

Who's Hiding under the leaf Litter

Outdoor Learning & Biodiversity Investigation

Subject: Science

Grades: 1-6

Duration: 60 mins

Location: Schoolyard

Groups: 4-5 students
per group



Lesson Plan

1. Introduction — 5 minutes

Gather students outdoors and discuss what happens to fallen leaves, what might live beneath them, and why leaving some leaves on the ground is important. Explain that students will explore how leaf litter supports a healthy ecosystem.

2. Leaf Litter Investigation — 15-20 minutes

Divide students into groups of four or five. Students search beneath designated leaf piles to find 12 hidden critter cards, numbered 1-12. As they find each card, they bring it back to their group and discuss the organism's role in the ecosystem.

3. Sort the Critter Cards — 5-10 minutes

Each group sorts the 12 critter cards into the correct hula hoops, with each hoop representing a different ecological role. Students work together to decide where each card belongs and explain their reasoning. For example, a spider belongs in Hoop #2 — Hunters (Predators) because it hunts and eats other organisms.

4. Share and Reflect — 5-10 minutes

Bring students together to discuss their discoveries. Ask: What might happen if we removed every fallen leaf from the schoolyard? Discuss how leaf litter provides food and shelter for organisms and helps support biodiversity.

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Follow-up Discussion-15 minutes

The Big Idea: Why Should We Leave the Leaves?

1. Leaf Litter is a mini-ecosystem

Fallen leaves provide habitat for insects, spiders, worms, and other small organisms. Many use leaf litter for shelter or to survive the winter. These organisms also support food webs by providing food for birds, small mammals, and other predators.

2. Leaf Litter improves soil health

As leaves break down, decomposers help turn them into organic matter that enriches the soil. This process recycles nutrients that plants need to grow.

3. Leaf Litter conserves moisture and protects soil

A layer of fallen leaves helps slow water evaporation, keeping the soil moist. It also cushions the soil from rain and wind, helping reduce erosion.

***ACTION : Environmental stewardship**

Where could we leave some leaves in our schoolyard to support biodiversity? What is one action our class could take to make our schoolyard more wildlife-friendly?

Extend the investigation

1. Design a small leaf-litter habitat area in your schoolyard.
2. Create a simple food web showing how three or more organisms depend on one another.
3. Compare a bare patch of soil with an area covered in fallen leaves. What differences do you notice in moisture, soil condition, or the organisms present?

Critter Cards



Before the lesson:

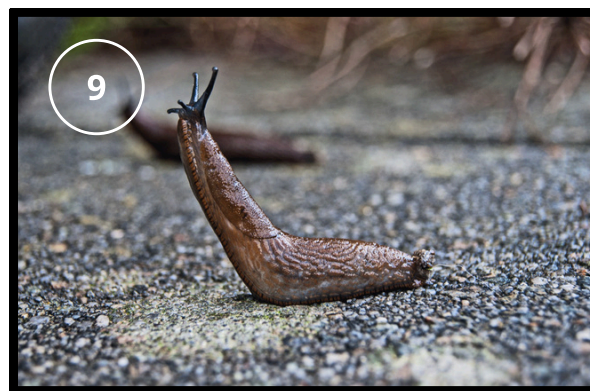
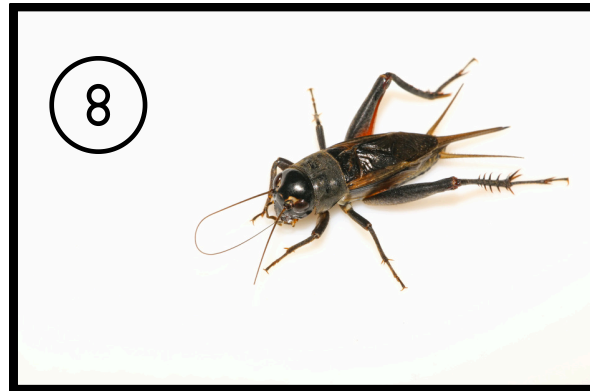
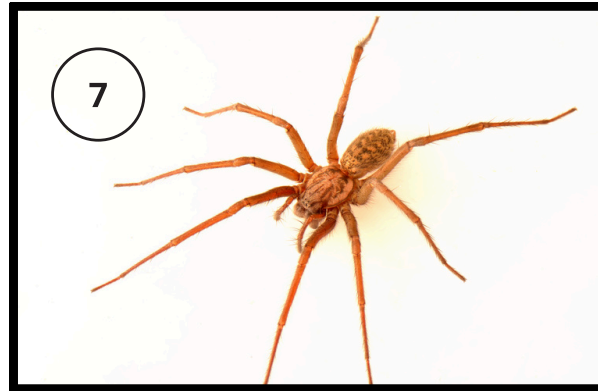
1. Print five copies of the critter cards page.
2. Cut out the individual critter cards and laminate them for reuse.
3. Laminate the four ecological role cards: Recyclers, Hunters, Leaf Eaters, Prey
4. Choose a safe outdoor area with several leaf piles beneath trees or in garden beds.
5. Hide the critter cards beneath different leaf piles before students arrive.

