

The Truth About Sharks

Dive In!: Exploring Ecological Interactions

Grades: 6-8	Implementation Practice: Evaluating Evidence; Constructing Explanations
Subject Area: Life Science	Estimated Duration: One 45-minute period
Learning Objective - Students will be able to: <ul style="list-style-type: none"> - evaluate ecological interaction between organisms 	

Standards Supported

NGSS	Performance Expectation MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems		
	Disciplinary Core Idea(s)	Science and Engineering Practices	Crosscutting Concept(s)
	<ul style="list-style-type: none"> ● LS2.A: Interdependent Relationships in Ecosystems 	<ul style="list-style-type: none"> ● Constructing Explanations and Designing Solutions ● Engaging in Argument from Evidence 	<ul style="list-style-type: none"> ● Patterns

Activity Summary

Students use the Internet to research an example of ecological interactions that involves a species of shark. Students organize their research and citations in a table.

Advance Preparation

Review the Student Guide to familiarize yourself with the assignment. Review Content Background Information.

Materials Needed

- Student guide; one per student. Consider delivering this resource digitally so that students may modify their work space as necessary.
- Instructor Rubric; one per student

Instructor Notes

Make sure students understand the definitions of each type of ecological interaction.

Content Background Information

Sharks are arguably one of the most successful vertebrate groups on the planet with over 500 species inhabiting every available ocean habitat. As a result of their diversity, sharks have evolved many interesting interactions with other species and are an interesting lens through which to examine the ecological interactions that shape ecosystems including predation, competition, and symbioses (mutualism, commensalism, parasitism).

Definitions:

Predation – an interaction in which one organism, the predator, kills and eats another, the prey

Competition – an interaction in which organisms vie for limited resources

Symbiosis – a close association between two species

Mutualism – a symbiosis in which both species benefit

Commensalism – a symbiosis in which one species benefits and the other is not affected either positively or negatively

Parasitism – a symbiosis in which one species the parasite, benefits, and the other, the host, is harmed

The Truth About Sharks Dive In! Rubric

Name: _____

Glow: Student meets or exceeds performance standard	Performance Standard	Grow: Improvement needed in order to meet performance standard
	Student correctly defines each ecological interaction.	
	Student states the common names of species involved in the interaction and at least one species is a type of shark.	
	Student explains the interaction with authority and in full sentences.	
	Student includes correctly cited sources in a Citations section.	

Comments:

Name: _____

Date: _____

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Student Guide

Guiding Expectations

Sharks are arguably one of the most successful vertebrate groups on the planet with over 500 species inhabiting every available ocean habitat. As a result of their diversity, sharks have evolved many interesting interactions with other species and are an interesting lens through which to examine the ecological interactions that shape ecosystems including predation, competition, and symbioses (mutualism, commensalism, parasitism).

Use the Internet to research an example of each of the following ecological interactions that involves a species of shark. Make sure your sources are credible. Cite your sources in a "Citations" section by using the following format: *Name of website*, url. Organize your research and citations in the table below. Write information in your own words; do not copy/paste from the source.

Interactions Table

Shark Ecological Interactions	
Predation	
Definition	
Species Involved	
Explanation of Interaction (full sentences)	
Competition	
Definition	
Species Involved	
Explanation of Interaction (full sentences)	

Mutualism	
Definition	
Species Involved	
Explanation of Interaction (full sentences)	
Parasitism	
Definition	
Species Involved	
Explanation of Interaction (full sentences)	
Mutualism	
Definition	
Species Involved	
Explanation of Interaction (full sentences)	
Commensalism	
Definition	
Species Involved	
Explanation of Interaction (full sentences)	

Citations

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Reflection

Complete the self-reflection below.

Glow: Things I can do well	Standard	Grows: Things that I need to improve
	I can correctly define each ecological interaction.	
	I stated the common names of species involved in each interaction and at least one species is a type of shark.	
	I explained each interaction with authority and using full sentences.	
	I included correctly cited sources in a Citations section.	

My favorite part of the Dive In! was...

The most important thing I learned is...

Something I'd like to know more about is...