

Building a Classroom Composter

Primary/Elementary

Big Ideas ([Social Studies](#)):

- Local actions have global consequences, and global actions have local consequences.

Curricular Competencies - Students are expected to be able to do the following:

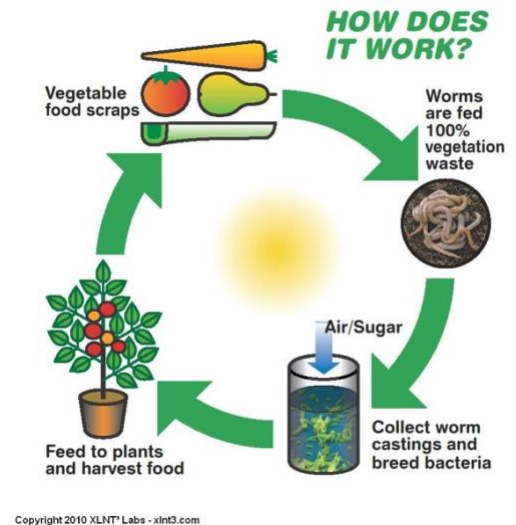
- Ask relevant questions to clarify a classroom or school problem
- Brainstorm & compare a variety of responses to a given classroom or school problem
- Use simple graphic organizers (e.g., charts, webs, journals) to record relevant information

Concepts & Content - Students are expected to know the following:

- Demonstrate responsibility to the environment
- The relationship between humans and their environment

Objectives for This Activity:

- Students will be able to identify a response to a classroom or school problem
- Students will be able to observe and record, then share their findings
- Students will be able to reflect on the environmental consequences of their choices



Preliminary Activities:

- Read ["What Matters" by Alison Hughes](#) then ask if students made any connections to the story? Discuss what are some small actions they could do as a class to help the Earth.
- Take a close look at the daily garbage in your classroom and discuss ways to solve the amount of garbage being thrown out.
- Sort the garbage into recyclable, returnable, compost and garbage. Tell the students that their class is going to tackle this problem by putting waste in its proper place. Then, explain how composting works using the visual provided and [watch the video](#) *In our Garden: Vermiculture (Worm Composting) with Kids!*

Materials and Technologies:

Students will use the following materials, tools, equipment:

- a large square plastic storage container
- soil
- kitchen scraps and lawn clippings
- old newspaper or used paper
- earthworms
- journal for recording observations



Activity:

- poke holes in the lid of the plastic container and then fill the container with a mixture of finely torn newspaper, dried leaves, and soil (equal parts of each)
- dampen thoroughly until it is as moist as a squeezed sponge
- place about a pound of earthworms (redworms are best) into the plastic container
- stir the compost with a stick (add water to the mixture if it is too dry or add more dry soil if it is too wet). Put the lid on the container and store it in an area at about 17-25 degrees Celsius
- feed kitchen scraps or lawn clippings to the worms by mixing them carefully every 2 or 3 days. Avoid fat, meat & bones because they will cause the compost to smell
- observe the compost at regular intervals and record class observations
- after a few weeks students will notice dark crumbly castings as the leaves and scraps will "disappear". Push these castings to one side and add more shredded paper and feed to the other side (these dark crumbly castings can be used as soil for plants).

ANALYSIS from observations:

- where do the worms prefer to feed?
- how might temperature change affect the compost?
- what other agents could be added to the compost and what might their effect be?

Assessment/Evaluation:

- Using Social Studies inquiry processes and skills to ask questions: gather, interpret, and analyze ideas; and communicate findings and decisions.
- Make simple inferences based on their results and prior knowledge.
- Design a course of action to address a problem or issue and provide reasons to support the action.
- Compare observations with others.

RESOURCES AND REFERENCES: YouTube Videos

- ["What Matters" by Alison Hughes](#)

- [In Our Garden: Vermiculture \(Worm Composting\) with Kids](#)
- [Worms are Wonderful](#)

Extensions/Possible Cross-Curricular Connections:

- **Art** – make a school display showing how to sort waste items
- **Science** – examine the earthworm life cycle
- **[ADST](#) (Applied Design, Skills & Technologies)**– designs grow out of natural curiosity – build an outdoor compost
- ***Some photos courtesy of [Pexels.com](#)***