Biology 1 Syllabus (2019-20)

School: *Garfield High*

**Garfield High School**

1255 16th Street • San Diego, CA • 92101

(619) 362-4500 ext. 2208

**Teacher**:  Camille Fowler

BS in Marine Biology, MA Teaching and Learning: Curriculum & Design

**Room:** 208

**Course**:  Biology 1 (6111)

**Contact Information**: cgibson@sandi.net

**Website**: Google Classroom (class code:\_\_\_)

**Readings**:  Glencoe Biology, Newsela, Science World

**Supplies needed**: Scientific notebook, mechanical pencils, and pens.

**Course Description**:  Biology is a college preparatory science course that satisfies one year of the science portion of the A-G requirement for the UC system. This course is aligned with the Next Generation Science Standards (NGSS), The Living Earth: Integrating Biology and Earth & Space Science. Topics will include: ecosystem interactions and energy, history of the Earth’s atmosphere, evidence of evolution, human impact, and engineering practices.

**Course Objectives**

**Upon completion of this course, the successful student will:**

1. Understand the role of biology in today’s world, including the current applications to the areas of medicine, biodiversity, conservation, climate change, environment and the significance of these developments.
2. Develop an appreciation for technology and explain the principles that form the basis for this technology.
3. Demonstrate an understanding of some of the social, ethical and legal issues associated with some aspects of biology.
4. Learn and practice safety in the laboratory.
5. Be familiar with the scientific method and think critically.
6. Access and use a wide variety of information sources.
7. Improve oral, written, numeracy, and communication skills.
8. Demonstrate increased positive interaction in the classroom and in small collaborative groups.
9. Apply crosscutting concepts, such as patterns, cause and effect, scale, systems, energy, structure and function, stability and change to different topics in science.

**Grading**:  Your academic grade will be determined by the following grading scale:

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| Grade | Percentage Range | Assignment Category | Weight |
| A | 90-100 | Scientific Notebook | 60% |
| B | 80-89 | Homework | 10% |
| C | 70-79 | Assessments | 10% |
| D | 60-69 | Independent Research Project | 20% |
| NC | BELOW 60 |   |   |

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| **Week #** | **The Course at a Glance** | **NGSS Guiding Questions** |
| **1** | Introductions, computer check-out, Google Classroom, Science Safety Contract, syllabus, Netbook Agreement, scientific notebook with table of contents,  Science Safety TestIntroduction to Biology | **Segment 1 – Ecosystems Interactions and Energy** * What factors affect the size of populations within an ecosystem?
* What are common threats to remaining natural ecosystems and biodiversity?
* How can these threats be reduced?

**Segment 2 - History of Earth’s Atmosphere: Photosynthesis and Cellular Respiration*** How do living things acquire energy and matter for life?
* How do organisms store energy?
* How are photosynthesis and cellular respiration connected?
* How do organisms use the raw materials they ingest from the environment?
* How has the cycling of energy and matter changed over Earth’s history?

**Segment 3 - Evidence of Evolution**  * How do layers of rock form and how do they contain fossils?
* Why do we see fossils across the world from each other but living organisms that are very different from each other?
* What evidence shows that different species are related?
* How did modern day humans evolve?

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