



Chapter Review

Cell Processes

Part A. Vocabulary Review

Directions: Select the term from the following list that matches each description.

active transport	energy	enzyme	inorganic compound	passive transport
consumer		equilibrium	metabolism	producer
diffusion		mixture	exocytosis	organic compound
matter		endocytosis	fermentation	osmosis

- _____ 1. movement of molecules without the input of energy
- _____ 2. passive transport of water by diffusion
- _____ 3. protein binds to a particle and uses energy to move through the cell membrane
- _____ 4. condition in which molecules of a substance are spread evenly throughout a space
- _____ 5. an organism that makes its own food
- _____ 6. a substance that speeds up a chemical reaction
- _____ 7. a process by which vesicles release their contents outside the cell
- _____ 8. all of the activities that occur within the cells of an organism
- _____ 9. movement of molecules from an area of more molecules to an area of less molecules
- _____ 10. an organism that can't make its own food
- _____ 11. compound containing carbon and hydrogen and is associated with living things
- _____ 12. process that releases energy without using oxygen
- _____ 13. a substance made of elements other than carbon
- _____ 14. process of taking substances into a cell by surrounding it with the cell membrane
- _____ 15. combination of substances in which each substance retains its own properties
- _____ 16. has mass and takes up space
- _____ 17. the ability to cause change

Chapter Review (continued)**Part B. Concept Review**

1. Explain the difference between compounds and mixtures.

Directions: Identify the following examples as a compound or a mixture.

_____ 2. glucose

_____ 3. blood

4. Explain the difference between organic and inorganic compounds.

Directions: Identify the following examples as organic or inorganic.

_____ 5. water

_____ 8. chlorophyll

_____ 6. cellulose

_____ 9. carbon dioxide

_____ 7. calcium

_____ 10. DNA

11. Explain the function of a selectively permeable membrane.

Directions: Identify the following as part of active transport or passive transport.

_____ 12. mineral movement into plant root

_____ 13. osmosis

_____ 14. carrier proteins

_____ 15. diffusion

Directions: Write P if the item describes photosynthesis or R if it describes respiration.

_____ 16. carbon dioxide is waste

_____ 17. occurs in mitochondria

_____ 18. oxygen given off

_____ 19. makes glucose from CO₂

_____ 20. uses light energy

_____ 21. uses chlorophyll



Directed Reading for
Content Mastery

Section 1 ■ Chemistry of Life
Section 2 ■ Moving Cellular Materials

Directions: Use the words in the lists to fill in the blanks in the paragraphs below.

compounds **inorganic** **proteins** **atoms**
carbon **elements** **organic** **molecules** **water**




All matter is made up of 1. _____ 2. _____ are made up of only one kind of atom. These atoms may bond together to form 3. _____. Two or more kinds of atoms form 4. _____. Living things and their products are 5. _____ compounds. They all contain 6. _____ and hydrogen. 7. _____ called enzymes are organic compounds that help regulate chemical reactions in cells. 8. _____ compounds are made from elements other than carbon. One of the most important inorganic compounds for living things is 9. _____.

endocytosis **passive** **active** **permeable**
diffusion **exocytosis** **osmosis**

Cells have selectively 10. _____ membranes. Some molecules can pass through, but others can't. Movement through a cell membrane without using energy is 11. _____ transport. 12. _____ is passive transport that moves particles away from areas with more particles into areas with fewer particles in order to spread them out. Diffusion of water in and out of cells is called 13. _____. Large particles may need to use energy to pass through cell membranes. This is called 14. _____ transport. 15. _____ uses energy to take particles into a cell. 16. _____ releases particles out of a cell.

Amoeba Sisters Video Recap: "Photosynthesis and Cellular Respiration"

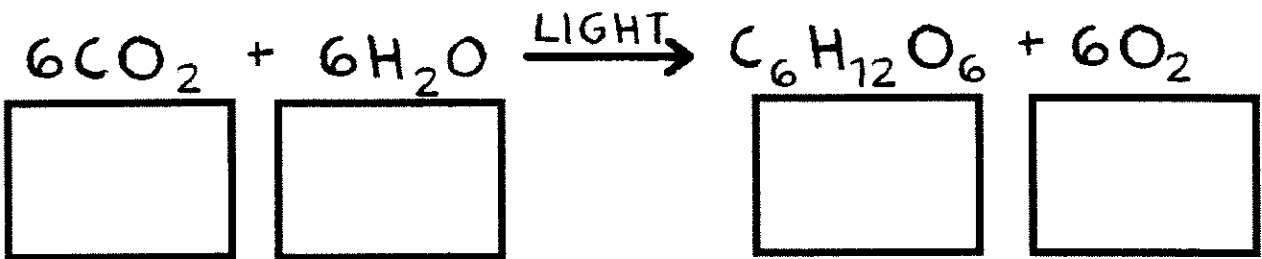
NOTE: This recap compares two Amoeba Sisters videos: photosynthesis and cellular respiration.

<p>1. In photosynthesis, what are the two major reactions that take place?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>2. Where do each of these reactions take place?</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Cooking with Photosynthesis!</p> 	
<p>3. In aerobic cellular respiration, what three major steps are involved?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>4. Where do each of these three major steps take place (for eukaryotes)?</p> <p>_____</p> <p>_____</p> <p>_____</p> 

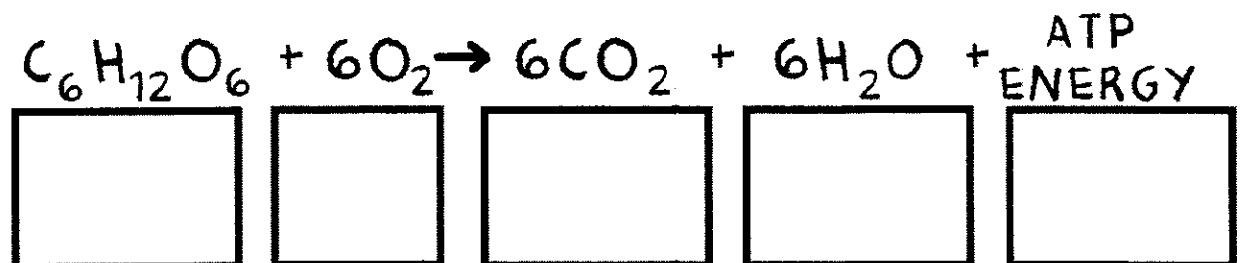
Formula Illustrations

For the following formulas, (1) determine whether the formula is photosynthesis or cellular respiration, (2) circle the products, and (3) creatively illustrate each reactant or product in the box underneath.

5. Formula is for: _____



6. Formula is for: _____



If Chloroplasts and Mitochondria Could Speak

If chloroplasts and mitochondria could only speak! Decide whether each quote could be stated by a chloroplast (label "C"), mitochondria (label "M"), or both organelles (label "C, M").

7. _____ My main goal is to produce a lot of ATP energy.

8. _____ I contain pigments to help capture light energy.

9. _____ Oxygen gas production will happen within me.

10. _____ I can be found in plant cells.

11. _____ I can be found in animal cells.

12. _____ Carbon dioxide gas production will happen within me.

13. _____ Muscle cells would contain a lot of me.

14. _____ Water production will happen within me.

15. _____ Glucose production will happen within me.

16. _____ I would be found within a photosynthetic protist.

17. _____ I am the site of aerobic cellular respiration.

18. _____ Krebs and the Electron Transport Chain both happen within me.

19. _____ I contain chlorophyll.

20. _____ The Calvin Cycle happens within me.

