

Pre-AICE Biology Midterm Study Guide 2009

Study your interactive notebook, past labs, PowerPoint notes, daily assignment page on Mrskingsbioweb.com and chapters in your textbook; IGCSE chapters 1-5, 21 and Modern Biology chapters 1-8, 10. Review the IGCSE website **s-cool** for extra help. The following topics will be addressed on the midterm exam:

Scientific Method

- Theory
- Microscope basics

Basic Chemistry

- Properties of Water
- pH
- elements, atoms, ions

Biochemistry

- Organic compounds
- Hydrocarbons
- Amino acid, carbohydrate, lipids, protein, nucleic acid
- Enzymes
- Functional groups (types)

Cell Structure & Function

- Eukaryotic & prokaryotic
- Plant cells
- Animal cells
- Plasma membrane and organelles
- ATP

Homeostasis & Cell Transport

- Diffusion and osmosis
- Passive and active transport

Photosynthesis & Respiration

- Biochemical pathway
- Cycles (Calvin and Krebs)
- Bi-products

Cell Reproduction

- Cell cycle (G_1 through cytokinesis)
 - Mitosis
 - Meiosis I & II
- Chromosomes
- Haploid and diploid
- Karyotype

DNA, RNA & Protein synthesis

- DNA & RNA Structure and function
- Nucleotides
- Codon
- Base pairing

Scientists

- Hooke
- Watson & Crick
- Hershey & Chase

*Interactive Notebook and 5 x 8 note card will be turned in the day of the midterm