

## Fourth Grade Gardening Unit

| <b>Subject<br/>Name of Lesson</b>         | <b>Iowa/Common Core Concepts</b>  | <b>Where to Find It<br/><a href="http://TeachersGoingGreen.com">@TeachersGoingGreen.com:</a></b> |
|---|---|--|
| <b>Mathematics</b>                        |   |  |
| <b>Making &amp; Using Rain Gauges</b>     | <ul style="list-style-type: none"> <li>• <b>4.MD.B.3</b> Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</li> </ul>   | <b>Fourth Grade<br/>Mathematics</b><br>Place you gauge in the garden and keep track.             |
| <b>Design &amp; Cook with Solar Ovens</b> | <ul style="list-style-type: none"> <li>• <b>4.MD.B.3</b> Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</li> </ul>   | <b>Fourth Grade, Mathematics</b><br>Try cooking produce from the garden                          |
| <b>Plants to Dye For</b>                  | <ul style="list-style-type: none"> <li>• <b>4.MD.A.1</b> Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36)</li> </ul> | <b>Fourth Grade<br/>Mathematics</b><br>Use plants from the garden to dye fabric.                 |

| Science                                      |   |   |
|--|---|---|
| <b>The Greens &amp; Browns of Composting</b> | <ul style="list-style-type: none"> <li>• <b>4-LS1-1</b> Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</li> </ul>   | <b>Fourth Grade Science</b><br>Composting makes soil.             |
| <b>Rainfall &amp; Erosion</b>                | <ul style="list-style-type: none"> <li>• <b>4-ESS-2-1</b> Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</li> </ul>  | <b>Fourth Grade Science</b><br>How much rain falls on our garden? |
| <b>Making Sundials</b>                       | <ul style="list-style-type: none"> <li>• <b>4-PS3-4</b> Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</li> <li>• <b>S.3-5.SI.1</b> Identify and generate questions that can be answered through scientific investigations.               <ul style="list-style-type: none"> <li>○ Students ask questions that they can answer with scientific knowledge combined with their own observations.</li> </ul> </li> <li>• <b>S.3-5.SI.3</b> Plan and conduct scientific investigations.               <ul style="list-style-type: none"> <li>○ Students should engage in systematic observation, making accurate measurements, and identifying and controlling variables.</li> <li>○ Students follow appropriate safety procedures when conducting investigations.</li> </ul> </li> </ul> | <b>Fourth Grade Science</b><br>Follow the sun's path.             |

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|--|---|--|
| <b>Social Studies</b>                                    |   |  |
| <b>Conflict Resolution</b>                               | <ul style="list-style-type: none"> <li>• <b>SS.3-5.BS.2 Understand the influences on individual and group behavior and group decision-making.</b> <ul style="list-style-type: none"> <li>○ Understand that people involved in a dispute often have different points of view.</li> <li>○ Understand that communicating different points of view in a dispute can often help people to find a satisfactory compromise.</li> </ul> </li> <li>• <b>SS.3-5.BS.3 Understand how personality and socialization impact the individual.</b> <ul style="list-style-type: none"> <li>○ Understand the rights and responsibilities of the individual in relation to his/her social group</li> </ul> </li> </ul>   | <p style="text-align: center;"><b>Fourth Grade<br/>Social Studies</b></p> <p>Negotiate decisions about the garden.</p>           |
| <b>Guilds &amp; Communities,<br/>Plants &amp; People</b> | <ul style="list-style-type: none"> <li>• <b>SS.3-5.BS.2 Understand the influences on individual and group behavior and group decision-making.</b> <ul style="list-style-type: none"> <li>○ Understand that people involved in a dispute often have different points of view.</li> <li>○ Understand that communicating different points of view in a dispute can often help people to find a satisfactory compromise.</li> </ul> </li> </ul>   | <p style="text-align: center;"><b>Fourth Grade<br/>Social Studies</b></p> <p>Plants &amp; people cooperate.</p>                  |
| <b>Food Around the World</b>                             | <ul style="list-style-type: none"> <li>• <b>SS.3-5.BS.2 Understand the influences on individual and group behavior and group decision-making.</b> <ul style="list-style-type: none"> <li>○ Understand that people involved in a dispute often have different points of view.</li> <li>○ Understand that communicating different points of view in a dispute can often help people to find a satisfactory compromise.</li> </ul> </li> <li>• <b>SS.3-5.BS.5 Understand current social issues to determine how the individual formulates opinions and responds to issues</b> <ul style="list-style-type: none"> <li>○ Understand that the way a person views an issue reflects personal beliefs, experiences, and attitudes.</li> </ul> </li> </ul> | <p style="text-align: center;"><b>Fourth Grade<br/>Social Studies</b></p> <p>Gardens are a place for food- around the world.</p> |

