

Course Title: Biology Lab

Level: HS

Teacher/Facilitator: Janice Higdon home: 595-7582 cell: 351-3662  
[tennesseebill@comcast.net](mailto:tennesseebill@comcast.net)

**Description:** These labs will be provided in order to provide hands-on labs for accompanying the DIVE Biology course. Four exams will be given in class along with several, short, in-class quizzes. DIVE Biology is a full year lecture course teaching concepts found in a typical high school biology course, plus a whole lot more. Topics include but are not limited to Science and Christianity, biochemistry, cells, genetics, Creation/evolution, bacteria, protozoans, fungi, plants, animals, ecology and human anatomy. DIVE Biology contains 38 lessons, each with definitions, and review questions. Only about half of the lessons contain a lecture, because many topics in biology require memorization of names and facts, and little explanation is required. There are over 500 total review questions, and many of these are essays or problems with multiple answers.

There are 28 video labs, most of which are taught using the scientific method. Students formulate a hypothesis, perform the experiment, and then use the results to determine whether their hypothesis was correct. DIVE Biology labs incorporate labs required by the College Board's AP Biology program. The AP Biology labs usually follow the scientific method, but also emphasize important laboratory techniques used by biologists, including chromatography, colorimetry, and gel electrophoresis. Some labs will be video based only.

Assignments for viewing lectures and other DIVE homework will be issued along with assignments for Science Roots (an etymology workbook) and readings from the apologetics book, *The Exchange of Truth*.

\*DIVE Science Lessons do not correlate completely with the Apologia text. Occasionally, they contain more or less information than is in the Apologia chapter they correlate with. We will use the DIVE Biology Course as the main course, and supplement it with Apologia's text and the Internet.

**YOU DO NOT HAVE TO USE BOTH APOLOGIA TEXTBOOKS TO COMPLETE THIS COURSE.** There is an available internet syllabus that shows how to use the internet for both the regular and advanced Apologia texts, but the reading will be more rigorous. Both Apologia texts are recommended if you are planning to take the CLEP or AP Biology exam. Otherwise, just purchase *Exploring Creation With Biology*, and when a DIVE Lesson does not have a corresponding Apologia module, use the DIVE Lecture and Internet Syllabus to find any definitions/information you need.

Additional Class Fees (if any): \$10 pre-lab manual , \$30 - microscope fee

Required Supplies:

DIVE Biology CD <http://www.diveintomath.com> \$50

Apologia Exploring Creation with Biology, 2<sup>nd</sup> Edition

(≈\$50 new) <http://www.christianbook.com>

Apologia The Human Body, 1st Edition (opt. see description)

(≈\$50) <http://www.christianbook.com>

Science Roots and Study cards (Hasseler)

(≈ \$10 each) <http://www.christianbook.com>

The Exchange of Truth <http://www.diveintomath.com> \$10

2 inch 3 ring binder with dividers, slim notebook type 3-hole punch

Scientific calculator

Prerequisites: It is recommended the a student be taking or past Algebra I

Homework Requirements: 4-6 hours/week

- Lecture notes ~taken from assigned DIVE lectures
- Reading assignments, either from Apologia or internet.
- Definitions and lecture review questions
- Science Roots homework
- Lab notebook preview and postwork

## Additional Course Information:

While this coop course is primarily a lab class to fulfill the hands-on work for Biology, if followed fully, this is an aggressive Biology course for the college bound student. Students must be prepared to spend solid time watching DIVE lectures, taking notes, reading, and studying several days throughout the week. For students with 80+ average, a few more hours of review with CLEP Professor will prepare them to sit for the college level CLEP or with a 90+ average the AP Biology exam. Registration for AP tests is generally done in January with the test being early May at a local high school. CLEP testing is available locally at Williamson Christian College in Cool Springs by appointment. Many colleges will accept these tests; however, you must check with the policies of your student's prospective college. With a college classes costing  $\approx$  \$150-\$250/credit hour for instruction, that is a potential cost savings of \$600-\$1000, not to mention time and duplicated efforts savings.

(Students wishing to audit this class should do so only if slots remain open for those wishing to take the class as fully presented. In this case, as well as others, I am perfectly happy to work with a parent on expectations.) Since this is considered a 'heavy' science course, I do not recommend this class to be taken, as is, with excessive demands on the student in other areas. Late homework or tests are discouraged and will be accepted for class credit, if received within 24hrs of class period or prior to class, in the case of known absences. Parents may contact me concerning assignments in the event of sickness.