Worms, Compost & Decomposition

Objectives:

Students will!

· Learn about worms, composting, and decomposition by starting a worm compost bin of their own.

Educator Notes

· The compost bin needs be kept moist in a dark space

· Do not add water to the worm bin unless is dry

· Dig under the bedding every so often to mix and break apart any clumps

· Make sure the temperature of the bin remains between 55 to 77 degrees Fahrenheit

Materials:

· Rubber-made storage container

· Recycled newspaper

· Red wriggler worms

· Worm sandwich (old bread, egg shells, fruit peels)

· Fall leaves

· Magnifying glasses (for EXTENSION ACTIVITY)

Preparation:

Poke holes 1 inch to 1 inch apart along the sides and bottom of the container to create enough aeration for worms. Cut newspaper strips into small squares. Prepare a cup of lukewarm water. If possible, have the students go outside to collect leaves from the garden the day before this activity.

Key Vocabulary:

compost | decomposition | red wriggler worms

Activity:

Before beginning this activity, show the students several pictures of red wriggler worms and ask the students what they already know about worms. Make a list of what the students know and use this as a starting point to provide the students with some basic information on worms, composting, and the connection between the two. For example, it might be a good idea to talk

about why worm composting is good (i.e. it helps recycle materials). Alternatively, tell the students some facts about worms (i.e. worms are invertebrates, worms are blind, worms breathe oxygen through their skin, worms have no teeth, worms possess both male and female reproductive organs, worms feed on decaying or organic matter). Now begin the activity by having the students gather around a table with the plastic container, the newspaper squares, and the dry leaves. Have the students take turns filling the container with the newspaper squares and dry leaves. Have 1 student volunteer pour the lukewarm water into the container until the bedding of newspaper and dry leaves is moist but not soaking. Have the students take turns breaking up any clumps of newspaper that may have formed. Tell them that breaking apart the clumps will help to give the worms enough air to breath and prevent the bin from getting a bad smell. Take the worms out and allow the students to spend several minutes observing the worms. Explain what worms like to eat (decaying organic material) and make a worm sandwich while they watch: Using old bread and non-meat food scraps (vegetable peels, fruit, egg shells, tea bags, coffee grounds, etc.), make a sandwich while explaining to the class what can and what can't be put into the bin. For example, explain that eggshells help the worms "chew" the food since they don't have teeth. Once the sandwich is made, choose a couple of student volunteers to help bury different parts of the sandwich in different locations of the bin. This should be done by pulling aside some of the bedding, dumping a piece of the sandwich into the bin, and then covering it up with bedding.

Wrap-Up:

Conclude the activity by having the students spend several minutes drawing a picture of the worms and/or the compost bin.

Extension Activity (K-5):

If older students are completing this activity, students can spend time in pairs looking at the worms with magnifying glasses. In addition to simply drawing a picture of the worms after completing the activity, students can record their observations about the worms (how long are they? how many segments do they have?). Alternatively, if computer access is available, older students can research red wriggler worms and come up with five worm composting facts.

Sources:

http://dug.org/storage/school-garden-curriculum/Worms_Are_Our_Friends.pdf