Predators and Prey

Lesson Overview

There are a variety of natural interactions that occur between species within an ecosystem. One type of relationship is predation, which is when one organism kills and consumes another organism. In this activity, students will examine and identify predator and prey relationships in order to explain how these relationships are essential to keeping a balanced ecosystem.

Grade level: 6-8
Lesson Time: 15 Minutes
Key Terms:
- Biome
- Ecosystem
- Predation
- Predator
- Prey
- Relationship

Resources:
- Predators and Prey worksheet

Objectives

- Analyze the effects that predation has on an ecosystem
- Distinguish predator/prey relationships within ecosystems

Standards (NGSS and Common Core)

For state specific standards visit edu.zspace.com

Next Generation Science Standards

Life Science - Ecosystems: Interactions, Energy, and Dynamics

- MS-LS2-1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

Common Core Connections

Language Arts

- RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.
- WHST.6-8.9 Draw evidence from informational texts to support analysis, reflection, and research.
- W.6.7 Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

Mathematics

- 8.SP.A.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

Differentiation (Δ)

- Group students heterogeneously to allow students with a strong command of the English language to assist in reading or interpreting questions

Topic: Life Science - Ecosystems: Interactions, Energy, and Dynamics

Software: Studio

Introduction

Ecologists know that the amount of resources available affects the growth of species. Predation is one relationship that helps to maintain balanced resources, which in turn affects the whole ecosystems. The teacher will explain to the students that they will be exploring several predator/prey relationships within this activity. The teacher will provide basic information only: An ecosystem is a community in which both living and nonliving things interact in order to survive.

Activity

Scene 1

Predator and prey relationships are essential to ecosystems because they help them stay balanced. A predator is an animal that feeds on other organisms. A prey is the organism that gets eaten. In this scene, there are two predator and prey relationships. The wolf is the predator and its prey is the chicken. Likewise, the eagle is the predator and the sparrow is the prey.

Scene 2

There are a variety of animals before you. Match each organism with its correct predator/prey. Record your answers on your worksheet and then take a screenshot of your pairs.

Closing

When students complete their lesson in Studio, they will discuss their results as a whole class or in small groups.

Questions for Discussion

1. What would happen to the ecosystem if there were more predators than prey?

   Answers will vary. Sample Answer: If there were more predators than prey, the prey population would eventually die out. This could also cause an overpopulation of producers, since the consumers who once fed on them are all dead.

2. Aside from predation, what are other limiting factors that could affect the populations within an ecosystem?

   Answers will vary. Sample Answer: Some other factors that could limit the population size are, competition for resources, parasitism, disease, etc.

Δ Investigate Further

Follow-up Activity: Flow of Energy in an Ecosystem - Studio

Follow-up Activity: Energy Pyramid - Studio

Follow-up Activity: Solution for an Environmental Problem - Studio

Topic: Life Science - Ecosystems: Interactions, Energy, and Dynamics

Software: Studio

Extension Activity: Students could research several other predator/prey relationships within different biomes and explain how their interactions impacts their ecosystem. They will share their information with the class or a group of students when they are done.

Extension Activity: Students could analyze or create a graph of a predator/prey relationship over time.

Answer Key

Activity Questions Provided in Studio

1. Match each organism with its correct predator/prey.

   The lion is the predator and the zebra is its prey. The wolf is the predator and the sheep is its prey. The hawk is the predator and the rabbit is its prey.

Name _____ Date _____

Predators and Prey

Complete this worksheet as you view Predators and Prey in Studio. Conduct additional research as needed.

Match each organism with its correct predator/prey.

1. _____ _____ 2. _____ _____

3. _____ _____ 4. _____ _____