

Concepts, ideas and information you should know and understand:

1. What the characteristics of science are.
2. What the scientific method is and what steps you would use when employing this method.
3. What the common properties possessed by all living forms are.
4. Understand the properties of water and how they affect living systems.
5. Know what the four types of organic macromolecules are.
6. Know what the cell theory states.
7. What prokaryotic cells are and what structures they possess.
8. What eukaryotic cells are and how they are different from prokaryotic cells.
9. Know what the different organelles are and have a general understanding of their functions.
10. Know the functions of membranes in the cell.
11. Understand the structure of membranes and that structure relates to its functions.
12. Understand the different methods of molecular transport.
13. Understand what enzymes are and how they work.
14. Have a basic understanding of what energy is and why it's important in living systems.
15. Know what the molecule ATP is, what its function is.
16. Be able to define aerobic cellular respiration, know what organisms can do it, and understand why it is essential to life.
17. Know what the main starting "ingredients" for aerobic cellular respiration are and what the end products are.
18. Know what the different stages of cellular respiration are, including where each occurs in the cell and what the ending products are.
19. Understand how anaerobic fermentation is different from aerobic respiration, including what the ending molecules are.
20. Be able to define photosynthesis and know what organisms can do it.
21. Know what the main starting "ingredients" for photosynthesis are and what the end products are.
22. Know the different stages of photosynthesis, where each stage occurs in the cell (be specific), and what the starting and ending products are.
23. Understand how/what I mean when I say aerobic cellular respiration and photosynthesis are complementary processes.
24. Know what process is responsible for all the energy in the food we eat, i.e. what is the ultimate source of all energy on the planet?

Terms you should know:

Active transport

Aerobic

Anaerobic

ATP

Biological catalyst

Calvin Cycle

Chlorophyll

Chloroplast

Cristae

Cytoplasm

Diffusion (simple)

DNA

Electron transport chain

Endocytosis

Endoplasmic reticulum (ER)

Energy of Activation (E_A)

Enzyme inhibitor

Exocytosis

Facilitated diffusion

Fermentation

Fluid mosaic

Glycolysis

Golgi apparatus

Hydrophilic

Hydrophobic

Hypertonic

Hypotonic

Isotonic

Kreb's Cycle

Light reactions

Lysosome

Mitochondria

Mitochondria matrix

Nucleoid region

Nucleus

Organelle

Osmosis

Passive transport

Phospholipid bilayer

Plasma membrane

Pyruvate

Ribosomes

Selectively/semi permeable membrane

Stroma

Thylakoid

Transport vesicle

Vacuole