

Skills Worksheet

# Directed Reading B

## Section: Characteristics of Living Things (pp. 52-55)

### LIVING THINGS HAVE CELLS

1. All living things are composed of one or more cells [this is cell theory].
2. The smallest functional and structural unit of all living organisms is called a(n) cell.
3. What is the role of the cell?

to grow, divide, and establish homeostasis - (a balance with it's environment)

4. What is the purpose of the cell membrane?

The cell membrane is a protective barrier that separates the outside environment from the machinery inside the cell. It also serves to identify the cell to other cells and to allow materials to pass in and out of the cell under it's regulation.

5. Name three functions that different parts of a one-celled protist perform.

1. cell membrane - protection and eating.  
2. nucleus - store the DNA and dispense activated genes.  
3. ribosomes - make proteins for the cell

6. Name two kinds of cells that perform specialized functions in humans.

1. muscle cells - contract to allow movement of the body  
2. nerve cells - communicate electrical signals to other cells, brain and nerves.

### LIVING THINGS SENSE AND RESPOND TO CHANGE

7. What are all living things able to sense and respond to?

stimulus - an outside influence to the cell

8. A change that affects the activity of an organism is called

a(n) stimulus.

9. Name three examples of stimuli. plural for stimulus

1. poking a nerve ending with a pin  
2. putting chewed food next to stomach cells.  
3. losing too much water as sweat = dehydration.

## Directed Reading B *continued*

10. What must an organism be able to do to survive?

1. absorb energy from the environment. 2. grow and develop. 3. reproduce

11. Define *homeostasis*.

homeo = "the same", stasis = "to remain"  
homeostasis = to remain the same, or balance the chemicals inside and out of the cell.

12. What is your body trying to do when you are either shivering or sweating?

Your body is trying to maintain homeostasis  
1. shivering is to make muscles contract to burn sugar and generate heat to make the body warmer.  
2. sweating is losing warm water to evaporation to remove heat and make the body cooler.

13. How does a turtle control its body temperature?

A turtle is cold blooded so it allows it's body to function at the same temperature as the environment, It will however go into it's shell to get cooler from the sun, or it can stretch out it's arms and legs to expose more blood to the sun's warmth.

### LIVING THINGS REPRODUCE

14. The process by which two parents produce offspring that share

characteristics of both parents is called sexual reproduction.

15. The process by which one parent produces offspring identical to the parent

is called asexual reproduction or budding or binary fission

16. Most animals and plants reproduce by sexual reproduction (ex. pollen)

17. Most single-celled organisms reproduce by asexual reproduction, binary fission

### LIVING THINGS HAVE DNA

c = DNA

18. What do the cells of living things contain?

- a. hydrochloric acid
- b. phosphoric acid
- c. deoxyribonucleic acid
- d. sulfuric acid

A. 19. What does DNA do?

- a. carries instructions for the organism's traits
- b. breaks down food in cells
- c. acts as a stimulus in the environment
- d. acts as a preservative in foods