**Biology Review Cells**

1. Prokaryotic cells have no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. List the 3 parts of the cell theory.
3. List 3 examples of a eukaryotic cell.
4. What is one example of a prokaryotic cell?
5. Which cell structure is responsible for providing energy to the cell?
6. Which organelle transfers light energy into food?
7. Which organelle breaks down waste material and recycles it?
8. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ provides temporary storage of food, enzymes, and waste products.
9. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ takes materials made by other organelles and packages them for storage or to leave the cell.
10. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is very flexible and is composed of lipids and proteins.
11. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is found only in plant, bacteria and fungi cells. This protective layer can be made of cellulose.
12. Who is given credit for naming cells after looking at the bark of cork?
13. Draw a Venn diagram to compare Prokaryote and Eukaryote cells. Put the following descriptions into the diagram as belonging to Pro, Eu, or both:
    1. Do not have internal organelles
    2. Have a cell membrane
    3. Contain cytoplasm

h. Contain hereditary material

* 1. Have a nucleus
  2. Are only unicellular
  3. Can be unicellular or multicellular
  4. Do not have a nucleus

1. Describe what happens when a cell is in a hypotonic, hypertonic or isotonic solution. Include why this happens.
2. Complete the chart below for cell transport – put an X for each true statement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Osmosis | Diffusion | Facilitated diffusion | Active transport |
| Requires energy |  |  |  |  |
| Movement of water |  |  |  |  |
| Movement of other stuff |  |  |  |  |
| Needs proteins |  |  |  |  |
| Does not require energy |  |  |  |  |
| Endocytosis and exocytosis |  |  |  |  |

* 1. Hypotonic –
  2. Hypertonic –
  3. Isotonic -

**Ecology and Biochemistry Review Questions**

1. Draw an energy pyramid. Make sure to show the energy transfer and label what happens to the energy as it is lost.
2. Explain 3 symboitic relationships.
3. What are the 4 macromolecules and their functions?
4. What are 4 polysaccharides and their functions?
5. Do proteins give you energy?