### Environmental Science and Biology

#### Course Comparison Information Sheet

<table>
<thead>
<tr>
<th>Environmental Science</th>
<th>Biology</th>
<th>Biology Honors</th>
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| **Text:** | • *Pearson Environmental Science, and Google Classroom* | • Standard first year high school Biology text | • College entry-level Biology textbook.  
• Novel "The Hot Zone" |
| **Content:** | Survey course covering foundational concepts in Environmental Science  
• Ecology  
• Geology  
• Human Population Dynamics  
• Renewable and Nonrenewable Energy  
• Hydrology  
• Waste Management | **Nature of science**  
• Ecology  
• Evolution  
• Classification and characteristics of living things  
• Biochemistry  
• Cell structure and function  
• Plant and animal systems  
• Mendelian and molecular genetics | **Same topics as in Biology, but with a greater level of detail/depth and more biochemical emphasis**  
• Bioethics will be embedded |
| **Workload:** | • 15-25 minutes of studying, review and homework assignments 1-2 nights per week.  
• Most work done in groups with heavy teacher guidance through all assignments. | • 20-30 minutes of studying which will include reviewing, reading and/or written assignments 2-3 nights per week.  
• Some independent work expected, but often reviewed in class. | • 30-40 minutes of reading and/or written assignments 3-4 nights a week.  
• More independent work expected. |
| **In-class instruction:** | • Lectures, laboratory experience activities, demonstrations, and projects.  
• Pacing is dependent student success and work completion. | • Lectures, laboratory experience, activities, demonstrations, computer work, modeling, and projects.  
• Lectures will cover material at a slightly slower pace than honors. | • Laboratory experience, discussions, projects, computer work, simulations, modeling, and presentations.  
• Lectures will cover more difficult topics at a faster pace. |
| **Skills developed:** | • Students will use their basic Algebra skills to solve simple equations.  
• NGSS Science and Engineering practices  
• Creation of graphs and graphical analysis of data both by hand and with a computer  
• Logical reasoning skills related to collected or provided data  
• Group collaboration and intrapersonal skills  
• Academic organization/studying  
• Preparation for successful transition to Biology | • NGSS Science and Engineering practices  
• Use of research and scientific method to determine answers  
• Creation of graphs and graphical analysis of data both by hand and with a computer  
• Logical reasoning skills that connect experimental results to Biology principles  
• Communication of ideas and reasoning to others in written and spoken form  
• Biotechnology skills and techniques | • Sophisticated use of the Google Suite  
• Library and Internet research skills  
• Design and implementation of experiments |
| **Background necessary for success:** | • Study and organizational skills  
• Problem solving skills  
• Critical thinking | • Study and organizational skills  
• Problem solving skills  
• Critical thinking | • Comfort applying Algebra skills  
• Strong reading, writing, and analytical skills |

**NOTE:** The textbooks used in these courses are different. Topics are not covered in the same order. It is very difficult to change courses after the school year has started.