

WILD at Schools Program: Turtle Troubles

Wildlife and Heritage Service

This free, 60 minute program is for grades 3-5 and is designed for a classroom or larger space. This activity has been adapted from Flying WILD.

Learning Objectives

As a result of this program, students will be able to:

- Compare marine and freshwater turtles, their adaptations, habitats and lifecycles.
- Describe some of the threats turtles face and actions which they can take to help turtles.

Concepts to be covered:

3rd grade focus (NGSS): Turtle life cycles.

4th grade focus (NGSS): Adaption of turtles to different environments.

5th grade focus (NGSS): Human impacts on the environment and solutions.

Curriculum Standards and Science & Engineering Practices Addressed

Grade	Standard	Detail	Program Feature
3 rd	3-LS1-1 3-LS4-4	Develop models to describe that organisms have unique and diverse life cycles. Make a claim about the merits of a solution to a problem caused when the environment changes and the types of animals that live there may change.	Students compare and contrast the life cycle of a freshwater and marine turtle. Students examine the problems that are causing turtle numbers to decline and suggest solutions to the problems, including the impact of invasive plants on bog turtles.
4 th	4-LS1-1	Construct an argument with evidence that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	Students learn about the structures of turtles that help them survive and reproduce such as their shell type and flippers or legs for living on the land or in the ocean.
5 th	5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	Students explore the threats facing turtles and ways that scientists, communities and individuals can help protect different turtle species.
Engineering and Science Practices		Use a model that represents a concrete event	Students model the impacts of development on bog turtle populations. Students then compare the model to actual population changes in Maryland.

Program Summary

1. Introduction to reptiles and adaptations of turtles to different habitats.
2. Students work as teams to decide on similarities and differences between freshwater and sea turtles including their size, diet, habitat and nesting locations by comparing and contrasting 2 globally threatened turtle species: bog turtles and leatherback turtles.
3. Students decide how different items threaten leatherback turtles through marine pollution and other human impacts. Then, students suggest actions to take to keep plastics out the oceans.
4. Students model different threats to bog turtles. Grade 5 students calculate percentage of turtles that survive development, predation, invasive species and poaching threats.
5. Education on turtles as pets and why people should not take turtles from wild.
6. Students make a pledge about personal or school actions they can take to help turtles.

Key Program Vocabulary

Bask: lie exposed to warmth and light, typically from the sun.

Ectothermic: an organism that regulates its body temperature largely by exchanging heat with its surroundings, also known as cold-blooded.

Flippers: a broad flat limb without fingers, used for swimming by various animals including sea turtles.

Habitat: the natural home of a living organism considered to have four elements: food, water, shelter and space.

Hatch/ Hatchling: emerge from its egg / a young animal that has recently emerged from its egg.

Incubate: keep eggs at a suitable temperature so that they develop. With turtles this is achieved by the location of the nest.

Invasive plant: An invasive species is a plant, fungus, or animal species that is not native to a specific location, and that has a tendency to spread to a degree that it causes damage to the environment, human economy or human health.

Reptile: a vertebrate animal including snakes, lizards, crocodiles, turtles that are distinguished by having a dry scaly skin and typically laying soft-shelled eggs on land.

Scutes: the scales that cover a turtle shell.

