

Biology 106: Principles of Biology I

Instructor: Dr. Michael Franklin

Assigned Reading

Biological Science 2nd Edition, by Scott Freeman (2005)

The following covers information to the second midterm (and includes the second quiz).

CELLS

(Especially review the function of eukaryotic (plant and animal) cell organelles)

Prokaryotes (Bacteria, etc.) pp 128-131; Eukaryotes (all others) pp 131, and rest of Chapter.

Major Organelles and their functions, pp 132-143 and 149-156

Cell to Cell Communication, pp 163-166, 168-170, 170-174.

(Major organelles and their functions, and cell to cell communication corresponds to your first homework assignment).

Cell Cycle: Chapter 11

mitosis and meiosis pp 228-231

cancer (unregulated cell growth) pp 241-245

DNA Synthesis and Replication: Chapter 14

As hereditary material pp 304-305

DNA synthesis and replication pp 312-316

DNA repair pp 318-323

Introduction to Genetics: Chapter 13

Mendel's Experiments, single trait pp 269-274 (hybrid cross)

Mendel's experiments, 2-traits pp 276-279 (dihybrid cross)

Test Cross p 278

Sex Linkage, Sex Linked traits p 281

Incomplete Dominance and Codominance p 288

Multiple alleles affects and Polymorphic traits p 289

Pleiotropy p 289

Environmental Effects on Genes pp 290-292

EVOLUTION

Evolutionary Mechanisms, Natural Selection pp 496-503

Natural Selection and Microbe resistance to Antibiotics (case study) p 504

Natural Selection and Adaptation pp 510-512

Hardy-Weinberg Principle p 517

Hardy-Weinberg Assumptions p 518

Natural Selection and Sexual Selection pp 520-523

Genetic Drift pp 527-529

Gene Flow p 530

Mutation pp 531-532

Inbreeding vs Interbreeding p 573

Species and Species Concept pp 539-541

Isolation and Divergence pp 545-550

Phylogenetic Relationships pp 556-566

Also look over information for taxonomic classification in case we make it that far.