

## Exploring the Micro World

**Subject:** Systems up-close

**Duration:** 1 hour

**Setting:** Outside

**Materials:** Journal, pencil, string (1-3 ft. per student)

**National Standards -**

**Guiding Theme:** Observing systems interactions in a specific defined area, very up-close. Students will learn to observe "micro" environments and focus on how much they can observe in a small area. If available nearby, find a place with lots of mosses, lichens, or other small "micro" plants.

### Activity Instructions

1. Give each student a 1-3 ft piece of string to use to create their "micro-world observation site".
2. Students should observe everything within the string circle, and use words, pictures, and numbers to record each subject they find.
3. Introduce the idea of the "system" of their "micro-world", and that each different thing they see is interacting with each other. Ask students to focus on these interactions and focus some of their "I notice" and "I wonders" on this.  
**For example:** I notice the moss is attached to this rock. I wonder how the moss stays in place on the rock.
4. Give students about 40 minutes to sit and observe their micro-world.

### **Discussion Questions**

In groups of 2-3 have students discuss similarities and differences between their "micro-worlds" and the things they noticed.

What interactions did you notice between different plants or items within your micro-world?

If you came back in one week, do you think you would notice any changes in the area you studied? What might those be?

What was it like observing a micro-world? Did you observe differently in the limited space?

If you could do this activity anywhere on earth, where would it be and why?

Example Journal Entry:

# Micro World

Kenai Fjords NP - Exit  
August 31, 2021  
Partly Sunny, 53°F

I notice all the colors of  
the different lichens and mosses

So many organisms in  
such a small 2'x2' space



Reminds me of  
encrusting algae  
found in the ocean

I wonder how long  
it takes for certain  
lichens to grow

These blue lichen reminds me  
of golf tees

I wonder if lichens and mosses are as  
competitive for space as corals are

