

Review the Vocabulary

adaptation (ad ap TAY shun)
 data
 energy
 evolution (ev uh LEW shun)
 homeostasis (hoh me o STAY sus)
 organism
 response
 species (SPEE sheez)

theory
 biology
 dependent variable
 environment
 experiment
 hypothesis (hi PAATH us sus)
 organization
 safety symbol
 stimulus

control
 développement
 ethics
 growth
 independent variable
 reproduction
 scientific methods
 technology (tek NAHL uh jee)

The Chapter 1 vocabulary words are listed above. Review the definitions of these words. Then draw a line to match each word in the box with its definition.

- | |
|---|
| a. biology
b. ethics
c. reproduction
d. homeostasis
e. experiment |
|---|

1. What you do to test a hypothesis
2. Making of offspring
3. Moral principles and values held by humans
4. Study of living things
5. Living things maintaining body functions

Use the words in the box to fill in the blanks in the sentences that follow. You will not use all the words.

response	organism	organization	control
stimulus	adaptation	technology	evolution

6. A(n) _____ has all four traits of life.
7. A(n) _____ causes living things to respond.
8. Scientific research for society's needs or problems is called _____.
9. A(n) _____ in an experiment is used as a standard for comparison.
10. _____ is the change in a species over time.

Review the Vocabulary

cell	electron microscope	nucleolus
cell theory	endoplasmic reticulum	nucleus
cell wall	eukaryote (yew KER ee oht)	organelle
chlorophyll	flagella	phospholipid
chloroplast	fluid mosaic model	plasma membrane
chromatin	Golgi apparatus (GALW jee)	plastid
cilia	homeostasis	prokaryote (pro KER ee oht)
compound light microscope	lysosome	ribosome
cytoplasm	microfilament	selective permeability
cytoskeleton	microtubule	transport protein
	mitochondria	vacuole

Review the Chapter 7 vocabulary words listed above. Match the words with the definitions below.

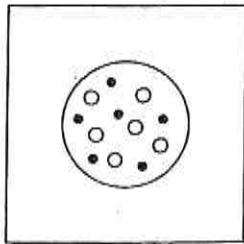
1. Cell having a nucleus and other membrane-bound organelles _____
2. Short, hairlike projections on a cell's surface that are composed of microtubules

3. Fluid-filled space within the cytoplasm; temporarily stores food _____
4. Building block of both unicellular and multicellular organisms _____
5. Contains the cell's DNA and manages cell functions _____
6. Green pigment that traps light energy from the sun _____
7. The process of maintaining the cell's environment _____
8. Organelles in which food molecules are broken down to produce ATP _____
9. Creates selective permeability of plasma membrane _____
10. Rigid structure outside the plasma membrane of plant cell _____
11. Membrane sacs that receive and package proteins _____
12. Serves as a boundary between the cell and its external environment _____
13. Cell lacking a nucleus or other membrane-bound organelles _____

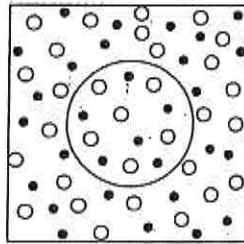
Study the Diagrams

Study the diagrams of the cells. Then circle the word that best completes each sentence.

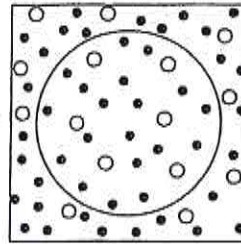
Cell with water molecules
and dissolved particles



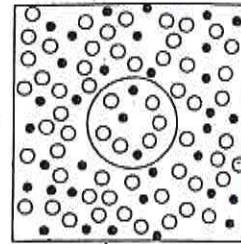
Cell after being placed
in an isotonic solution



Cell after being placed
in a hypotonic solution



Cell after being placed
in a hypertonic solution



• Water molecule

○ Dissolved particle

When the cell is placed in an isotonic solution, water molecules move into and out of the cell at the same rate.

When the cell is placed in a hypotonic solution, more water molecules enter the cell than leave the cell.

When the cell is placed in a hypertonic solution, more water molecules leave the cell than enter the cell.

1. Placing a cell in a hypertonic solution causes the cell to (swell, shrink, stay the same).
2. Placing a cell in an isotonic solution causes the cell to (swell, shrink, stay the same).
3. Placing a cell in a hypotonic solution causes the cell to (swell, shrink, stay the same).

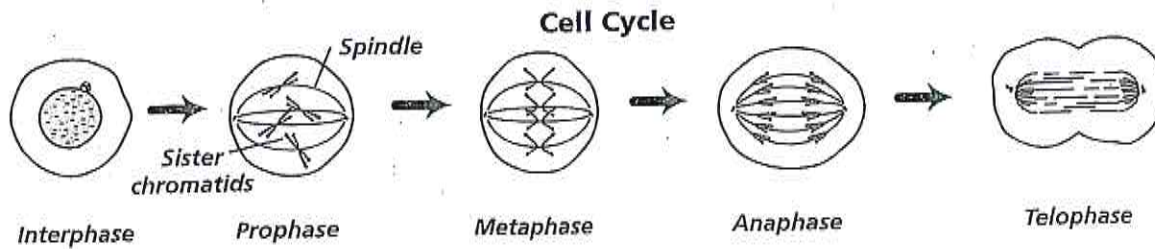
Chapter
8
Cellular Transport and the Cell Cycle, *continued*
Content Mastery

Section 8.2 Cell Growth and Reproduction

Section 8.3 Control of the Cell Cycle

Study the Diagrams

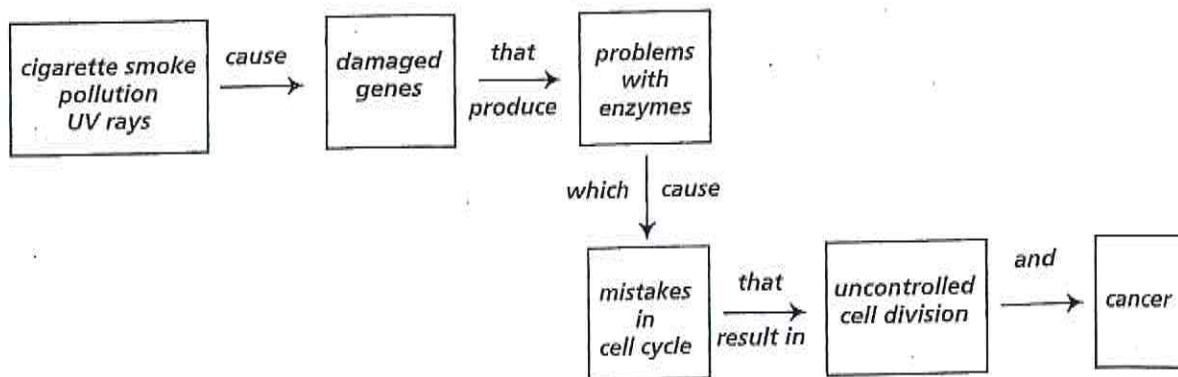
Study the diagrams of the cell cycle and answer the questions that follow.



1. Chromosomes move to the middle of the spindle during which phase? _____
2. What are sister chromatids? When do they separate? _____

3. During which phase do the chromosomes first become visible? _____
4. In multicellular organisms, the cell cycle produces groups of cells that perform the same function. What are these groups of cells called? _____

Study the diagram showing the causes and results of an abnormal cell cycle. Then answer the questions that follow.



5. What happens when there are problems with the enzymes that control the cell cycle?

6. Name three environmental factors that can damage the genes that produce those enzymes.

7. What can result from an abnormal cell cycle? _____