Exploration Academy
K/1st Grade Unit Plan
Getting the Dirt on Soil
4-6 Weeks

Desired Results

Essential Questions:
How do worms help our ecosystem?

Enduring Understandings:
- What are the properties of soil (texture, composition, color)?
- How does compost help our planet?
- Different foods grow in different types of soil (i.e., sunflowers need rocky soil to grow and rice needs clay to grow).
- What type of soil will make the best home for worms?
- How will we know if one soil is better for worms than another?
- Layers of soil
- Can worms survive on Mars or the Moon?

Objectives:
Students will be able to use scientific evidence and observation to explain how worms help our ecosystem.

Standards:
Science, Grade 1

112.12(b)(1)
Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures and uses environmentally appropriate and responsible practices.

112.12(b)(1)(A)
recognize and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using materials appropriately;

112.12(b)(1)(C)
identify and learn how to use natural resources and materials, including conservation and reuse or recycling of paper, plastic, and metals.

112.12(b)(2)(A)
ask questions about organisms, objects, and events observed in the natural world;

112.12(b)(2)(C)
collect data and make observations using simple equipment such as hand lenses, primary balances, and non-standard measurement tools;
communicate observations and provide reasons for explanations using student-generated data from simple descriptive investigations.

### Assessment Evidence

May include but not limited to:
- Formal and informal teacher observations
- Teacher questioning and student oral responses
- Models
- Completed projects
- Paper Bag Book

### Activities and Resources

#### Activities
- Parts of a Flower
- Layers of the Soil Model
- Soil Science Investigation
- Science Observations – Earth Worms
- Paper Bag Book
- Group Presentation: Willie the Worm

#### Differentiation
- T Modeling Graphic Organizers
- Peer Assistance
- Extra Time as Needed

#### Resources:
- Paper bags
- Worms
- Soil, Hummus, Clay
- Muffin Cups
- Construction Paper
- Sunflower Seeds
- Water Colors
- Scientific Investigation Recording Sheet
- [https://www.youtube.com/watch?v=if29mjcd5bc&feature=youtu.be](https://www.youtube.com/watch?v=if29mjcd5bc&feature=youtu.be)
- [https://www.youtube.com/watch?v=Q5s4n9r-JGU](https://www.youtube.com/watch?v=Q5s4n9r-JGU)
- Layers of Soil Model (graham crackers, M&M’s, Oreos, Sprinkles, Gummy Worms)