Biology

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**Course Description:**

Introductory college level course designed to teach the process of science as it applies to biology today. This course studies the basic principles governing all living things. Topics in biology that will be covered include the nature of science, ecology, cellular biology, heredity, evolution and human body systems.

**Learner Outcomes:**

* *Understand that scientists conduct investigations for a variety of reasons, including: to discover new aspects of the natural world, to explain observed phenomena, to test the conclusions of prior investigations, or to test the predictions of current theories.*
* *Formulate a testable hypothesis, design and conduct an experiment to test the hypothesis, analyze the data, consider alternative explanations and draw conclusions supported by evidence from the investigation.*
* *Describe how the functions of individual organ systems are integrated to maintain homeostasis in an organism.*
* *Explain the function and importance of cell organelles for prokaryotic and/or eukaryotic cells as related to the basic cell processes of respiration, photosynthesis, protein synthesis and cell reproduction.*
* *Explain how matter and energy is transformed and transferred among organisms in an ecosystem, and how energy is dissipated as heat into the environment.*
* *In the context of a monohybrid cross, apply the terms phenotype, genotype, allele, homozygous and heterozygous.*
* *Describe the process of DNA replication and the role of DNA and RNA in assembling protein molecules.*
* *Use the processes of mitosis and meiosis to explain the advantages and disadvantages of asexual and sexual reproduction.*
* *Use scientific evidence, including the fossil record, homologous structures, and genetic and/or biochemical similarities, to show evolutionary relationships among species.*
* *Explain how competition for finite resources and the changing environment promotes natural selection on offspring survival, depending on whether the offspring have characteristics that are advantageous or disadvantageous in the new environment.*
* *Describe the social, economic and ecological risks and benefits of changing a natural ecosystem as a result of human activity. For example: Changing the temperature or composition of water, air or soil; altering populations and communities; developing artificial ecosystems; or changing the use of land or water.*

**Required Materials:** Pencil, SCIENCE ONLY notebook and folder or binder with note paper, college biology textbook (Reece et. al., Campbell Biology: Concepts & Connections 8e) or intro biology textbook (Miller and Levine, Biology )

**Classroom Policies:**

Late work: All late work for a unit will be due at the beginning of the hour on the day ***before*** the test for that unit. Late work **will not be accepted** after this deadline, and will be marked in the gradebook as missing.

Phones: During class time, cell phone will not be allowed to be used. If a cell phone is being used at a time that is not appropriate, it will be asked to be held until the end of the hour. Parents will be contacted that day of the behavior. The second time the cell phone will be turned into the dean/front office to be picked up by the student at the end of the day. The third time, the cell phone will need to be picked up at the front office by the parent/guardian.

Absences:

Absences should not affect learning. You are responsible for checking the calendar on your teacher’s website to find what you have missed.

* If you were absent on the test review day you are *still responsible* to ***take the test on the day of the test***.
* If you were absent on the day of a quiz, you must make up the quiz the ***same day*** you get back during class.
* If you were absent on the day of a test, you will take the test the ***same day***you get back during class.
* If you were absent on a lab day, you have ***until the day before the test*** to finish the lab work and turn it in. Please check with your teacher on how to make it up.
* If you were absent on the day homework is ***checked***, you must turn in the assignment the ***same day*** you get back during class.
* If you were absent on the day homework was ***assigned***, you must turn in the assignment on the ***following day***.

**Attendance:**

“Absences will not arbitrarily result in reduction in grades, but failure to complete work will affect grades. Students and/or parent or guardian are responsible for requesting make-up work for each day's absence” (Irondale Student Handbook).

**Tardies:**

“Each teacher will maintain a record of student tardiness to class. School discipline will be assigned. *(Refer to the Fall Mail Packet sent home in August 2016 regarding the classroom tardies policy.)* Any unexcused tardiness which results in a student missing more than 10 minutes of the period will be reported by the teacher to the attendance office as an unexcused absence” (Irondale Student Handbook).

**Academic Honesty:**

Mounds View School Board Policy EG-3109 Student Rights and Responsibilities:

Academic honesty is required to ensure an accurate measurement of a student’s academic knowledge. The Mounds View School Board expects that students will achieve success with integrity. Academic dishonesty impairs a true showing of academic achievement. Substantiated reports of academic dishonesty will result in appropriate consequences as defined in accompanying regulations and in student handbooks. Examples of academic dishonesty include, but are not limited to: theft and use of tests; use of crib sheets or other cheating devices on an exam; plagiarism or representation of a substantial piece of work as one's own without proper attribution. This policy applies to all manner, including the most current technological advances, systems, or equipment, that may be utilized for the purposes of academic dishonesty.

Academic dishonesty will be considered a behavioral infraction. The following guidelines will be utilized when a violation of academic honesty occurs:

* Consequences will be commensurate with the severity of the incident
* Consequences cannot prevent growth and development or an accurate measurement of student achievement
* Measures will be sought to determine why the academic dishonesty occurred
* Students will be required to provide a written explanation of behavior
* Students in violation of this policy will not escape the performance indicator; student knowledge will still be measured within an agreed timeframe set by teacher, dean, and student
* Additional consequences may include:
  + Re-examination of content; repeat of project, paper, or activity
  + Possible reduced score/grade not to prevent achieving a level of proficiency
  + Other measures identified in Mounds View School Board Policy EG-3109: Student Rights and Responsibilities
  + Multiple offenses may result in loss of credit, to be determined by building principal

(Irondale Student Handbook).

**Grading Scale:**

A: 93 - 100% B-: 80 - 82% D+: 67 - 69%

A-: 90 - 92% C+: 77 - 79% D: 63 - 66%

B+: 87 - 89% C: 73 - 76% D-: 60 - 62%

B: 83 - 86% C-: 70 - 72% I: 59% and below

**Gradebook Setup:** (this can include categories, weights, explanations of replacement grading or portfolios or standards-based grading, etc.)

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|  | **College Biology** | **Introduction to Biology** |
| **Daily Work** | 15% | 25% |
| **Lab Experiments and Projects** | 35% | 35% |
| **Tests and Quizzes** | 50% | 40% |

**Accessing Grades:**

Using the online Synergy Student and Parent Portal, you can get instant access to grades in the course. Grades will be updated periodically throughout the semester. It is the student’s responsibility to know their progress in the class.

**Relearning Opportunities:**

Quizzes: Students who do not earn a proficient score on a quiz will have the opportunity to relearn the material through a remediation activity to earn up to a proficient score on the quiz. All retakes must be completed before the test for each unit.

There will be **no other relearning opportunities** in this course.