

BIOL 1110: General Biology I Outline for Lab Test 1

Taxonomy

- seven levels of classification from most general to most specific
- 5 kingdoms of organisms
- complete classification of man
- scientific naming and binomial nomenclature
- use of dichotomous keys

Microscopy

- comparison of the compound light microscope and electron microscope (table in lab manual)
- visual ranges of microscopes compared to one another (diagram in lab manual)
- identification of parts of the compound light microscope-know functions of the parts and specific names for all lenses
- correct use of the microscope (carrying it, cleaning lenses, storing it, focusing, light control, moving the slide around on the stage)
- calculation of **total magnification**
- which power has the greater/lesser **diameter of field**
- which power has the deeper/shallower **depth of focus**
- preparation of a wet mount
- microscope terminology: **photomicrograph, resolution (or resolving power), ocular, objectives, diaphragm, inversion, parfocal, binocular, monocular**

Cell Diversity

- functions and location of major cell structures
- cell terminology: **prokaryotic, eukaryotic, organelle, cell, tissue, organ, organ system, organism**
- 4 types of animal tissues-appearance, function, location (tables in lab manual)
- tissue terminology: **epithelial, voluntary, involuntary, striation, myofiber, neuron, axon, dendrite, cell body, erythrocyte, leukocyte, thrombocyte, adipocyte, osteocyte, chondrocyte**

Diffusion and Osmosis

- terminology: **diffusion, osmosis, tonicity, isotonic, hypertonic, hypotonic, hemolysis, crenation, turgor pressure, plasmolysis**
- microscopic effects of various concentrations of salt solutions on red blood cells and Elodea