

Name: _____

Cells Study Guide and Checklist

_____ 1. State the 3 parts to the Cell Theory and recognize the scientists who contributed to it.

- a. Leeuwenhoek - 1st to see bacteria (animicules)
- b. Hooke - came up with word "cell"
- c. Schleiden - all plants are made of cells
- d. Schwann - all animals are made of cells
- e. Virchow - cells come from other living cells

_____ 2. Study the organelles and their general functions:

- a. Cell Membrane
- b. Cell Wall
- c. Cytoplasm (water and cytoskeleton)
- d. Nucleus
- e. Nucleolus
- f. Endoplasmic Reticulum (smooth and rough)
- g. Ribosomes
- h. Golgi Apparatus
- i. Lysosome
- j. Vacuole
- k. Chloroplast
- l. Mitochondria

_____ 3. Recognize the difference between eukaryotic and prokaryotic cells

_____ 4. Review the plant and animal cell diagrams

- a. Label the parts
- b. List 3 differences between the two

5. Compare the different types of cell membrane transport

- a. Passive Transport
 - i. Diffusion
 - ii. Osmosis
 - iii. Facilitated Diffusion
 1. Uses channel proteins
- b. Active Transport
 - i. Uses carrier proteins and energy
 - ii. Moves substances from where they are less concentrated to more concentrated
- c. Endocytosis and Exocytosis

6. Review the nucleus and explain protein synthesis

- a. Diagram of DNA → RNA → amino acid → protein
- b. Transcription
 - i. Where does this happen?
 - ii. What does it produce?
- c. Translation
 - i. Where does this happen?
 - ii. What does it produce?
- d. Be able to translate the 3 letter code into an amino acid using the Amino Acid Chart

7. Draw protein and vesicle transport in a cell

- a. ER – proteins made and packaged into vesicles
- b. Golgi – vesicles tagged and sorted
- c. Cytoskeleton – movement of vesicle by motor proteins
- d. Cell membrane – exocytosis (contents delivered outside cell)

8. Explain photosynthesis

- a. Formula
- b. Occurs in chloroplasts

9. Explain cell respiration

- a. Formula
- b. Occurs in mitochondria