

# Science: Honors Biology

UNIT/Weeks	Timeline/Topics	Essential Questions
13	<p><b><u>Unit I: Cell Specialization and Homeostasis</u></b></p> <ul style="list-style-type: none"> <li>• Biology in the 21<sup>st</sup> Century</li> <li>• Chemistry of Life</li> <li>• Cell Structure</li> <li>• Photosynthesis and Cellular Respiration</li> <li>• Cell Growth and Division</li> <li>• Viruses and Prokaryotes</li> <li>• Immune System and Disease</li> </ul>	<ul style="list-style-type: none"> <li>• How do the structures of organisms enable life's functions?</li> </ul>
10	<p><b><u>Unit II: DNA and Inheritance</u></b></p> <ul style="list-style-type: none"> <li>• Meiosis and Mendel</li> <li>• Extending Mendelian Genetics</li> <li>• From DNA to Proteins</li> <li>• Frontiers of Biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>• How are characteristics from one generation related to the previous generation?</li> </ul>
3	<p><b><u>Unit 3: Evolution</u></b></p> <ul style="list-style-type: none"> <li>• Principles of Evolution</li> </ul>	<ul style="list-style-type: none"> <li>• What evidence shows that different species are related?</li> </ul>
2	<p><b><u>Unit IV: Natural Selection</u></b></p> <ul style="list-style-type: none"> <li>• The Evolution of Populations</li> <li>• The History of Life</li> </ul>	<ul style="list-style-type: none"> <li>• How can there be so many similarities among organisms yet so many different plants, animals, and microorganisms?</li> </ul>
2	<p><b><u>Unit V: Matter and Energy Transformations in Ecosystems</u></b></p> <ul style="list-style-type: none"> <li>• Principles of Ecology</li> </ul>	<ul style="list-style-type: none"> <li>• How do matter and energy cycle through ecosystems?</li> </ul>
2	<p><b><u>Unit VI: Interdependent Relationships</u></b></p> <ul style="list-style-type: none"> <li>• Interactions in Ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>• How do organisms interact with the living and nonliving environments to obtain matter and energy?</li> </ul>
2	<p><b><u>Unit VII: Human Activity and Biodiversity</u></b></p> <ul style="list-style-type: none"> <li>• The Biosphere</li> </ul>	<ul style="list-style-type: none"> <li>• Would we treat our resources and life support system, if we were on a rocket headed for Mars, as we do in our community right now?</li> </ul>

2	<p><b><u>Unit VIII: Human Activity and Climate</u></b></p> <ul style="list-style-type: none"><li>• Human Impact on Ecosystems</li></ul>	<ul style="list-style-type: none"><li>• How do humans depend on Earth's resources?</li><li>• How and why do humans interact with their environment and what are the effects of these interactions?</li></ul>
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