



ADVANCED BIOLOGY SCIENCE SYLLABUS

Mrs. Bradshaw

2014 – 2015

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Course Description: The objective of this course is to develop an understanding of biological concepts using the scientific process. All major concepts of biology including cells, growth, reproduction, heredity, evolution, genetics, genetic engineering, bioenergetics, classification, microbiology, invertebrate and vertebrate animals, and current topics in life sciences are studied as they apply to organisms such as plants and animals. Explorations and application of key concepts will be conducted through lab experiments and various learning strategies including self-questioning and visual learning approaches. A rigorous curriculum includes application of higher level thinking skills and writing proficiency will be used to teach the various content related standards.

Text: Holt Biology (replacement cost \$66)
 Double Helix (replacement cost \$12)

(Students are responsible for books that they check out. They will be given an Indebtedness notice if not returned by the end of the year which will need to be cleared to be able to march in graduation ceremony.)

Supplies: pen/pencil; FOUR 3-prong folders with pockets; calculator; composition notebook for science fair projects

I will be using a variety of medium to present the information—textbooks, videos, speakers, demonstrations, labs, and anything else that I might discover that might increase your learning and enjoyment level. I am a firm believer that if you are having a good time in class, you will learn far more than if you were...say...asleep or absent.

Course Outline

Nine Weeks	Standards	Unit Topics
First Nine Weeks	SCSH2, SCSH4, SCSH8 SB1, SB3a	Science Process Skills (safety, scientific method, graphing, and experimental design) Cells Domain(characteristics of life, Macromolecules, Enzymes, Cell Structure and Function, Photosynthesis and Respiration, and Cell Transport/Homeostasis
Second Nine Weeks	SB2	Genetics Domain (DNA and Protein Synthesis, Mutations and Genetic Variations, Cell Reproduction, Mendelian Genetics, Biotechnology
Third Nine Weeks	SB3 b-d	Organisms Domain (Classification, Biodiversity, Viruses) Evolution Domain (Evolutionary History and Trends, Natural Selection, Cladograms and Phylogeny)
Fourth Nine Weeks	SB4	Ecology Domain (Biosphere, Levels of Organization, Interdependence of Organisms, and Human Impact on Environment EOCT REVIEW

Evaluation: Each student will be graded according to their ability to execute the objectives of course components. The components of this course will be weighed in the following manner as determined by TCCHS science department

Benchmark **10%**
Tests **40%**
Labs/Projects **30%**
Class Work **20%**

Standardized Testing:

EOCT-this is a comprehensive exam that measures student achievement in the area of Biology. It is based on the Georgia Performance Standards (GPS). The EOCT will comprise 20 % of the students' final grade.

Grading Policy-

Each nine weeks will be a final grade that will be averaged at the end of the year for the final grade. Physical Science has an EOCT test at the end of the year and will count 20% of their final grade.

The due date for assignments will be the deadline for turning in the assignment. If you are absent on the due date, the assignment will be due the first day you return to class. One day late – 10 points off; two or more days late – 20 points.

Reading in the Content Area-

As part of our content standards, all students will be required to read content related material to enhance the curriculum. Reading requirements include current science article and *Double Helix* by James Watson. This will be assigned during the 3rd nine weeks grading period. An outside project and reading assignment will be required.

The class has a requirement of a long term project. Students can either complete science fair or Exploravision project. This project is broken up over the 1st, 2nd, and 3rd nine weeks. Each assignment will be given a specific due date and assignment weight. An outline for each grading period will be provided.

Class Expectations: They are pretty simple. All school policies apply as well.

1. **Respect Everyone.** When someone is talking, don't talk. If you have something to say, please raise your hand. No cursing or profanity. You must respect everyone's right to learn and CAN NOT interfere with that process. Respect other's things (if it is not yours don't touch it).
2. **Do your best work and be responsible.** Turn it in on time! If ever feel that something is not your best see me and we can find an alternative assignment.
3. **Bring all materials to class.** Be prepared to learn when the bell rings. The warm up will begin with the bell. Tardies are a big deal! I will dismiss you at the end of the period. Use the restroom before class.
4. **Listen to rules and follow them.** This is important on lab days.
5. **Keep in touch.** If you don't understand something, ask.
6. **Food is not permitted.** Please do not bring food into the classroom – safety reasons and insects.

If you choose to break a rule:

Rewards for good behavior

1st time is a warning (Student/Teacher conference)

Praise!

2nd time is Parent Contact and detention

Positive Notes or emails Home

3rd time is referral

Candy or Sweet treats!

Make up work-It is important that you are here as much as possible. Make up work is a pain to make up. It can be done by appointment BEFORE OR AFTER SCHOOL

Teacher Web site: Information about test dates, projects, Power Points, etc. will be available for you to check throughout the year. To access web site – www.thomas.k12.ga.us -> schools -> TCCHS -> TCCHS web page -> click teacher.

Outside assignments: There will be several activities and reports that will be required outside of class.

Exploravision Group of 2-4 www.exploravision.org	Science or Engineering Project Individual or team of 2 http://www.societyforscience.org/isef/	Due date & assignment
Create and explore a vision of future technology by combining imagination with the tools of science. See above website for more information.	Design and conduct an experiment to answer a question or solve a problem. Engineering projects set a goal and build a prototype. See above website for more information.	
TOPIC Select group and identify topic. Write a paragraph explaining your topic (the technology, the problem it could solve and a short explanation).	TOPIC Work individually or with a partner. Describe topic and a rough research plan. (Describe in general terms what you will do.)	Friday, August 22 Daily (no other work will be accepted until the topic has been approved)
HISTORY, PRESENT AND FUTURE TECHNOLOGY Follow formatting guidelines given to you. These will be the first 3 sections of your description. SUBMITTED through TURNITIN	INFORMATION DISCOVERY/RESEARCH PLAN Write a summary of background research relating to your topic and design your experiment. This should be written in proper MLA or APA format and include a bibliography. SUBMITTED through TURNITIN	Friday, September 19 Test Grade
BIBLIOGRAPHY Minimum of 5 in correct format (MLA or APA)	Log Book Check —experiment should be started and data recorded	Monday, October 20 Daily Grade
ABSTRACT Follow guidelines. SUBMITTED through TURNITIN	ABSTRACT Experiment must be completed. Follow guidelines on proper form. SUBMITTED through TURNITIN	Friday, November 14 Daily Grade
COMPLETE PROJECT DESCRIPTION All written parts in proper format. SUBMITTED through TURNITIN	RESEARCH REPORT Follow guidelines.	Friday, December 5 Test Grade
Complete Description and WEB PAGE GRAPHICS (5)	DISPLAY	Friday, December 12 Lab Grade
TCCHS Science Fair, Wednesday, December 17		

Syllabus Confirmation 2014-2015
Mrs. Bradshaw– ADV Biology

Please sign the below indicate you and your parents have read the above information. Please keep this in your folder.

Teacher: I will be fair and consistent in administering the discipline plan and grades for my students.
Signature: _____ Date: _____

Student: I have read the classroom discipline plan and syllabus, and I understand it fully. I will honor it and will support it while in the classroom.
Signature: _____ Date: _____

Parent: My child has discussed the classroom discipline plan and syllabus with me. I understand and support it. **I also understand that a long term project (science fair or exploravision) is required and have received the outline.**
Signature: _____ Date: _____