SUMMER ASSIGNMENT ***2019-2020***
BIOLOGY II/BIOTECHNOLOGY- HONORS #546 ***Mrs. Ducharme***

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.)

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 phospholipds
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.)

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 lwer 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 cel l 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. specialized water channel proteins with positively charged amino acids that attract water
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
13. Aquaporins _____	m. means “cell eating”

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

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

Enjoy your summer,

Mrs. Ducharme