**Module 2 Overview**

**Driving Question(s)**

How do we ask and answer our scientific questions?

**Overview**

This module introduces students to asking and answering scientific questions using vermicomposting as the context in which to practice these skills.

Number of lessons/time to complete: This module lasts 2 class periods, with ongoing observations to follow. Lessons need to be in sequence, but do not need to occur on sequential days.

Lesson 1 (class period): What is in the box?

Lesson 2 (class period): How can inquiry help us answer questions?

Ongoing lessons as students interact and care for the worms throughout the year.

**Major Products & Performances**

Science journals

Inquiry skills

Vermicomposting bin

**Teacher Background**

**About the Plant(s):**

Obviously not plants in this one, but worms! Vermicomposting is the process of using worms (in this case, red worms) to decompose plant material into nutritionally rich material. We use a worm bin that does not take up too much space and is easily used by the students. I continue to refer to the *Uncle Jim’s Worm Farm* site (<http://unclejimswormfarm.com/>) for information about red worms and vermicomposting.

**Growing Tips:**

Worms can be “fed” scraps (pre-consumption) from any vegetable or fruit, however, too much fruit (especially banana peels) can bring fruit flies and gnats, and citrus fruits are always a no-no. Keep scraps covered with shredded newspaper to keep moisture levels in check and to provide additional material to eat. Newspaper should be soy-based ink only; check with your newspaper office to find out that information. Close observation of the amount of food given and the amount of time it takes the worms to consume it will help guide the decisions about when and how much to feed. The bin needs to stay well-drained to avoid odor. With moisture and feeding level kept balanced, there should be no odor in the bin. Every few months, “harvest” the soil by making pyramid shaped mounds of soil on newspaper. Worms will crawl to the bottom; soil on top is then worm-free and can be used for planting. Students love this part, and are quite meticulous about making sure no worms accidentally get “planted.”

**Facts Related to Standards:**

Students make a direct connection to caring for and understanding the worms’ needs (K-LS1-1) and models (K-ESS3-1). It starts the conversation of living “greener” (K-ESS3-3) and teaches them the basics of composting. Vermicomposting provides many opportunities for engaging students in conversation and sparking ideas for writing, both information and narrative.