

**Youngstown City Schools  
Grade 7 Science Pacing Guide  
Grading Period 1**

| Strand/Topic/Content Statement  | Duration   | Clear Learning Targets   | Curriculum Resources   | Vocabulary/Concepts  |
|---|--|--|--|--|
| <p style="text-align: center;"><b>SCIENCE INQUIRY<br/>AND<br/>APPLICATION<br/>PRACTICES</b></p> <p style="text-align: center;"><b>Thinking Like a 21<sup>st</sup><br/>Century Scientist</b></p> | <p style="text-align: center;">Weeks<br/>1-3</p> | <p style="text-align: center;"><b>"I Can..."</b></p> <ul style="list-style-type: none"> <li>- follow a laboratory procedure and work collaboratively within a group using appropriate scientific tools.</li> <li>- work individually, with a partner, and as a team to test a scientific concept, change a variable, and record the experimental outcome.</li> <li>-use the engineering design cycle to develop a solution with a predictable outcome.</li> <li>-cite specific text or online resource to support a proposed design solution.</li> </ul> | <p style="text-align: center;"><u>Curriculum Units:</u></p> <ul style="list-style-type: none"> <li>• Team Building</li> <li>• Lab Safety</li> <li>• My Science Classroom: Scale designs</li> <li>• Laboratory Procedures and Equipment</li> <li>• Computer Technology</li> <li>• Introduction to Science and Engineering</li> <li>• Inquiry Design Cycle</li> </ul> <p style="text-align: center;">Discovery Education:</p> <ul style="list-style-type: none"> <li>• <a href="http://www.discoveryeducation.com">www.discoveryeducation.com</a></li> </ul> | <ul style="list-style-type: none"> <li>Classify</li> <li>Communicate</li> <li>Compare</li> <li>Conclude</li> <li>Data</li> <li>Design cycle</li> <li>Engineer</li> <li>Evidence</li> <li>Infer</li> <li>Interpret</li> <li>Investigate</li> <li>Justify</li> <li>Measure</li> <li>Observe</li> <li>Organize</li> <li>Predict</li> <li>Question</li> <li>Record</li> <li>Relate</li> <li>Science</li> <li>Variable</li> </ul> |

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| <p style="text-align: center;"><b>PHYSICAL SCIENCE</b></p> <p style="text-align: center;"><b>The properties of matter are determined by the arrangement of atoms<br/>(7.PS.1)</b></p> | <p style="text-align: center;">Weeks<br/>4-9</p> | <p style="text-align: center;"><b>"I Can..."</b></p> <ul style="list-style-type: none"> <li>- explain that mixtures are materials composed of two or more substances that retain their separate atomic compositions when mixed.</li> <li>- describe how elements are grouped based on their properties and positions on the periodic table.</li> <li>- use the pH scale to compare and evaluate the acidity or alkalinity of a compound.</li> <li>- measure pH values in the natural world (e.g. soil, water, and air quality.)</li> <li>- investigate how mass is conserved when a substance undergoes a physical or chemical change.</li> <li>- explain that in a closed system, the number and type of atoms stays the same, even if the atoms are rearranged.</li> </ul> | <p><u>Curriculum Units:</u></p> <ul style="list-style-type: none"> <li>• Magnificent Mendeleev</li> <li>• ABC: Acid Base Chemistry</li> <li>• Changes All Around Us</li> </ul> <p><u>Holt Series Science Textbook:</u> Prentice Hall</p> <p><u>On-line Simulations:</u></p> <ul style="list-style-type: none"> <li>• Gizmo:</li> <li>• <a href="http://www.pHet.colorado.edu">http://www.pHet.colorado.edu</a></li> </ul> <p><u>Discovery Education:</u></p> <ul style="list-style-type: none"> <li>• <a href="http://www.discoveryeducation.com">http://www.discoveryeducation.com</a></li> </ul> <p><u>Ohio Department of Education - Science:</u><br/><a href="http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science">http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</a></p> <p><a href="#">AIR Practice Site</a></p> | <p>Acidic<br/>Acidity<br/>Alkalinity<br/>Atoms<br/>Basic<br/>Changes in Matter<br/>Chemical Equation<br/>Compounds<br/>Conservation of Mass<br/><br/>Elements<br/>Families<br/>Groups<br/>Indicator<br/>Litmus Paper<br/>Metals<br/>Mixtures<br/>Molecules<br/>Neutral<br/><br/>Nobel Gases<br/>Non-Metals<br/>Periodic Table of Elements<br/>Periods<br/>pH<br/>pH Scale<br/>Phase Change<br/>Phenolphthalein<br/>Properties<br/>Reaction</p> |
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