

Science Academy Class Information

Honors Biology (2006-2007)

Class Time: Wednesdays, 9:30 a.m. to 11:45 a.m.

Location: Bethany Collegiate Church, Township Line Road, Havertown

Instructor: Lisa Swieson (610.355.9174, LSwieson@science-resources.org)

Textbook: *Biology* (Glencoe McGraw-Hill, ©2007)

Class Web Site: www.science-resources.org/honbio0607.htm

Overview. This is an honors high-school biology course, appropriate for all good students, especially those planning to attend college. Students should be motivated and willing to work hard. Through independent readings and written assignments, students will gain an understanding of basic biology and extend that knowledge through weekly laboratory investigations. Students will conduct independent research and present their findings to the class as well as at local science fairs. Students are also encouraged to take the biology SAT II in June.

Class Particulars: Each week, the first hour of class will be spent reviewing assignments and preparing for lab. The remainder of the time will be in lab. The last class session of each term will be devoted to a practical lab exam.

Supply List: loose leaf notebook calculator
filler paper graph paper or access to a computer graphing program

Students are expected to bring the following to class each week: textbook, notebook, pen and pencil, and all written assignments (see below).

Dress Code: Students should wear comfortable (not baggy) clothing that is easily washable or that you don't mind getting dirty. Long hair **must** be tied back. No contact lenses, open-toed shoes, bracelets, rings, or loose jewelry should be worn.

Assignments: Each student will receive an assignment sheet, which will list all of the assignments for several weeks at a time. (Assignments will also be posted online at the class web site.) The assignment sheet can also be used to track hours or days, if desired. Assignments will include:

- **Readings.** Students will be expected to read an average of 3 sections (approx. 30 pages) each week from the assigned textbook.
- **Lab Prep.** Each week, students will receive instructions to prepare for the next lab. These may involve readings or written work.
- **Lab Report.** A short write-up of each lab will be due the week following the lab. I recommend writing up the lab report Wednesday afternoon or evening, while everything is still fresh in the student's mind. Some labs will require simply completing the lab sheets, while others will require a separate lab report as well.
- **Science Fair Project.** Students will start their science fair projects in September and work on them steadily during the first semester. Intermediate assignments will be due every few weeks to keep students on track.
- **Other Written Assignments.** Most reading assignments will have corresponding written assignments that are intended to solidify the students' understanding of the readings. If any student encounters difficulty with these written assignments, s/he should contact me by phone or email for extra help.
- **Tests.** At the end of each unit, students will be given a take-home test, which will consist of questions similar to the open-ended questions the students have been doing for homework. Tests should be taken on the date indicated and mailed to me the following day so that I can score them before the next class. Tests are **not** open book, so I ask each parent (please!) to

supervise these tests and sign them before mailing them back to me. There will be a total of 8 tests during the year.

Grades: Grades will be calculated as followed:

- **Homework:** 25% A: 90-100%
- **Labs (28):** 25% (Lowest lab score *each semester* will be dropped.) B: 80-89%
- **Tests (8):** 25% (Lowest test score for the year will be dropped.) C: 70-79%
- **Practical Lab Exams (2):** 15% D: 60-69%
- **Science Fair Project:** 10%

Mid-Week Help: In addition to being available by phone or email during the week, as questions arise I will also send emails (check email regularly!) and maintain a class web site containing assignments, answers to questions, extra information & clarification, etc.

Absence: I realize that students may need to miss class once or twice for illness or family obligations. If your child must miss class, please let me know ahead of time. Even so, students will be responsible for the material they miss – homework assignments must still be completed and handed in, and, though the lab itself cannot usually be made up, students must understand the principles investigated during lab. Note that, since the student's lowest lab score will be dropped each term, absence need not affect that portion of the student's grade, unless the student misses more than one lab each term.

Lab Safety: It is essential that lab safety rules be followed carefully. All students must read and sign a lab safety contract prior to the first lab session. (Be sure to bring this with you to our first class.) Remember, students who repeatedly ignore these safety rules are putting themselves and their classmates at risk and will be suspended from class with no refund. In addition, students will be expected to pay for equipment that they break.

About Your Textbook: Each chapter includes a "Foldable" study organizer that should help you organize and understand the chapter. These would also be useful tools for review before tests. I encourage you to use these organizers, but it is not required. At the end of each chapter is a one-page feature relating biology to other fields ("BioDiscoveries," "Cutting-Edge Biology," "Biology and Society," etc.). You should read these when you get to them, but you do not have to answer the questions unless specifically assigned.

Science Resources will buy back your textbook at the end of the year for one-half the price you paid for it (i.e., for \$34.50) **if it is in good condition** – no writing (other than your name in the front), no dog-eared or torn pages, no spills, etc. To help keep it in good condition, please put a book cover on it. We plan to offer this class again in a few years, so if you have a younger sibling, you may want to keep it.

I look forward to seeing you in September!

Lisa Swieson

Assignment for September 6 (This assignment is approximately two weeks worth of work.)

Read Chapters 1 and 2. Answer these questions as you read through the chapters:

Chapter 1: p. 10: 1-2 / p. 14: DAL* 1.1 / p. 21: 5 / pp. 25-26: 1-5; 9-12; 15-20; 23-24

Chapter 2: p. 39: DAL* 2.1 / p. 40: 3 / p. 42: MiniLab 2.1** / p. 44: 6 / p. 49: 4 / pp. 53-54: 1-9; 12; 19-21; 23; 27-29; 35-36

* DAL = Data Analysis Lab – Read lab and answer all questions.

** MiniLab 2.1: Use the food web on p. 43 as a guide. Answer both Analysis questions.