

Biology Course Content

Mrs. McCargar - 2007/2008

1. Introduction to Biology

- The nature of science
- Characteristics of life
- Kingdoms of life
- Classification of organisms

5. DNA

- Structure of DNA
- DNA replication
- RNA and protein synthesis
- Transcription and translation

2. Cells

- History of cell discoveries
- Cell theory
- Prokaryotes and eukaryotes
- Cell structure and function
- Cell organelles
- Cell membrane and transport
- Multicellular organization
- Microscope parts and use

6. Genetics

- Gregor Mendel's legacy
- Genetic crosses and punnett squares
- Probability
- Types of inheritance
- Pedigrees
- Human genetic disease
- Technology in disease prevention

3. Cell Energy

- Molecules of life
- Photosynthesis
- Cellular respiration
- Fermentation
- Circulatory, digestive, respiratory systems

7. Ecology

- Ecological issues
- Environmental responses of lifeforms
- Populations
- Biomes
- Community ecology
- Succession
- Trophic levels
- Nutrient cycling

4. Cell Reproduction

- Chromosomes
- Cell cycle
- Mitosis
- Meiosis
- Asexual vs. sexual reproduction

8. Evolution

- Earth's history
- Radioactive dating
- First life forms
- Theory of evolution
- Human evolution
- Classification review