

# Natural Science

## (Biology Section)<sub>1</sub>

<b>Date</b>	<b>Content</b>	<b>Skills</b>	<b>Assessment</b>	<b>Essential Questions</b>
<b>Weeks 1-2</b>	<ul style="list-style-type: none"> <li>• Introduction: Areas of Science</li> </ul>	<ul style="list-style-type: none"> <li>• Identify different areas of scientific study.</li> </ul>	<ul style="list-style-type: none"> <li>• worksheet</li> </ul>	
	<ul style="list-style-type: none"> <li>• Steps in Scientific Method</li> </ul>	<ul style="list-style-type: none"> <li>• Contract, compare, identify.               <ul style="list-style-type: none"> <li>- Hypothesis</li> <li>- variable/control</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• quiz</li> </ul>	<ul style="list-style-type: none"> <li>• Why is scientific method necessary for valid conclusions?</li> </ul>
<b>Week 3</b>	<ul style="list-style-type: none"> <li>• Metric Measurement (sample measurements)</li> </ul>	<ul style="list-style-type: none"> <li>• Measure mass, volume, distance.</li> </ul>	<ul style="list-style-type: none"> <li>• lab</li> <li>• quiz</li> </ul>	
<b>Week 4</b>	<ul style="list-style-type: none"> <li>• Complex Measurements</li> </ul>	<ul style="list-style-type: none"> <li>• density calculations</li> <li>• mass of liquids</li> <li>• volume of solids and gases</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• quiz</li> <li>• test on week 3-4</li> </ul>	
<b>Weeks 5-6</b>	<ul style="list-style-type: none"> <li>• Graphing</li> </ul>	<ul style="list-style-type: none"> <li>• form data table</li> <li>• identify x – y axis</li> <li>• form correct scales</li> <li>• plot points</li> <li>• identify dependant and independent variable</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• worksheets</li> <li>• quiz</li> <li>• test</li> </ul>	
<b>Week 7</b>	<ul style="list-style-type: none"> <li>• Microscopes</li> </ul>	<ul style="list-style-type: none"> <li>• Correctly use a microscope to view and measure microscopic organisms.</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• worksheets</li> <li>• quiz</li> </ul>	
<b>Week 8</b>	<ul style="list-style-type: none"> <li>• Cells</li> </ul>	<ul style="list-style-type: none"> <li>• organisms</li> <li>• view, diagram, measure cells</li> <li>• three microscopes</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• worksheets</li> <li>• quiz</li> </ul>	

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## (Biology Section)<sub>2</sub>

<b>Date</b>	<b>Content</b>	<b>Skills</b>	<b>Assessment</b>	<b>Essential Questions</b>
<b>Week 9</b>	<ul style="list-style-type: none"> <li>• Cells (continued)</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiate between animal and plant cells.</li> </ul>	<ul style="list-style-type: none"> <li>• computer lab – research cell organelles</li> </ul>	
<b>Weeks 10-11</b>	<ul style="list-style-type: none"> <li>• Diffusion and Osmosis</li> </ul>	<ul style="list-style-type: none"> <li>• Identify movement of molecules across a membrane due to concentration gradient.</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• quiz</li> <li>• test – microscope and cells</li> </ul>	
<b>Weeks 12-13</b>	<ul style="list-style-type: none"> <li>• Respiration</li> </ul>	<ul style="list-style-type: none"> <li>• Identify chemical formula for respiration.</li> <li>• function of respiration</li> <li>• energy forms</li> <li>• energy changes and efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• worksheets</li> <li>• quiz</li> </ul>	
<b>Week 14</b>	<ul style="list-style-type: none"> <li>• Photosynthesis</li> </ul>	<ul style="list-style-type: none"> <li>• write chemical formula</li> <li>• compare photosynthesis and respiration</li> <li>• diagram photosynthesis and respiration</li> </ul>	<ul style="list-style-type: none"> <li>• worksheet</li> <li>• test photosynthesis and respiration</li> </ul>	<ul style="list-style-type: none"> <li>• What is the essential nature of photosynthesis for survival of world's organisms?</li> </ul>
<b>Weeks 15-17</b>	<ul style="list-style-type: none"> <li>• p</li> </ul>	<ul style="list-style-type: none"> <li>• explain pH scale</li> <li>• compare/contrast acids and bases</li> <li>• neutralization</li> </ul>	<ul style="list-style-type: none"> <li>• labs</li> <li>• worksheets</li> <li>• quiz</li> <li>• test</li> </ul>	
<b>Weeks 18-19</b>	<ul style="list-style-type: none"> <li>• Environmental Issues               <ul style="list-style-type: none"> <li>- acid rain</li> <li>- greenhouse effect</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• industrialization issues</li> <li>• factors of cause</li> <li>• effects</li> <li>• solutions</li> </ul>	<ul style="list-style-type: none"> <li>• research paper</li> <li>• movie questions</li> </ul>	<ul style="list-style-type: none"> <li>• How has the history of man and “progress” industrialization affected our impact on the world?</li> </ul>

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## (Biology Section)<sub>3</sub>

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Week 20	<ul style="list-style-type: none"><li>• Review major skills.</li><li>• Prepare for final.</li></ul>		<ul style="list-style-type: none"><li>• final exam</li></ul>	