

**Grade 9 Biology**

Jefferson High School

**Teacher:** Rian Meguire **Location:** Rm D18. **E-mail:** rmeguire@pps.net

**Course Description:**

Biology is the study of life! This course covers the nature of science and inquiry, currently accepted theories, global ecology, bioethical decision making and current biological issues. Whenever possible these threads will be woven through the basic biological topics in the curriculum including: the nature of science, inquiry, cell biology, ecology and environmental issues, evolution, taxonomy and diversity, biochemistry, nutrition, cellular respiration and photosynthesis, cell division, nucleic acid replication, and genetics. Interesting learning activities will stimulate comprehension, retention and a sense of value for the topics studied. Concept-oriented, hands-on learning activities will be used whenever possible. Cooperative team-work is a major component of this course. Coursework will be planned to insure that the student reaches or exceeds PPS and Oregon State Standards.

**Materials Needed**

Interactive notebook (Minimum of 70 pages and for Biology **ONLY**).

Writing utensils

**Resources**

**Textbooks:** *Holt Biology*. Orlando, FL: Holt, Rhinehart and Winston, 2008. Print.

 *Biology: Concepts and Connections.*

**Google Classroom**: Each class is given a code and the course calendar with important due dates, along with course documents and information can be found here for support, review, and current class news.

**Assessment and Grading:**

**Grades**: Grades will be determined as follows:

* **50% Topic Assessments** (These include, but are not limited to, tests, major quizzes, individual projects, extended response questions)
* **40%Formative Assessments** (These include, but are not limited to, in-class assignments, quizzes, personal responses, group projects, and homework),
* **10% Journal Checks/Notebook Maintenance**: 3 ring binder

**Grade Scale:**

A=90-100%

B=80-89%

C=70-79%

\*final grades below C are not considered passing as marks below this are not accepted by colleges/universities.

**Plagiarism**: It is expected that all work submitted reflects **your own** thinking or is properly referenced. It is unethical to use someone’s ideas (whether a friend’s or a published author’s) and receive credit for them. Deliberate plagiarism will result in a mark of zero.

**Acceptable Electronic Use policy: Electronic devices are expected to be OFF and AWAY. This will only change if there is a planned learning routine involving them.**

**Late Work Policy:**  Formative and Laboratory assignments submitted **after** the **final** **assessment** for a particular unit will only be subject to partial credit, unless other arrangements have been made with the teacher.

**Major Projects & Tests**: Any test or major project needs to be made up/submitted upon the day a student returns to school from an absence unless other arrangements have been made with the teacher.

**Extensions:** Should you require an extension for an assignment or test, students should speak with their teacher well **before** the due date. Do not assume that an extension will be given – it is solely at the discretion of the teacher and will depend on the circumstances.

|  |
| --- |
| **Course Content** |
| **Semester 1:**  Unit 0: Nature of Science * The Science of Biology
* Scientific Investigations

Unit 1: Ecology * The Biosphere
* Ecosystems and Communities
* Populations
* Humans in the Biosphere

Unit 2: Biochemistry * Water
* Macromolecules

Unit 3: Cell Theory * Types of Cells
* Cell Structures & Functions
* Microscopic Examination of Cells

Unit 4: Cell Processes * Cell Structures and Functions

Unit 5: Energy in Cells * Photosynthesis
* Cellular Respiration and Fermentation
 | **Semester 2:** Unit 5: Energy in Cells * Photosynthesis
* Cellular Respiration and Fermentation

Unit 6: Cell Cycle * Cell Growth and Division
* Cancer treatements

Unit 7: Genetics * Meiosis and Mendelian Genetics
* Human Heredity
* DNA
* RNA and Protein Synthesis

Unit 8: Evolution * Natural Selection
* Evolution of Populations

Unit 9: Classification Taxonomic Keys, Cladistics |

**A Successful Year in Grade 9 Biology**

**Formative Assessments:**

* Science Notebook: This will be the most important tool that you carry with you. You will be given many opportunities to synthesize and process new information and to receive timely feedback from me.
* Frequent Quizzes: These enable us to monitor the progress being made throughout each unit. It helps to clearly identify the learning targets that are being met and to receive feedback on which areas need additional support.
* Projects: Small group projects allow for the synthesis of new information, usually in a more creative way. Each project will be completed in the classroom and include an exit criteria. The exit criteria will give detailed, necessary instructions in order to earn credit. If a student provides an incomplete project, **no grade will be given**. Students must continue to finish these projects in a timely manner. Because most project work is completed in the classroom, students who neglect to finish projects during assigned dates will need to finish this work on their own time.
* **Laboratory Investigations:**

On a regular basis, students will be participating in laboratory investigations. These allow for further study of the topic and to enhance the processing of new information. It is important that student behavior is safe and cooperative during laboratory exercises to ensure success and safety for all. **Please see safety contract for additional safety information.**

**Summative Assessments:**

These are end of the unit exams or summative projects that allow for students to demonstrate proficiency of the unit learning targets.

At the end of each semester, students will be given a final exam. The exams will cover all the material given up to that point, with the student earning the higher grade (for example, if a student earned an 80% on a quiz the first time but raises her/his grade to a 95% for the same material on the final, the final grade is a 95% (the 80% is replaced).

***Support:***

I love and believe that science is a wonderful fascinating way to look at the world. Scientific concepts are not always easy and can include difficult vocabulary that we don’t often use in our everyday lives. While we strive to meet the learning needs of every student some students will find they need extra support along the way. If/when this happens we’ll work together to find the resources and support so that each student can find their success.

**Google Classroom:** This will be the medium through which access to classroom resources, as well as additional support materials. It also allows for student to teacher and student to student communication outside of the classroom.

Students are expected to adhere to all school rules and the behavior guidelines listed within the student handbook.

Behavioral expectations: There are 4 general categories. We’ll talk about the details together. They are:

**1. Be Here**

**2. Be Responsible**

**3. Listen**

**3. Respect our time and space**

**Non-Negotiable Rules:**

1. Use of electronics is not permitted during class. Electronic devices may be used for purposes relating to the lesson.

2. Remarks or behavior that put down other students or staff members on the basis of race, ethnicity, gender, sexual orientation, nationality or class are not acceptable.

3. Remarks or behaviors that result in a student or staff member feeling threatened or unsafe are not acceptable.

**ATTENDANCE:** It is expected that students will be present at every class. There is a maximum of absences that may be reached as per PPS or JHS policy. Any more than that and the student will be dropped from the class.

I have read and understand the attached course description. I understand that:

* I need certain materials to succeed in this class,
* I need to attend class and complete classwork and homework to be successful,
* Being tardy will result in missing the warm-up and key information
* All regulations outlined in the Jefferson student handbook will be enforced.
* Rule infractions will result in retentions or detentions during lunch or afterschool
* Mr. Meguire is available for extra help and it is the student’s responsibility to schedule available time.
* I will

**\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_Student Name\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_ \_\_\_\_Student Signature**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_Family Member Name\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_Signature**