



**Title: Micro Hike**

Adapted from *4-H Earth Connections*, by permission of the University of Maine Extension Services.

**Theme:** You can find living things of all sizes if you look closely.

**Objectives:**

- Students will build a miniature nature trail to highlight interesting living organisms.
- Students will understand that shelter, space, air, and water are essential to living organisms of all sizes

**Duration:** 45-60 minutes

**Age Range:** Kindergarten-6<sup>th</sup> Grade

**Materials:**

- one 20 foot length of string or yarn for every 2 students
- 8 popsicle sticks for every 2 students
- Scratch paper
- 1 magnifying glass or bug cube for every 2 students
- Magic Dust pouch (optional)

**Background:**

This activity is meant to encourage students to look closely at the environment around them, increasing their awareness and perception of the natural world. By gaining personal experience of the diversity of living things in an area, students will be prepared for future lessons about ecosystems and environmental effects of oil spills.

**Preparation:**

When looking for a suitable site, choose one with a diversity of ground cover, but avoid areas of thick or dangerous vegetation. Prepare sets of 20-foot sections of yarn and popsicle sticks for every two students.

**Introduction:**

Have the student sit near the micro-hike site and think about some of the smallest organisms they have seen. Then, have them imagine what the world would look

like if they were the size of those animals, less than an inch tall. Ask students how big their school, house, and parents would seem.

### **Activities & Procedures:**

Explain that there are many creatures and plants that are less than an inch tall. Ask the students to find one from where they are sitting. Share some of the findings. Explain that they are going to have a chance to discover and explore an uncharted section of the miniature natural world.

If you'd like, bring out your special "Magic Dust" pouch and explain that the magical dust will make them all small. Quietly tell the children to lie back and close their eyes (the dust will not work if they peek). Use guided imagery or a short fantasy trip to bring the children into the miniature world. As you spread the dust on them, speak quietly and slowly. Explain that they are getting smaller and smaller. Use your creativity to set the scene.

Have students open their eyes and slowly examine the ground. Ask them what kinds of plants and animals they can see now. Slowly crawl to the micro-hike site, preparing the children for observing closely.

Ask the students if they've ever been on a nature trail and ask them to describe it. Explain that they are going to build a nature trail to mark all of the interesting miniature things they discover. Provide a few examples of possible stops along the trail (broken egg shells, ants, beetles, colored sand grains, plant sprouts, etc.)

Divide the naturalists into pairs and give each group a string (to create the nature path), popsicle sticks (for trail markers), and a magnifying glass (to look more closely). Explain that the magnifying glass is a special scientific tool for looking closely and needs to be treated carefully. Set a 40-yard radius boundary and set each group out on hands and knees to create their trail. As they work, crawl around and check in with each group to make sure they understand the concept and encourage students to come up with a catchy name for their trail (i.e. The Great Ant Parade).

Give students about 15 minutes for trail making, reminding them throughout that they are very small. Then, have each pair lead the group down their trail on hands and knees, interpreting points of interest.

### **Wrap-up:**

Tell the students that at the snap of your fingers they will suddenly return to full size. Briefly review the discoveries of the micro-trails. Make a list of all the plants and animals found along the trails. Ask students what these plants and animals need to survive (food or sunlight, water, air, shelter, space.) Ask students to brainstorm how these organisms get these necessities. Have students think about

what survival needs might be hardest for these organisms to find in this area and then have them “help out” a plant or animal by giving a plant a few drops of water or placing a tiny bit of water near, but not on, an animal.

Note: This activity can be adapted for older elementary students by having them write and illustrate a trail guide for their nature hike.

**Evaluation:**

Crawl around and observe students during the planning process of their trail. Assess student understanding, cooperation, and participation during trail presentations.

## Micro Hike Standards

Science As Inquiry and Process: Students develop an understanding of the processes and applications of scientific inquiry.

### SA1

Students develop an understanding of the processes of science used to investigate problems, design and conduct repeatable scientific investigations, and defend scientific arguments

The student demonstrates an understanding of the processes of science by:

[3] SA1.2 observing and describing the student's own world to answer simple questions

[4] SA1.2 observing, measuring, and collecting data from explorations and using this information to classify, predict, and communicate

Concepts of Life Science: Students develop an understanding of the concepts, models, theories, facts, evidence, systems, and processes of life science.

### SC2

Students develop an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms.

The student demonstrates an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms by:

[3] SC2.2 observing and comparing external features of plants and of animals that may help them grow, survive, and reproduce

History and Nature of Science: Students develop an understanding of the history and nature of science.

### SG4

Students develop an understanding that advancements in science depend on curiosity, creativity, imagination, and a broad knowledge base.

The student demonstrates an understanding that advancements in science depend on curiosity, creativity, imagination, and a broad knowledge base by:

[3] SG4.1 asking questions about the natural world