

Name _____

Required text: *Biology: Life on Earth (with Physiology)* Ninth Edition (2011)
Audesirk, Audesirk, and Byers.

The summer assignment consists of a brief review of information from Chapters 4 and 5 from the text book. Look over those two chapters and complete the following assignments.

***THE ENTIRE ASSIGNMENT WILL BE COLLECTED ON THE FIRST DAY OF CLASS. IT WILL BE GRADED.**

****ANSWERS TO QUESTIONS MUST BE TYPED.**

*****CAUTION!!!** There are graphic photos of human injuries on pages 55 and 94. Do not open your text near children, or anyone else who may be easily traumatized.

Chapter 4 (pages 56-75)

A. Match the following terms with the correct description/definition:

(See page 76 for a list of terms with the pages on which they may be found.)

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|-------------------------------|--|
| 1. Aerobic ____ | a. specialized cellular membranes that modify, sort, and package protein |
| 2. Anaerobic ____ | b. protein fibers that give shape and organization to cytoplasm |
| 3. Chromatin ____ | c. tiny protein-lined perforations in the nuclear membrane |
| 4. Chromosome ____ | d. "with oxygen" |
| 5. Cytoplasm ____ | e. organelles that extract energy from food and store it in ATP |
| 6. Cytoskeleton ____ | f. series of membranes, sacs, and channels; makes phospholipids |
| 7. Endoplasmic reticulum ____ | g. membrane sacs that carry contents to different areas of cell |
| 8. Golgi apparatus ____ | h. long strands made of DNA and proteins |
| 9. Microfilament ____ | i. organelle that consists of chromatin, nucleolus, and nuc. envelope |
| 10. Microtubule ____ | j. small particle of ribosomal RNA and proteins |
| 11. Mitochondria ____ | k. spiral tubes of protein that move chromosomes |
| 12. Nuclear pore ____ | l. "without oxygen" |
| 13. Nucleus ____ | m. twisted double strands of proteins that help contract muscles |
| 14. Ribosome ____ | n. fluid and structures inside plasma membrane; outside nucleus |
| 15. Vesicle ____ | o. originally called "colored substance" |

B. Answer **Review Questions** #4, 6 and 7 from page 76. * Please type answers on separate paper*

Chapter 5

C. Match the following terms with the correct definition/description.

(See page 95. It has a list of terms with the page number upon which each term may be found.)

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|--------------------------------|---|
| 1. Active transport ____ | a. movement of water across a selectively permeable membrane |
| 2. Carrier protein ____ | b. membranes that allow only certain ions or molecules through |
| 3. Channel protein ____ | c. movement from area of high concentration to area of lower concentration |
| 4. Concentration gradient ____ | d. membrane proteins use energy to move molecules across the plasma membrane |
| 5. Desmosome ____ | e. structures that link adjacent cells |
| 6. Diffusion ____ | f. double layered arrangement that makes up cell membrane |
| 7. Facilitated diffusion ____ | g. protein that has a binding site that can temporarily attach to specific molecules |
| 8. Osmosis ____ | h. the category of protein types embedded in cell membrane |
| 9. Phagocytosis ____ | i. a type of transport protein whose central pores allow water or ions to pass through the membrane |
| 10. Phospholipid bilayer ____ | j. means "cell eating" |
| 11. Receptor protein ____ | k. the difference in concentration of a substance between two parts of a fluid or across a membrane |
| 12. Selectively permeable ____ | l. the process of moving through cell membranes down a concentration gradient with the help of transport proteins |

We will review these terms on the first day of class.

Please contact me via email if you have any questions: eott@nda-worc.org

Enjoy your summer,

Mrs. Ott