## Science in the Garden - PD Supplement - July 2021



| NEXT GENERATION SCIENCE STANDARDS   | LESSONS  |
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| <ul> <li>Next Generation Science Standards (NGSS) Cross Cutting Concepts:</li> <li>Patterns</li> <li>Cause and Effect</li> <li>Systems and System Models</li> <li>Energy and Matter: Flows, Cycles, and Conservation</li> <li>Structure and Function</li> </ul>   | <ul> <li>Scavenger Hunts</li> <li>Walk and Talk</li> <li>Shared Research Projects</li> <li>Nature Journaling (designing questions and investigations, collecting data, communicating findings)</li> <li>Seed planting and seed saving</li> <li>Habitat investigation</li> <li>Decomposition</li> <li>Visit <u>https://www.slcww.org/wwvf2s-garden-lessons</u></li> <li>for all the lessons that the Farm to School program can offer. Most individual lessons work for a range of grade levels as well as a range of subjects concepts. We can also help you brainstorm if you want to use the garden for but aren't sure where to start!</li> </ul> |
| <ul> <li>K-LS1-1 From Molecules to Organisms: Structures and Processes - Use observations to describe patterns of what plants and animals (including humans) need to survive.</li> <li>K-ESS2-1 Earth's Systems - Use and share observations of local weather conditions to describe patterns over time.</li> <li>K-ESS2-2 Earth's Systems - Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</li> <li>K-ESS3-1 Earth and Human Activity - Use a model to represent the relationship between the peeds of different plants and animals (including humans) and the places they live.</li> </ul> | 5 senses (WWVF2S)Seed exploration/Pea planting (WWVF2S)Burma Shave (LifeLab)Build your own bugs (WWVF2S)Little Munchkins (Life Lab)Animal Antics (Life Lab)  |
|   | K-LS1-1 From Molecules to Organisms: Structures and Processes - Use observations to describe patterns of what plants and animals (including humans) can change the environment to meet their needs.  |



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| 1st | <ul> <li><u>1-LS1-1 From Molecules to Organisms: Structures and Processes</u> - Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.</li> <li><u>1-LS3-1 Heredity: Inheritance and Variation of Traits</u> - Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</li> </ul>                              | Parts of a plant/Salsa Making (WWVF2S)<br><u>3 sisters</u> (WWVF2S)<br><u>Is it an Animal</u> (LL)<br><u>Fruits to Flowers</u> (LL)<br><u>Animal Hunt</u> (LL)  |
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| 2nd | <ul> <li>2-LS2-1 Ecosystems: Interactions, Energy, and Dynamics - Plan and conduct an investigation to determine if plants need sunlight and water to grow.</li> <li>2-LS2-2 Ecosystems: Interactions, Energy, and Dynamics - Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</li> <li>2-LS4-1 Biological Evolution: Unity and Diversity - Make observations of plants and animals to compare the diversity of life in different habitats.</li> </ul> | Soil dissection – fava bean planting<br>(WWVF2S)         Flowers lesson (WWVF2S)         Scientist At Work (LL)         2nd grade lesson series (WWVF2S)         ♦       fall outline<br>spring outline |
| 3rd | <ul> <li><u>3-LS1-1 From molecules to Organisms: Structures and Processes</u> - Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</li> <li><u>3-LS3-1 Heredity: Inheritance and Variation of Traits</u> - Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</li> </ul>          | <u>Seed Saving</u> (SGP Lane Co)<br><u>Planting Greens/Eating diversity</u><br>(WWVF2S)<br><u>Interview An Organism</u> (WWVF2S via<br>UCBerkley BEETLES)<br><u>What's In A Name</u> (LL)               |



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|     | <ul> <li><u>3-LS3-2 Heredity: Inheritance and Variation of Traits</u> - Use evidence to support the explanation that traits can be influenced by the environment.</li> <li><u>3-LS4-3 Biological Evolution: Unity and Diversity</u> - Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</li> <li><u>3-LS4-4 Biological Evolution: Unity and Diversity</u> - Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.</li> </ul> | <ul> <li><u>3rd Grade Lesson series</u> (WWVF2S)</li> <li><u>fall outline</u></li> <li><u>spring outline</u></li> </ul>                              |
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| 4th | <ul> <li><u>4-LS1-1 From Molecules to Organisms: Structures and Processes</u> - Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</li> <li><u>4-ESS2-1 Earth's Systems</u> - 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>   | Beautiful Soil/Healthy Soil (WWVF2S)Planting potatoes (WWVF2S)Habitats and Interactions (WWVF2S)Habitat Scavenger Hunt (WWVF2S)Habitat Hunt (WWVF2S) |
| 5th | <ul> <li><u>5-LS1-1 From Molecules to Organisms: Structures and Processes</u> - Support an argument that plants get the materials they need for growth chiefly from air and water.</li> <li><u>5-LS2-1 Ecosystems: Interactions, Energy, and Dynamics</u> - Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</li> <li><u>3-5-ETS1-1 Engineering Design</u> - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</li> </ul>  | Potato harvest (WWVF2S)<br>Tomato and pepper seedling (WWVF2S)<br>Designer tomatoes (WWVF2S)   |