

## **Super Soils**

### **Living Lab Extensions with STEAM Emphasis**

#### **5th Grade Super Soils Extension: Soil Chemistry and Plants**

Combining science with art, this lesson teaches basic concepts of soil acidity through exploration of the hydrangea. Students learn to conduct hands-on experiments involving mixtures and solutions.

Duration: 13 minutes

Supplies: Colored pencils, blank white paper, distilled water, white vinegar, baking soda, red cabbage, and manner to boil water.

#### **Correlation to Common Core and Next Generation Science Standards**

##### *Fall – Earth and Sun*

- 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect Earth’s resources and environment.

##### *Winter – Physical Science- Mixtures and Solutions*

- 5-PS1-3. Make observations and measurements to identify materials based on their properties.
- 5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.

##### *Spring – Life Science – Living Systems*

- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.
- 5-LS2-1. Use a model to describe the movement of matter among plants, animals, decomposers, and the environment.
- 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.

##### *Art- Synthesize and relate information through art*

- VA:Cr2 - Creating Standard 2 Learn how to organize and develop ideas to create art using a variety of methods or a specific method. How do artists create art?