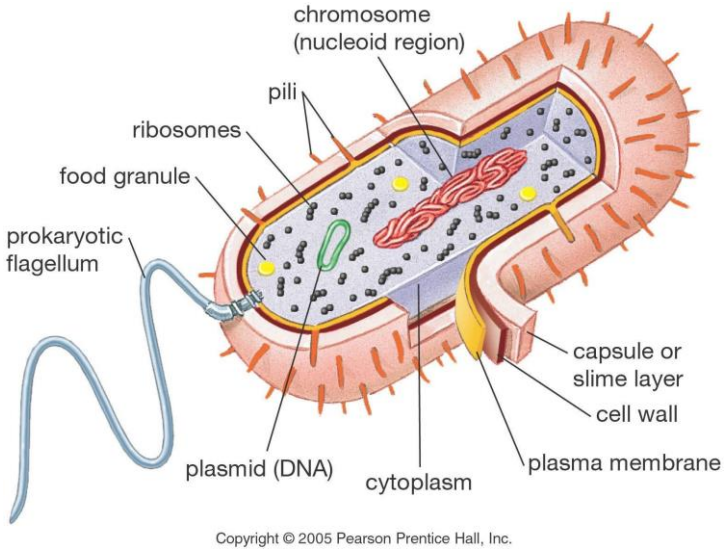
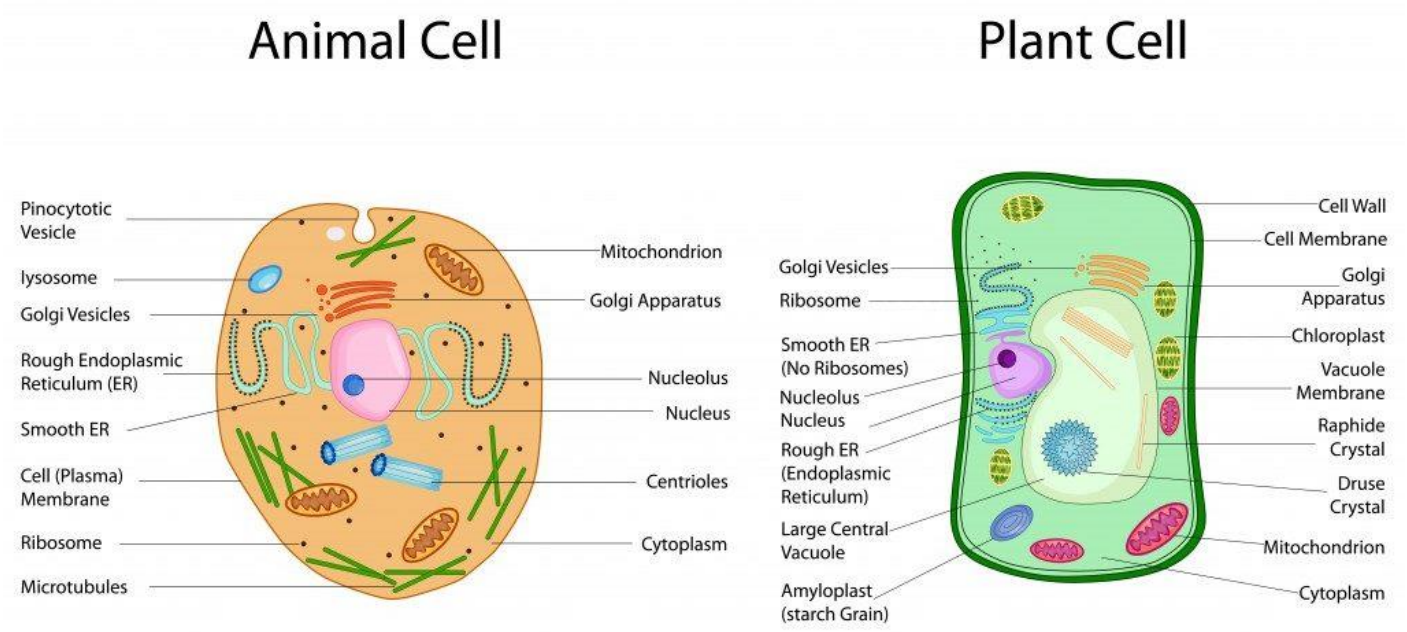
Unit 2 Part 1 Study Guide
Answers

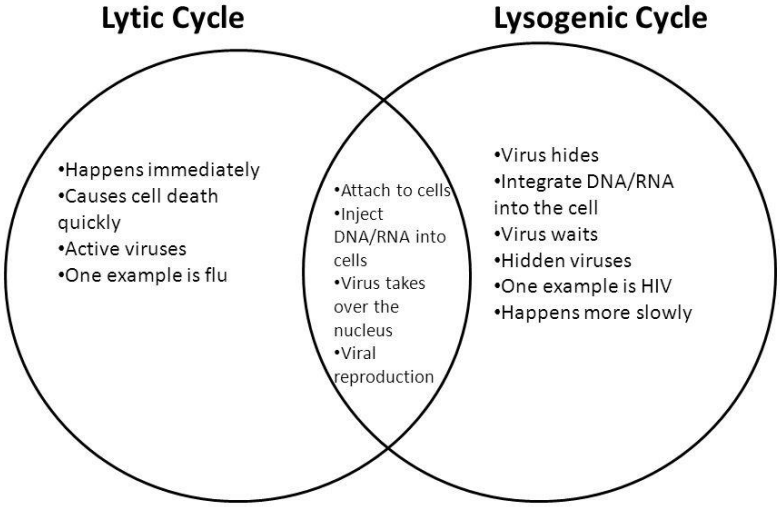
1. Four things that all cells have are : DNA, Cytoplasm, Cell Membrane, Ribosomes
2. The three parts to the Cell Theory are:
    a. All living things are composed of one or more cells.
    b. Cells are the basic unit of life.
    c. All cells come from pre-existing cells.
3. Prokaryotes have no nucleus but eukaryotes do. Prokaryotes are all unicellular and bacteria are the only prokaryotes. Eukaryotes can be unicellular or multicellular and are protists, animals, plants and fungi.
4. Here is a picture of a labeled bacteria (prokaryotic cell).



5. Here is a picture of a labeled eukaryotic cell.



6. A, C, E, F, and G are all eukaryotes B, D, and H are all prokaryotes
7. membrane; membrane
8. Protein Capsid and Nucleic Acid (DNA or RNA)
9. Here are the differences between the lytic and lysogenic cycles:



10. Central vacuole; vacuole; vacuole
11. Cellulose
12. Cells; Organs
13. Passive
14. Diffusion
15. The salt will cause the water in the gum cells to leave the cells, causing the swelling to go down. The water moves in this direction because there is more water inside the cell versus outside the cell.
16. They still move around because molecules are in constant motion.
17. No, facilitated diffusion requires a protein channel.
18. A, B, C
19. D, E, F
20. D, E, F
21. A
22. A, B, C
23. B
24. D, E, F
25. F
26. D, E

In the isotonic solution, water is moving into and out of the cell at an equal rate in order to maintain homeostasis. In the hypotonic, solution, water is moving into the cell. This is because there is more solute inside the cell and water moves into the cell to reach equilibrium. In the hypertonic solution the water is moving out of the cell because there is more solute outside the cell. It moves to reach equilibrium.