

Worms in the Rain!



Measurable Objective

Students will conduct an investigation to try to find out what worms will do in the rain; they will then record their final finding in their own diary of a worm.

Suggested Grade Level

1st Grade

Materials

- Book: *Diary of A Worm*
- Large tub or container filled with soil and worms
- Several small containers
- Newspaper
- Several cups full of water
- Worm cut-outs for each student
- Blank sheets of paper
- Markers

GLEs

- Science: conduct a simple investigation (fair test) to answer a question
- Math: represent data using pictures and bar graphs
- Communication Arts: demonstrates concepts of print

Anticipatory Set

1. Gather the children on the rug to listen to *Diary of a Worm*.
2. After reading the story, go back to the page where it talks about how the worms went up on the sidewalk during the rain. Ask the students if they have ever gone on a walk right after a rainstorm and ask what they saw.
3. Ask the children what they think worms do when it rains. Write down about 3 or 4 ideas on the board. If they don't come up with the idea "come to the surface", bring this up and ask if they think that's a good idea.
4. After doing this, hand a worm cut-out to each child. Tell them they are each going to put their worm by the idea that they think is correct. Put a worm by an idea as an example. Call the children up two at a time to do this.



5. When all the children have put their worms up, have them count how many are in each group. Ask them which has the biggest number and tell them this is the idea that the most people agree with. Do the same for the smallest number.
6. After doing this, draw a graph on the board with their ideas at the bottom and numbers along the side. Have the children help count how high up you should draw the bar for the 1st idea. Draw that bar and shade it in.
7. Follow this procedure for all the ideas that the children have.
8. Ask if they have any thoughts about how we can decide which is the best answer. After allowing for some ideas, tell them that we are going to do an experiment to find out what worms will do when it rains.

Instructional Point:

Prior knowledge: drawing skills, listening skills, critical thinking skills, writing skills

Procedure:

1. While the students are getting back to their desks, have one person from each table get a stack of newspapers to spread on their desks.
2. Have a different person get a smaller container and scoop the soil from the large container into it.
3. After they go back to their desks, have another child get the cup with the water in it.
4. After the children have all their materials, tell them that they are going to work in their groups to see if they can figure out what worms do when they get really wet.
5. Explain to the students that we should not only see what worms do when they are wet, but first, what they do when they're in the soil that's pretty dry.
6. Let the students conduct their own experiments, observing the worms in the dry soil.
7. After they observe the worms in the dry soil for about 5 minutes, ask anyone if they would like to share what they saw with the class. Ask what they think might happen next, when they pour the water into the soil.



8. Then they should pour the water into the containers to see how the worms react.
9. After about another 5 minutes, have them share what they just saw in the wet soil. Ask them what, if any, changes they observed.
10. Have the children help clean up. Then tell the students that they are going to create their own diary entry, pretending they are a worm. They should remember what they observed the worms doing after they poured the water in and draw what the worms did, as a reaction. They should also include a sentence or two describing what the picture shows. Tell them to make sure they capitalize the beginning of the sentence and put a period at the end.
11. Pass out the blank pieces of paper for the students to create their entries.

Modeling

- Showed students how to put their worm cut-outs beside the idea they agreed with.
- Created a diary page for the children to see.

Check for Understanding

- Walk around while the students are doing their experiments to listen to discussions.
- Answer questions throughout the lesson.

Guided Practice

- Helped the students count the ideas on the board.
- Discussed what idea the most students chose and which had the least.

Independent Practice

- Students work in groups with the soil, worms, and water to see what the worms do when they get very wet.
- Students create their own entry for their diary of a worm.

Closure

- Teacher asks each student to share their diary entry.
- Ask the students what they saw when they watched the worms in the soil. Then ask them what they saw in the wet soil. Ask children why they think the worms came to the surface when they were wet.



- After they share their observations, ask them which idea from the beginning makes the most sense. If they did, discuss why the children changed their minds about which hypothesis was correct.
- Collect the diary entries to make the class *Diary of a Worm* to keep in the classroom.

Evaluation

- Use of a checklist to make sure the students did each of the following tasks:
 1. Made a hypothesis by placing their worm cut-out on the board.
 2. Participated in the investigation
 3. Created an entry for their class worm diary about what worms do when they get really wet with both a picture and a correctly written descriptive sentence.

Lesson plan compiled by Ashley Parker, an Earth Team Volunteer and Early Childhood Education student at Missouri State University, Springfield, MO. January 2008

