Biology Chapter 1 Study Guide

Lab Safety Rules

Living & Nonliving things

What do you study in biology?

What do biologists do?

Characteristics of life (8) & describe each

What is science?

What is scientific inquiry?

Scientific theory

Scientific law

Metric system (length, mass, volume, time)

***Vocabulary Words:***

* Biology
* Organization
* Cell
* Growth
* Reproduction
* Species
* Stimulus
* Response
* Homeostasis
* Adaptation
* Science
* Observation
* Hypothesis
* Experiment
* Control group
* Experimental group
* Dependent variable
* Independent variable
* Data
* Quantitative data
* Qualitative data
* Cohesion
* Surface tension

BIO STUDY GUIDE 6

1. VOCABULARY
   1. Protons
   2. Neutrons
   3. Elements
   4. Matter
   5. Enzyme
   6. Groups
   7. Ions
   8. Isotopes
   9. Molecules
   10. Nucleus
   11. Periodic table of elements
   12. Periods
   13. Electrons
   14. Substrate
   15. Catalyst
   16. Active site
   17. Atoms
   18. Compound
   19. Macromolecule
   20. Polymer
   21. Carbohydrate
   22. Proteins
   23. Lipid
   24. Amino acids
   25. Nucleic acid
   26. nucleotide
2. The different states of matter
3. What are atoms
4. Periodic table
5. Van der Waals bonds
6. Know how to draw the atom model
7. Energy diagrams
8. Exothermic reactions
9. Endothermic reactions
10. Chemical symbols
11. What are isotopes
12. Energy levels on each atom
13. How many electrons can each energy level hold
14. The different chemical bonds,(ionic, covalent, hydrogen know each one of them.
15. What are chemical reactions?
16. Balancing equations
17. Water properties
    1. Bonds
    2. Shape
    3. Cohesion
    4. Adhesion
18. Solutions
19. Mixtures
    1. Solvents
    2. Solutes
20. pH scale, acids, bases, buffers
21. what is the role of carbon in living organism?
22. What are the 4 macromolecules
    1. Carbohydrates
    2. Lipids
       1. Saturated and unsaturated
       2. Phospholipid
    3. Protein
       1. amino acids
    4. Nucleic Acid
       1. DNA
       2. RNA

BIO STUDY GUIDE 7

Vocabulary

* Cell
* Cell theory
* Plasma membrane
* Organelle
* Eukaryotic cell
* Nucleus
* Prokaryotics
* Eukaryotics
* Selective permeability
* Phospholipid bilayer
* Transport proteins
* Fluid mosaic model
* Organelles of the cells
  + Cytoplasm
  + Cytoskeleton
  + Ribosome
  + Nucleolus
  + Endoplasmic reticulum
  + Golgi apparatus
  + Vacuole
  + Lysosome
  + Centriole
  + Mitochondria
  + Chloroplast
  + Cell wall
  + Cilium
  + Flagellum
* Diffusion
* Dynamic equilibrium
* Facilitated diffusion
* Osmosis
* Isotonic, hypertonic, hypotonic solutions
* Active transport
* Endocytosis
* Exocytosis

1. How are the advances in microscope technology
   1. Names and functions of microscope
2. Compound, electron microscope
3. Principles of cell theory
4. Differences between eukarytic and prokaryotic cells
5. Structures of eukaryotic cells, and their functions
6. Differences and similarities between plant and animal cells
7. What are the process of diffusion, facilitated diffusion, active transport?
8. Effects of hypotonic, hypertonic, isotonic solutions on a cell
9. How do large particles enter and exit the cell?