

Plant Predators

Grade(s): 3-5	Topic: Plant-Animal Interactions, Ecosystems, Predation	Season: Any
Timing: 45 minutes, including 5 minute RPK, 5 minute introduction, 15 minute tree predation game 15 minute outdoor predation observation and 5 minute conclusion		
Objectives: <ul style="list-style-type: none"> • Students can list different animals that can act as predators on plants, especially orchard trees • Students can define what a predator is and give examples, as well as explaining that predators are just trying to stay alive and meet their needs of food, water, and shelter 		
Materials: <ul style="list-style-type: none"> • Example of leaf or bark that has been preyed upon • <i>Predation Observation</i> worksheet • Pictures of and information about the Asian long-horned beetle (optional) • Tree Predation game cards 		
Degree of need for extra teacher or parent helper? Low		
Journal Prompt: What are some predators of trees? Are there different ways to harm a tree?		
Lesson Sequence: Reactivate Prior Knowledge (5 minutes) Pass out your example of a leaf or bark that has been preyed upon. Ask the students, “what do you think happened here? What do you think the animal was trying to do? What do you think the size of the animal was? What part of it’s body was it using?” etc. Introduction (5 minutes) Define predation and tell students we will be focusing on the predation of orchard trees today. Can they think of any predators that they KNOW like trees in particular (bark beetles, woodpeckers, beavers, etc). Ask them about WHY it is that these animals are preying on the trees (plants). Do they mean to hurt the trees? What is it they need? What do ALL living creatures need to stay alive (food, water, shelter)? Can they think of anything that isn’t alive that might harm an orchard tree? If you want to focus on a specific predator, this is a great opportunity to tell students about the Asian long-horned beetle, a predator destroying millions of acres of forest across the US and Canada and found in more and more forests every year. Tree Predation Game (15 minutes) In this game students will explore many varieties of damage that can happen to trees and the types of things that cause damage. Give each student a card with either a tree or a predator on it. Half the students will have trees and the other half will have forms of predation that affect trees. Have them read their information and then try to find their match among the other students. After students have correctly found their match, quickly share as a group all the forms of predation that they learned about. This will prepare students to have keen eyes as they look for signs of predation on their own orchard trees. Real Evidence of Predation (Outside, 15 minutes) Take the class outside to look for real evidence of predation. Depending on the schoolyard,		

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either limit exploration to trees, or if there aren't very many, allow students to look at any sort of plant they find around. Have students bring their journals (or worksheet) and draw and describe what they are seeing. Have them try to figure out the sort of animal or environmental factor that is causing it (look for teeth marks, size of damaged area, other nearby evidence like scat or footprints). Also have them think about how the plant is trying to protect itself from predators (see *Plant Protection* lesson for more information). If anyone finds a particularly unique type of predation have the whole class come and look and try and figure out the culprit.

Conclusion (5 minutes)

Have a brief conversation that hits on the main points of the lesson: the types of predation, the fact that predators are not *trying* to harm a tree, but are instead looking to get what they need to survive from it, etc.

Vocabulary

Predation
Predator
Prey

Vocabulario

Depredación
Depredador
Presa

Extensions / Homework Ideas:

- If you do this lesson in the winter, students can help you protect your tree against winter moth if that predator is common in your area. If you do this lesson near the end of the schoolyear, students can help you place maggot traps in orchard trees to protect against them.
- Look outside again for signs of active predation. If any can be found, record the predator and the plant and try to find evidence on other plants. Look for ways that the plant might be defending itself. Ex. Can you see or smell anything that might deter a predator? Is the predator having to avoid thorns or chewing through tough bark? Did the predator succeed or give up?