

# Biology B Course Syllabus

VAPA at South Region High School #9

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## Overview

Biology B provides you with a project based introduction to the study of life. You will explore genetics, biodiversity, evolution, and human physiology by dealing with real world situations. Many times, your projects have the potential to impact your community and the world. Laboratory skills, questioning and inquiry, and combining scientific principles with 21<sup>st</sup> Century technology are emphasized.

Mr. Adolfo's website provides a wealth of information including daily assignments, PowerPoints, Worksheets, links to instructional videos, and rubrics and is a recommend resource, especially when students have prolonged absences.

## Assignments

Assignments are listed under below. Students will also express their understanding by creating projects such as multimedia projects, research papers, art work, demonstrations, presentations, and more. Students will be provided with rubrics and due dates for all deliverables.

<u>Individual Assignments</u>	<u>Points</u>
Projects	100
Weekly Homework	10
Weekly Homework Challenge	15 (with 5 points Extra Credit)
Weekly Vocabulary Assignment	10
Note Taking	5
Other Classwork Assignments	5
Laboratories:	25
Presentations	30
Quizzes	50
Final Exam	200

The "Homework Challenge" allows you to demonstrate knowledge of the content by answering a question of Mr. Adolfo's choosing in front of the class. The rubric for essay type questions is provided on the website. If the question involves calculations, The result may contain only 1 or 2 computational or significant figure errors. This will be conducted weekly on Thursdays and you must be present to select this option.

## Absences and Tardiness

Since legitimate absences do occur, it is expected that you will turn in any assignments that were due during the absence by the day after you return. Exceptions may be made in the case of the prolonged excused absence due to a documented medical condition. Both the website and email are available to stay up to date.

Tardiness disrupts the whole class and will count directly against your class participation grade. If you are late, slip in quietly. Excessive absences and tardiness may lead to academic failure.

## How Grades are Computed

Final Letter Grades will be based on a percentage of total points available at the end of the Semester.

A: 90% and above	D: 60% and above
B: 80% and above	F: below 60%
C: 70% and above	

## Required Materials

Spiral Bound Notebook  
Scientific Calculator (recommended)

All assignments (except projects, quizzes, and exams) will be completed in a bound spiral notebook. All assignments should be completed in chronological order and must be labeled with the assignment date and title. Notebooks will be collected graded approximately once every two weeks.

## Biology Course Outline (California Standards in Parentheses)

### **Instructional Component 2**

Standard Group 2 - Meiosis and Mendel's Law

Standard Group 3 - Probability of Inheritance

Standard Group 4 - Natural Selection

Accommodation and Adaptation (6.g., 7.a.), Mutations (7.c.), Variation and Survival of the Species (7.d., 8.a.), Diversity (8.b.)

Standard Group 5 - Population Genetics

Lethal Alleles in Heterozygotes (7.b.), Hardy-Weinberg equilibrium (7.e., 7.f.)

Standard Group 6 - Mechanisms for Evolution

Genetic Drift and Diversity (8.c.), Reproductive and Geographic Isolation (8.d.)

Standard Group 7 - Evidence for Evolution

Fossil Evidence (8.e.), Comparative Embryology, DNA and Protein Sequence Comparisons, Molecular Clocks, and Cladograms (8.f., 8.g.)

### **Instructional Component 3**

Standard Group 1 - Gas and Nutrient Exchange

Respiration, Nutrients, and Waste Removal (9.a.), Digestive Enzymes, Stomach acid, and Bile salts (9.f.), Kidneys and Liver (9.g.), Hormones and Internal Feedback (9.i.)

Standard Group 2 - Electrochemical Communication and Response

The Nervous System and the External Environment (9.b.), Role of neurons (9.d.), Sensory neurons, Interneurons, and Motor Neurons (9.e.), Muscle Contraction (9.h.)

Standard Group 3 - Feedback Mechanism

Feedback Loops in the Nervous and Endocrine Systems (9.c.), Hormones and Homeostasis (9.i.),

Standard Group 4 - Infection/Immunity

The Skin (10.a.), Antibodies (10.b.), Vaccination (10.c.), Body's Responses to Bacteria and Viruses (10.d.), Immunocompromised Individuals (10.e.), Phagocytes, B-lymphocytes, and T-lymphocytes (10.f.)

Standard Group 5 - Ecology

Biodiversity and Alterations of Habitats (6.a.), Changes in Ecosystems due to climate, human activity, introduction of nonnative species, or changes in population size (6.b.), Rates of Birth, Immigration, Emigration, and Death (6.c.), Water, Carbon, and Nitrogen cycles (6.d.), Producers and Decomposers (6.e.), Energy Pyramids and Heat (6.f.)