Answers to Study Guide

Cell Membrane: outside of a cell; controls what enters and leaves the cell

Nucleus: controls all cell function and contains DNA; known as “the brain” of the cell

Prokaryote: single-celled organism with no nucleus

Eukaryote: multicellular organism with a nucleus and cell membrane

Cell Wall: only in plants; provides support and protection

Ribosome: make protein

Endoplasmic Reticulum (ER): processes and packages proteins; transports nutrients throughout the cell

Mitochondria: produces energy using ATP; known as the “powerhouse” of the cell

Chloroplast: in plant; makes food using sunlight

Golgi Complex: packages and sends materials in and out of the cell

Lysosome: digests and removes waste (animal cell)

Vacuole: Stores water and other nutrients

Cytoplasm: gel-like material surrounding organelles

Cytoskeleton: gives support to the cell and keeps it from collapsing

1. Eukaryotic cells are larger, have nucleus, and make multicellular organisms. Prokaryotic cells are smaller, have no nucleus, make single-celled organisms, and can have a flagellum (bacteria). \*Look at the T Chart that is in your notes. This lists all of the differences we discussed in class.

2. Robert Hooke

3. All organisms are made of one or more cells, the cell is the basic unit of all living things, and all cells come from existing cells

4. A plant cell is more rectangular in shape, and plants have a large central vacuole, cell wall and chloroplasts. An animal cell is circular in shape and has lysosomes.

5. Nucleus

6. Surface area-to-volume ratio

7. It only allows certain material to enter and leave the cell.

8. cytoskeleton

9. ER

10. Make sure to look at the picture of the animal cell on page 69. Also, use your previous assignments, like the drawing of the cell and the reinforcement worksheet, to help you study.