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|-----------------------------------|---|---|
| <b>English Language Arts</b>      |   |   |
| <b>You Rock!</b>                  | <ul style="list-style-type: none"> <li>• <b>W.4.2.</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</li> <li>• <b>W.4.7.</b> Conduct short research projects that build knowledge about different aspects of a topic.</li> </ul> <p>*Standard W.3.2 adjusted to W.4.2 and W.3.7 to W.4.7</p>  | <p style="text-align: center;"><b>*Third Grade<br/>English Language Arts</b></p> <p>Soil starts with rock.</p>                        |
| <b>Earth Circle of Life</b>       | <ul style="list-style-type: none"> <li>• <b>W.4.2.</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</li> </ul> <p>* Standard W.3.2 adjusted to W.4.2</p>  | <p style="text-align: center;"><b>*Third Grade<br/>English Language Arts</b></p> <p>Make connections in the garden.</p>               |
| <b>Water Cycle Drama</b>          | <ul style="list-style-type: none"> <li>• <b>RL.4.9</b> Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.</li> <li>• <b>RI.4.8</b> Explain how an author uses reasons and evidence to support particular points in a text.</li> <li>• <b>RI.4.9.</b> Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.</li> </ul> | <p style="text-align: center;"><b>Fourth Grade<br/>English Language Arts</b></p> <p>The water cycle is essential to growing food.</p> |

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| <b>21<sup>st</sup> Century Skills</b> |   |  |
| <b>Water Cycle Fun</b>                | <ul style="list-style-type: none"> <li>• <b>SS.3-5.PSCL.1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action.</b> <ul style="list-style-type: none"> <li>○ Understand why civic responsibility is important and know examples of civic responsibility.</li> </ul> </li> </ul>  | <p style="text-align: center;"><b>Fourth Grade<br/>21<sup>st</sup> Century Skills</b></p> <p>Rain is essential to food production.</p>           |
| <b>Citizenship Reflection</b>         | <ul style="list-style-type: none"> <li>• <b>SS.3-5.PSCL.1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action.</b> <ul style="list-style-type: none"> <li>○ Understand why civic responsibility is important and know examples of civic responsibility, (such as good land stewardship).</li> <li>○ Understand opportunities for leadership and public service in the student's own classroom, school, community, state, and the nation.</li> </ul> </li> </ul> | <p style="text-align: center;"><b>Fourth Grade<br/>21<sup>st</sup> Century Skills</b></p> <p>The garden is a community.</p>                      |
| <b>The Giving Trees</b>               | <ul style="list-style-type: none"> <li>• <b>SS.3-5.PSCL.1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action.</b> <ul style="list-style-type: none"> <li>○ Understand opportunities for leadership and public service in the student's own classroom, school, community, state, and the nation.</li> </ul> </li> </ul>   | <p style="text-align: center;"><b>Fourth Grade<br/>21<sup>st</sup> Century Skills</b></p> <p>Fruit trees are a source of food in the garden.</p> |