(* ask some helpful grade 8's to hide these cards for you.)

Materials needed per group:

12 Critter cards, 4 role cards, 4 Hula Hoops

Critter Cards



Who's hiding under the leaf litter?



1. The Recyclers

Decomposers & Detritivores

- Earthworms**
- Pill bugs/woodlice**
- Millipedes**
- Some snails/slugs**
- Fungi**
- Bacteria**

Their job: break down dead leaves and other organic matter, helping return nutrients to the soil.

Who's hiding under the leaf litter?



2. The Hunters – Predators

“They keep other populations in check.”

- Spiders**
- Ground beetles**
- Some mites**
- Predatory beetle larvae**

Their job: eat other organisms and help keep the ecosystem balanced.

Who's hiding under the leaf litter?



3. The Leaf Eaters — Herbivores

“They feed on plants and plant material.”

- Caterpillars**
- Snails/slugs**
- Some beetles**
- Grasshoppers/crickets**

**Their job: transfer energy from
plants into the food web.**

Who's hiding under the leaf litter?

4. The Snack — Prey

“WHO EATS ME?”

Earthworm → Robin

Spider → Bird

Beetle → Frog

Caterpillar → Chickadee

Their job: become food for another living thing.

Bonus PAGE! : Who's hiding under the leaf litter?

Directions: Look for the matching critter under the leaves, next paste the correct species above in the empty box.



Toad



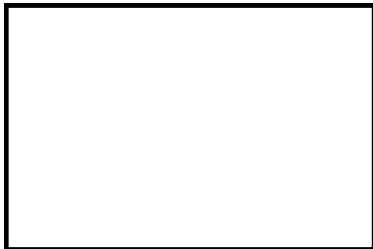
Spider



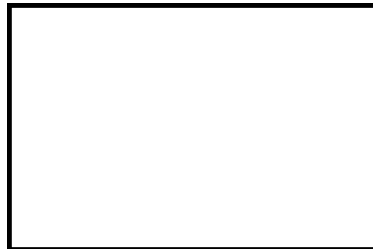
Snail



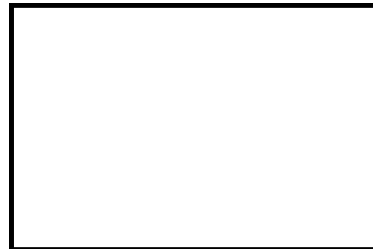
Sow Bug



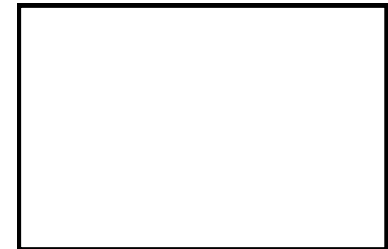
Beetles



Asian Lady Beetles



Moth Cocoons



Bees