

### **Worm Farm – in a Shoebox**

**Standard(s):** 3.1, 3.2, 3.3, 3.4, 4.6

**Objective(s):**

1. Students will construct a worm farm in a shoebox.
2. Students will learn decomposers role in the environment.
3. Students will make observations, design experiments, record and analyze data, make models, and infer their findings.

**Procedure:**

1. Lecture discussion:
  - a. Briefly discuss vermicomposting
  - b. Discuss worm farm experiment and basic setup
2. Use the textbook, internet, or various other sources to find information on the following questions relating to the worm farm experiment:
  - a. Reasons for using a worm bin
  - b. Different ideas for experimentation
    1. using four worm bins, study the reactions of worms to the four food groups
    2. reactions of worms to different colors of light
    3. food preferences of young versus mature worms
    4. effects of potting plants on various mixtures of vermicompost, peat moss, soil, and perlite
    5. and more...(with teacher approval)

Find the definitions to the following vermicomposting vocabulary:

- a. vermicomposting
  - b. decomposer
  - c. compost
  - d. organic material
  - e. *Eisenia foetida* (redworms)
3. After the textbook, internet, or various other sources research is completed we will have a class discussion on what we have found

**Follow-up Activities:**

1. Students will learn about other compost critters and decomposers.