



Vermicomposting



Grade Level: 3rd – 5th Grade

Approximate Length: 125 – 180 minutes

Objectives:

- Learn the importance of decreasing waste and avoiding landfills
- Discuss the relationships between animals, people and the environment
- Learn the positive impacts of composting with worms and how to make a vermicomposting bin
- Understand the importance of healthy soils

Science Standards Available (Teacher will identify which standards to bundle):

- 3-LS1-1 Plant and animal life cycles
- 3-LS3-2 Environmental influences on traits
- 3-LS4-3 Habitats and organism survival
- 3-ESS3-1 Weather related hazard solutions
- 4-ESS2-1 Weathering and erosion
- 4-ESS3-1 Renewable and non-renewable resources
- 4-LS1-1 Internal and external structures
- 5-LS1-1 Plant requirements (air and water)
- 5-LS2-1 Environmental matter cycling
- 5-ESS3-1 Protecting Earth resources and environment
- 5-PS3-1 Food energy from the sun

Outline for Program:

- **Interest Approach (5-10 min):** Students will start the lesson by working as a team in small groups to create a definition for a seed. They will also be asked to explain the difference between a renewable and non-renewable resource. Then as a whole group, we will come together to share our answers, to see how each groups perception might differ.
- **Opening Activity (15-20 min):** During this time, students will listen to a poem about the growing of a seed and create a graphic organizer (plant growth foldable). This activity will help students learn about the plant growth using pictures and descriptions. When the groups are all done, we will go over the answers as a large group and discuss which parts of plant growth include renewable and non-renewable resources.
- **Presentation (45-60 min):** The students will learn about the importance of healthy soil and how farmers raise food to help keep our bodies strong. Students will be able to make the connection that worms play a big role in helping make the soil healthier, by composting organic waste. Together we will explore the lives of red wigglers, the art of vermicomposting and see how students can make their own vermicomposting bins at home. Ultimately, students will learn how to reduce the waste entering landfills and create a renewable resource to positively benefit our environment.
- **IQhub Scavenger Hunt (45-60 min):** The IQhub is an interactive museum, that will help the students build on topics they have already learned and grab their attention for some new ones as well. Students can work individually or in small groups to explore the IQhub and learn about agriculture and the environment. This museum incorporates Science, Technology, Engineering and Math (STEM) to give students a well-rounded and fun learning experience.
- **Closing Activity (15-30 min):** Since plants and animals play a key role in keeping people healthy, it's important to understand how a healthy environment effects all living things. Students will get a chance to stretch their legs and see some easy ways to care for the environment and how to create healthy habitats for living things. Erosion, wetlands and environmentally friendly buildings are other topics discussed during this activity.

Additional Resources on YouTube:

<https://www.youtube.com/watch?v=cdzO7ArxdQo&t=149s>