



A Visit with Oli Earthworm

Grade: *Preschool* | **Time:** *45 minutes*

Standards: *CD-SC3.4a*

Supplies:

Puppet show:

Characters:

- Oli the Earthworm
- Legs the Spider

Props:

- Signs for Soil, Rock and Worms
- Bowl
- Rock, sticks, leaves, plastic insects, fake animal poop and guts
- Magnifying glass
- Water sprayer

Garden Activity:

- 2 buckets
- Ingredients for soil
- Live worms
- Magnifying lenses (1 per child)

Garden Connection:

Students visit the garden and study earthworms and the components of soil

Overview

Students use tools (magnifying lenses) to learn about soil and worms

Essential Questions

How can I learn about earthworms and soil?

How can I use a hand lens to learn more about nature including rocks and earthworms?

Engage

Perform "Oli Earthworm's Recipe for Soil" Puppet Show

Explore

Observation of soil and worms using magnifying lens

Explain

Students learn to use a science tool to observe soil in the school garden

Environmental Stewardship

By observing worms closely and learning about their role in nature, students develop empathy for the natural world

Evaluate

Are students engaged and on task? Are they answering

questions and showing enthusiasm for this learning experience?

Are they using vocabulary words and understanding what is soil and what is not soil?

Targeted Concepts and Vocabulary

Targeted Concepts

- Soil is made of many parts including leaves, rocks, insects and worms.
- I can observe a worm with my eyes and with a magnifier.

Vocabulary

- Rock
- Soil
- Worm
- Magnifier

Opening

Tell children the Standard for our lesson today is “I observe, explore, and discover many plants and animals.” You will get to observe a rock and a worm with a magnifier and will discover exciting things about how worms live and how they react to things in their outdoor, underground home.”

Mini-Lesson

- Perform Puppet Show: Oli Earthworm’s Recipe for Soil! – see script at end of lesson plan
- After the puppet show, come to the front of the stage, and summarize the concepts covered, using the word signs.
- At the end of the discussion proceed with Work session , ‘Let’s go look at some worms and soil!’
- Walk outside and have students sit on the ground near their garden beds.

Work Session

SOIL, WORM AND HAND LENS INVESTIGATION –

1. Gather children in a circle on the ground.
2. Reinforce the key concepts from the puppet show with the following demonstration. Have 2 buckets with labels on them - 1) SOIL; 2) NOT SOIL. Explain, “In this bowl, I have all the items that Oli Earthworm used to make soil in the puppet show. I also have items that Oli said were NOT in his soil recipe! As I hold up each item, I want you to tell me if it belongs in the ‘SOIL’ bucket or in the ‘NOT SOIL’ bucket.”
3. Next, move the students around the garden bed. Explain that children will use hand lenses to look at ‘parts’ of soil including rocks and worms. Explain how to use the hand lenses.
4. Demonstrate proper use of the hand lens to observe a rock and then, once they can observe a stationary item like a rock, they will observe a worm. UGA students and ELC teachers may need to help children hold the hand lenses the correct distance from their eye to view it properly.
5. Next, children will observe worms. Model appropriate behavior for touching, holding and observing the worms. You might state, “worms are very squishy and wet and neat to hold. You must hold them carefully and gently since they are living creatures. Worms are really fun to hold.” Distribute hand lenses and rocks to the children.
6. Each child holds a worm and looks at it with a hand lens for about 1 minute.
7. Finally, all children gently place their worm in the garden beds. State, “worms live in soil. Gently place your worm on the soil and watch what it does.”

Closing

Use the laminated paper signs to very briefly review the 3 words that were presented in the puppet show: Worm, Soil and Rock. Review the standard: “I observe, explore and discover many plants and animals.”

End with a positive statement such as, “You did a very good job observing and investigating worms and their behavior as young scientists. You were also very kind and respectful of these living creatures.”

Behavior Management

Model appropriate behavior for handling worms prior to giving out worms. Remind students to keep feet out of garden. If students begin to lose interest, use song or finger play to get them engaged again.

PUPPET SHOW SCRIPT

“OLI EARTHWORM’S RECIPE FOR SOIL”

Oli: (pops up from below stage) Hi, Boys and Girls. Things sure are busy down there in my home in the ground! Hey, do you want to hear a joke? (pause) Why did the worm cross the playground? To get the other slide! Ha, ha! I’m so funny. Let me introduce you to one of my workers. This is Legs. Nice legs, Legs!

Legs: Hi, Oli. Hi, Boys and Girls. Legs are very helpful when I try to move quickly through the soil! *(She scampers across the stage to demonstrate)*

Oli: Legs, as a top worker in the Soil, I would like you to tell the boys and girls about our work. How 'bout it Legs? *(Legs looks at Oli and begins to talk)*

Legs: We chew on all kinds of delicious dead things and turn them into soil - we say we '**decompose**' things. We put air spaces into the soil so that animals and plants can breathe.

Oli and Legs: *(rap the following)* Decomposers, break it down!; Decomposers break it down!

Oli: My department is nice and dark! I'm really not used to all of these bright lights, since I live in the dark soil, but I like teaching you kids about the soil. Legs, can you tell the children more about your work?

Legs: We make rich soil from dead trees, animal guts, and rocks. Soil is very important stuff!

Oli: Boys and Girls, Would you like to hear my Recipe for Soil? *(Pause for answer)* Let me get my bowl. *(Legs puts a big bowl on stage)* You all know what a 'Recipe' is, don't you boys and girls? *(pause for answer)* Well brownies are one of my favorite recipes because brownies look like dirt! But, in my recipe for soil, we start with....

Legs: Rocks! *Legs drops in 2 or 3 small rocks*

Oli: Thank you, Legs! Yes, rocks; and then we add . . . *(he looks toward Legs)*

Legs: *(Legs adds leaves, a stick and pine needles)* Some leaves, sticks and pine needles! Look closely Oli, there are lots of really cool things in here. *(Legs holds up a magnifier and Oli looks through it.)*

Oli: Wow. That looks amazing. I love to look at nature with a magnifier! And next?

Legs: Bugs - live bugs and dead bugs - looks delicious!

Oli: Do you like my recipe boys and girls? And now for the next ingredient...

Legs: Animal bones, guts. And then... poop! Poop is very important in making rich delicious soil. *(tilts the bowl toward children so they can see it better and stirs with a stick)*

Oli: We decompose it all into delicious, rich soil. Do you remember what decompose means? It means to break big things into little things.

Oli and Legs: *(rap the following)* Decomposers, break it down!; Decomposers break it down!

Legs: Oh and I almost forgot ...water. Water is very important. *(Legs or sprays some water on children in front row)* Ha Ha!

Oli: Oh, sorry children, Legs tends to get a little excited. *(Looks into soil bowl and stirs it again)* mmm...this is starting to look good! Legs...anything else in our soil recipe?

Legs: Air! *(and adds a bag of air to the bowl)*

Oli: That's right! *(Starts to talk fast and with excitement)* Air is very important - otherwise how would I breathe? And how would all of my workers breathe and how would all of the roots of trees breathe?

Legs: Boys and Girls, that is all the ingredients! I have to run away on my beautiful legs! Don't forget how important the soil is! *(runs off the stage)*

Oli: Children, can you say 'Good bye Legs'? *(pause while children say goodbye)*

Well, that's it, boys and girls. That's my recipe for good soil. I would like to stay longer, but you know how it is - gotta get to it! There are bugs, leaves, and **poop** to decompose. Bye-bye!