

**Course Name:** 2012 Biology  
**Teacher Name:** Meghann Murray

**Level:** CCP

**Points:** 5

**Course Description:** This course is a detailed study of living things from biochemical compounds to complex vertebrates. Topics include a thorough study of organic chemistry, cell structure, cell function, photosynthesis, cellular respiration, DNA science, genetics, heredity, ecosystems, evolution and biodiversity. Students will investigate the interrelationship among the human body systems while maintaining homeostasis at the cellular level. Laboratory experiences may include dissection of preserved specimens, investigation, design and analysis and interpretation of data. Team problem solving and modeling are also used. Laboratory demonstrations and/or hands-on activities will be conducted once in every schedule cycle. Students enrolled in this course will take the Biology MCAS in the spring. Opportunities are available for students to conduct an independent research project on a topic of their choice.

### **Texts/Instructional Materials:**

**Course textbook** - Miller, Kenneth R., and Joseph S. Levine. *Biology*. Pearson, 2018.

**Course website** - [msmurraybiology.weebly.com](http://msmurraybiology.weebly.com).

### **Required materials -**

- 3-Ring Binder with 5 sections: Warm-ups; Notes; Classwork & Labs; Homework; and Tests & Quizzes
- Lined paper
- Pencil or Pen

### **Topics of Study:**

#### Introduction to life

- Scientific Method
- Characteristics of life

#### Chemistry of life

- Elements found in living things
- Carbon Chemistry
- Enzymes
- Enzymatic reactions

#### Cells

- Cell structures
- Cell transport
- The Cell Cycle

#### Energy in organisms

- Photosynthesis
- Cellular Respiration

#### Genetics

- Mendelian Genetics
- Chromosomes

- Meiosis

#### DNA & RNA

- DNA Structure, Replication, Transcription
- Protein Synthesis

#### Body Systems

- Structures and locations of organs in each body system
- Functions of each body system
- How body systems work to maintain homeostasis

#### Evolution

- Natural Selection
- Evidence of Evolution

#### Ecology

- Energy in an ecosystem
- Cycles of nutrients
- Cycles of matter

### **Assignments:**

There will be daily classwork assignments and homework will be assigned both from the textbook and in class multiple times a week.

**Grading Policy:** Grades will be based on a variety of assessment methods. Tests will be given at the end of each unit and at least two quizzes will be given each term. There will be a midterm exam at the end of the 2nd Quarter and a final exam at the end of the 4th Quarter; each of these will comprise 20% of the grade for those quarters.

Grades will be broken down as follows:

| <u>Assessment</u>   | <u>1<sup>st</sup>/3<sup>rd</sup> Quarter</u> | <u>2<sup>nd</sup>/4<sup>th</sup> Quarter</u> |
|---------------------|--|--|
| Classwork           | 30%  | 24%  |
| Homework            | 25%  | 20%  |
| Tests & Quizzes     | 35%  | 28%  |
| Class Participation | 10%  | 8%   |
| Midterm/Final Exam  | 0%   | 20%  |

### **Academic Accountability:**

Students will complete the assigned work on time, or with knowledge of the following academic work policies:

#### **Homework Policy:**

In order to receive full credit, homework assignments must be turned in at the beginning of class on the day they are due. Homework is graded on a, check plus ( $\checkmark+$ ), check \* ( $\checkmark^*$ ), check ( $\checkmark$ ), check minus ( $\checkmark-$ ), late (L), very late (VL) and zero (0) scale. Homework grades will be based on correctness as well as completion. Please see homework grading sheet for a more detailed explanation. Homework will not be accepted once a test is given on the subject.

#### **Make-Up Work:**

*Students must speak with the teacher on the first day back after an absence to discuss make-up work and its due date.* Students who are absent on the day of a test/quiz/project should be prepared to take the test/turn in the project on the day of their return. Quizzes and tests must be made up on students' own time (i.e. before/after school), **not** during class. Generally, students will have 3 days to make up work, though this will be determined on a case-by-case basis.

#### **Late Classwork Policy:**

In order to receive full credit, work must be turned in by the **end of the period** (unless otherwise discussed). As with homework assignments, for each day classwork is late, the grade will decrease by one increment. Classwork will not be accepted once a test is given on the subject.

**Cell Phone Policy:** All cellular devices must be placed in the provided phone-pockets for the entire class period. Phone-pockets will be assigned to individual students. Students may retrieve their devices at the end of each period (or at teacher's discretion).

### **Discipline/3-Strike Policy:**

It is expected that student behavior will reflect positively on the student. Students should **be respectful** of themselves, the teacher and fellow classmates, as well as the classroom.

1. **Warning** – students who are disrespectful, disruptive or using their phones in class will be given a warning.
2. **Detention** – if a student has received a warning but continues to be disruptive, they must serve an afterschool detention with me. Students that miss detention will be referred to the dean.
3. **Dean** – if a student has received a warning, as well as a detention but continues to be disruptive, they will be sent to their dean.

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*Please complete this portion of the syllabus and keep this page at the front of your binder.*

*I, parent/guardian of \_\_\_\_\_, understand the content and expectations associated with the course described in this course contract/syllabus.*

*Name/Signature \_\_\_\_\_ Date \_\_\_\_\_*

*I, the student enrolled in the course described in this course contract/syllabus, understand what I can expect and what is expected of me, in this course.*

*Name/Signature \_\_\_\_\_ Date \_\_\_\_\_*