**Honors Biology Fall 2015**



**Instructor: Luke Abercrombie, MAT**

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**Tutoring –** Tutoring is available on Mondays and Thursdays from 3:00 – 3:30 p.m. if you cannot attend at this time, please contact me to schedule an appointment.

**Course Description**

Biology is designed to provide students with a challenging and engaging experience through which to explore the world around them. Through this course students will discover the processes that define and sustain life, as we know it. Students will be expected to use this knowledge to expand their understanding of the interactions between and among living and nonliving organisms.

In order to provide students with the best educational experience within this class, I have made some changes to my teaching style. The following is a brief list of terms used within the class for clarification:

**GM** – Game Master (the teacher)

**Campaign –** Unit of study

**Mission** – Assignment

**Boss Battle** – Exam

**Player**  - Student

**Item** – A paper marker used to provide players with access to a number of different choices and/or abilities intended to facilitate learning and fun within the classroom

**Essential Standards**

The essential standards for Biology as defined by the North Carolina Standard Course of Study (NCSCOS) are as follows:

* Understand the relationship between the structures and functions of cells and their organelles
* Analyze the cell as a living system
* Analyze the interdependence of living organisms within their environments
* Understand the impact of human activities on the environment (one generation affects the next)
* Explain how traits are determined by the structure and function of DNA
* Understand how the environment, and/or the interaction of alleles, influences the expression of genetic traits
* Understand the application of DNA technology
* Explain the theory of evolution by natural selection as a mechanism for how species change over time
* Understand how classification systems are developed based upon speciation
* Understand how biological molecules are essential to the survival of living organisms
* Analyze the relationships between biochemical processes and energy use

**Course Expectations**

Students in this class are expected to do the following:

* Enhance knowledge and understanding of the nature of science, its unifying concepts, and connections to other disciplines
* Develop knowledge and understanding of the course content
* Demonstrate proficiency of knowledge and understanding of the course content through written and oral assessments
* Develop the inquiry, research, and problem-solving skills necessary to sustain further academic and personal growth
* Learn to direct their own learning and growth based on their individual learning styles and preference

Students will be able to achieve these expectations through:

* Displaying and maintaining a positive learning attitude
* Collaboration with peers and instructors
* Participation in classroom activities, discussions, and assignments
* Choosing assignments and projects that best demonstrate student learning and understanding of the content material

**Course Outline**\*

* **Unit 1:** Introduction to Biology/Ecosystems
* **Unit 2:** Molecular Biology
* **Unit 3:** Cellular Biology
* **Unit 4:** Genetics
* **Unit 5:** Evolution & Classification
* **Unit 6:** Comprehensive Review\*\*

\*Course Outline is subject to change as needed to accommodate learning within the class.

\*\* Final Unit will be completed if time allows

**Classroom Rules**

* All rules set forth by the Student Handbook by Marvin Ridge High School and Union County are to be observed and followed at all times.
* Safety goggles are to be worn at all times in the lab when handling anything other than air and water. Other rules are subject to change depending on the content and materials used, and should be followed accordingly.
* When the bell rings to signal the beginning of class, all students should be in their seats, ready to work on the daily Do Now question.
* Laugh at my jokes. Humor is a higher form of intelligence.

**Course Grading**

Most assignments completed within the class will be entered into a category called a “stage”. Each unit will consist of 4-6 stages, with a comprehensive exam (also known as a Boss Battle) at the conclusion of each unit (or Campaign). Students may complete more assignments than are necessary for any given stage, however leftover points are not generally applied to a stage as extra credit, unless certain conditions are met.

Group Projects or assignments completed with the class will be counted separately from the stages, unless otherwise specified. At the conclusion of each stage, there will be a quiz on the content covered. Stages typically run for 3-4 school days.

