

**Biology 2010**  
**2<sup>nd</sup> & 3<sup>rd</sup> period, 1<sup>st</sup> semester**

**Objectives:**

- Use the Scientific Method, laboratory instrumentation and tools in a safe and productive manner.
- Develop and apply skills of observation, data collection and analysis, and scientific reasoning.
- Demonstrate knowledge of chemical structures and properties of elements, compounds and mixtures.
- Describe the cell processes in depth that are important to biology and demonstrate why they are important to everyday life.
- Contrast different perspectives and theories on topics associated biology and be able to defend your own viewpoints.
- Compare various levels of taxonomic hierarchy and classify organisms using biological keys.
- Investigate the interdependence of diverse living organisms and their interactions with components in the biosphere.

**Supply List**

- Text: Biology, BJU Press, 2005
- class notebook
- composition book for labs
- #2 pencils
- Notecards (optional)
- black or blue pens
- colored pencils
- ruler (both metric and standard)
- internet access will be needed for review of online classwork

**Expectations**

- Sit in assigned seats, if applicable.
- Adhere to the school dress code. You will be advised if alternate attire is needed for class activities.
- Be prepared for class – bring all materials needed for the class day.
- Show respect to the teacher and one another, and pay attention in class.
- Follow the school handbook rules and understand the discipline policy defined within it.
- Avoid inappropriate classroom behavior, allowing all to benefit from instruction.
- Adhere to Laboratory Safety Rules and Expectations (Attached)

**Grading**

Grade will be based on cumulative points. The Total number of course points will vary depending on topics and labs covered throughout the semester. In general:

- laboratories 25-50 points,
- tests 100-200 points,
- oral practicals 10-30 points,
- writing assignments 75 points
- final exam worth ~300 points.
- class participation/homework completion = points worth 10% of course total

## Class Syllabus

### Introductory Unit

- Lesson 1: Biology & Everyday Life
- Lesson 2: The Scientific Method
- Lesson 3: Lab Safety/Use of the Microscope

### Unit 1 Cell Biology

- Lesson 4: Basic Chemistry
- Lesson 5: Organic Chemistry
- Lesson 6: Intro to cells
  - 3a The structure of cells
  - 3b Cells and their Environment
- Lesson 7: Cellular Processes
  - 4a Cellular Energy
  - 4b Cellular Metabolism and Protein synthesis
- Lesson 8: Basic Cell Reproduction

### Unit 2: Genetics

- Lesson 9: Basic Genetics
- Lesson 10: Heredity
- Lesson 11: DNA

### Unit 3: The Beginnings of the Earth and Life

- Lesson 12: Biblical Creationism
- Lesson 13: Biological Evolution

### Unit 4: Classification/Diversity

- Lesson 14: The Classification of Organisms

### Unit 5: Dissections

- Earthworm
- Mammal

**Careers in Biology** will be covered at various times throughout the semester.

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**Questions, Comments, Help or For more information:**

**Susan Simonson**, [simonsons@graceacademyonline.org](mailto:simonsons@graceacademyonline.org)

Course information and grades will be available through **Edline.com**