

Shrink to Fit

Summary

Students will explore and discuss how various living and non-living organisms help and react to one another other, especially if they were placed in a small environment.

Materials

Overhead projector

- [Shrink to Fit Overlays](#)
- [Shrink to Fit student worksheet](#)

Clear plastic terrarium

Materials to place inside terrarium

- [Directions to fill terrarium](#)
- [Diorama template](#)

Scissors, crayons, glue, pencils

Eye loupes

Additional Resources

Books

- *Nature Hide & Seek: Woods & Forests*
, by John Norris Wood & Maggie Silver; ISBN 1-890409-03-0

Background for Teachers

Prior to this activity, the teacher should instruct and give opportunities for the students to recognize what makes a living organism. An understanding of an environment, on the part of the student, is also expected. Questions such as: What are the characteristics of an organism? 1) Does it breathe? 2) Does it eat? 3) Does it move? 4) Does it reproduce? should have been discussed.

Intended Learning Outcomes

1. Use science process and thinking skills.

Instructional Procedures

Invitation to Learn

Ask: "What if you could shrink a pond into a bowl, what kinds of items would you need to have in order for those living things in the pond to survive?"

"What if you could shrink a forest into a glass box, what kinds of items would you need to have for the forest creatures to survive?"

Instructional Procedures

Using the overhead projector, show students the Forest Scene. Ask students to identify all of the living items in the scene. Ask them to now identify the non-living items in the scene. This is just the discussion phase.

Go back and ask them to again identify the items. Start with the non-living items. Next, ask them to identify the living items. Help students to observe the many living and non-living things that make up the forest environment.

Hand out *Shrink to Fit* worksheet and ask them to have pencils ready. Place *Shrink to Fit* worksheet on the projector. Add *Overlay A* and ask, "What can you add to your picture that is a non-living thing that can help a creature to survive in the forest?" Add *Overlay B* and *Overlay C* and suggest items such as large rocks, small stones, gravel, dead trees, clouds, standing or running water, etc. As the instructor is drawing or placing overlay, students should be drawing

similar items on his/her worksheet.

"What living things can you add to this picture that will help creatures to survive?" Again, draw or place *Overlay D* & *Overlay E* to show items such as large and small trees, grasses, bushes, plants, and insects. Collect completed worksheets as an assessment.

Discussion-- "What happens to the animals when we make a small forest and place it in a small container?" "How is this like a zoo and how might the creatures living there react to living in a smaller environment?"

Journal entry-- If you woke up one morning to find that you were only six inches tall, how might the world look to you? Describe how your world now would look to you then.

Students are now given an eye loupe. Direct students to go outside and explore the out of doors with the eye loupe. Instruct them to make careful observations, as they will be expected to record their observations.

Students might be asked to collect items, with teacher's permission, that are living and non-living to be viewed under a microscope. Discuss and/or record observations.

Extensions

Curriculum Extensions/Adaptations/ Integration

Instructor should allow students to choose a color used in making the diorama or give students a paint chip to use and allow students to go outside and find items of similar colors that are living and nonliving.

Ask students to explain, either written or verbally, why nonliving items and living items are needed in any given environment.

Language Arts: Students can write a "Compare and Contrast" paper about how an environment needs living and non-living items.

Library/Media: Students will share ideas on visual perspectives as with wide-angle shots, medium angle and close range shots.

Social studies: How might this forest change if a human comes there to camp or hunt? How might humans help keep a pond or forest environment livable for the creatures living there?

Use the diorama template. Using pictures from template and student-made items, students will cut, color, and paste items onto the diorama and label each living and non-living item.

Family Connections

Students are asked to bring in and share terrariums and/or aquariums from home and explain why certain items are needed to replicate an animal's natural habitat.

Send a parent letter home to find a parent or community person who deals with helping to preserve or clean the environment. Ask them to come into the classroom and share their knowledge.

Assessment Plan

Involvement in the discussion can be an observable assessment.

Complete *Shrink to Fit* worksheets. Students might write reasons why a specific item was or was not included.

Journal entries and/or written responses about what the student observed when trying to shrink the forest into a small space.

Completed diorama with correct labeling.

Bibliography

Research Basis

Newton, L.D. (June 2002). Questions that help children understand Elementary Science. *Investigating* , Volume 18.2, pp. 6-9.

Teachers want to help every child understand science however; do teachers ask the right questions that can guide a student to comprehension? Questions about science need to be presented to assist a student to achieve this goal. Asking the right question at the right time can help a student make a mental connection. A carefully tailored question can be an effective tool.

Authors

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