Exercise - Genetics

- **Exercises: Genetics (Hardison)**

These are homework exercises to accompany Hardison's "Working with Molecular Genetics" TextMap. Genetics is the study of genes, genetic variation, and heredity in living organisms.

- 1.E: Fundamental Properties of Genes (Exercises)
- 3.E: Isolating and Analyzing Genes (Exercises)
- 4.E: Genomes and Chromosomes (Exercises)
- 5.E: DNA replication I: Enzymes and Mechanism (Exercises)
- 6.E: DNA replication II: Start, stop and control (Exercises)
- 7.E: Mutation and Repair of DNA (Exercises)
- 8.E: Recombination of DNA (Exercises)
- 9.E: Transposition of DNA (Exercises)
- 10.E: Transcription: RNA polymerases (Exercises)
- 11.E: Transcription: Promoters, terminators and mRNA (Exercises)
12.E: RNA Processing (Exercises)
- 13.E: Genetic Code (Exercises)
- 14.E: Translation - Protein synthesis (Exercises)
- 15.E: Positive and negative control of gene expression (Exercises)
- 16.E: Transcription regulation via effects on RNA polymerases (Exercises)
- 18.E: Transcriptional regulation after initiation (Exercises)
- 19.E: Transcriptional regulation in eukaryotes (Exercises)
- 20.E: Transcriptional regulation via chromatin alterations (Exercises)

- **Exercises: Online Open Genetics (Nickle and Barrette-Ng)**

These are homework exercises to accompany Nickle and Barrette-Ng's "Online Open Genetics" TextMap. Genetics is the scientific study of heredity and the variation of inherited characteristics. It includes the study of genes, themselves, how they function, interact, and produce the visible and measurable characteristics we see in individuals and populations of species as they change from one generation to the next, over time, and in different environments.

- 1.E: Overview, DNA, and Genes (Exercises)
- 2.E: Chromosomes, Mitosis, and Meiosis (Exercises)
- 3.E: Genetic Analysis of Single Genes (Exercises)
- 4.E: Mutation and Variation (Exercises)
- 5.E: Pedigrees and Populations (Exercises)
- 6.E: Genetic Analysis of Multiple Genes (Exercises)
- 7.E: Linkage and Mapping (Exercises)
- 8.E: Techniques of Molecular Genetics (Exercises)
- 9.E: Changes in Chromosome Number and Structure (Exercises)
- 10.E: Molecular Markers and Quantitative Traits (Exercises)
- 11.E: Genomics and Systems Biology (Exercises)
- 12E: Regulation of Gene Expression (Exercises)
- 13.E: Cancer Genetics (Exercises)