

FIELD CARD

Cut out along outer lines, & fold along the centerline. This makes a handy reference card that will fit in your pocket.



Lichen Exploration

Introducing this “weird organism”

1. Group chat: What the heck is this weird organism?
 - ▶ *Have you ever seen anything like this before?*
 - ▶ *What does it remind you of?*
 - ▶ *This is actually a living organism.*

Exploring Lichens

1. Pairs observe, describe, & compare lichens up close and see how many different kinds they can find.
 - ▶ *There are over 10,000 different kinds of this organism. Let’s see how many different kinds we can find here and what we can notice about them.*
 - ▶ *Describe them out loud & make comparisons between different kinds you see.*
2. Students explore these “weird organisms” in the area.
3. Circulate, troubleshoot, & be a co-explorer with students.

Sharing Lichen Observations

1. Group chat: What did you find?
 - ▶ *What did you notice?*
 - ▶ *How many different kinds did you find? How are they similar to or different from each other?*
 - ▶ *How would you describe one of the most interesting ones?*
 - ▶ *What does that one look like to you? What does it look like through your hand lens?*
2. Introduce the name “lichen” and encourage students to use it.

Introducing the Symbiotic Relationship in Lichens

1. Group chat: So, what exactly is a lichen?
 - ▶ *Let’s talk about lichen and what kind of organism it is. What do you know about plants? Do you see any evidence that lichen is plant-like?*
 - ▶ *What do you know about fungi? Do you see any evidence that lichen could be a fungus?*
2. “Freddy Fungus and Andi Algae took a likin’ to each other” in a relationship that benefits both.
3. *Optional:* Introduce term: *symbiotic*
4. Explain that the relationship between fungi and algae is an adaptation that helps them survive in their habitat.

Using the Lichen Key

1. *Turn & Talk:* Students recall one type of lichen they saw & describe it to a partner (not the person they explored with).
2. Introduce the key with 3 main types of lichen: crusty, leafy, & shrubby.
 - ▶ *Crusty lichens are like a scab or paint attached to the surface of rocks or wood. Leafy lichens have little flaps like lettuce & attach to the surface in one place. Shrubby lichens look like a bush or a beard.*
3. Explain that lichens won’t look exactly like the pictures.
4. Ask students to explore, identify types of lichen using the key, and look for patterns about where & on what surface it grows.
5. Give some examples of growth patterns to look for.
6. Students use Lichen Key to explore in pairs, pass out lichen keys.

Talking about Where Lichens Grow

1. Group chat: What did you find?
2. Students *Turn & Talk* about possible explanations for why different types of lichen might grow in certain places and not others.
3. Ask a few students to share their explanations—encourage discussion.
4. Explain each type of lichen has specific environmental conditions where it survives best.
5. Point out that all organisms change the environment a little as they grow.
6. Explain: Lichens often grow on surfaces in this order: crusty, leafy, shrubby, sometimes followed by moss, then other plants.
7. Pairs search for evidence of this order of lichen growth.
8. After ~5 minutes of exploration, bring group together to discuss findings.

Wrapping Up

1. Encourage students to keep looking for lichens & to notice any patterns.
2. *Walk & Talk:* Students reflect on learning.
 - ▶ *What are you still curious about? What do you wonder about lichens?*
 - ▶ *What did you do today that helped you learn about lichens?*
 - ▶ *Describe to your partner how you might tell a younger brother or sister what you learned about lichens.*

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