

Volunteer Teaching Outline: Frogs and Toads

Wetlands come alive in spring as frogs and toads serenade us with their chorus of voices. We'll learn to distinguish who's who in the pond by studying different amphibians and their pattern of development, observing field marks of frogs and toads, and listening closely to their distinct songs. A field trip to a frog pond is a must!

UNIT VOCABULARY

Amphibians	Frog
Toad	Salamander
Egg	Tadpole
Polliwog	Metamorphosis
Gills	Field marks

SUGGESTED OUTDOOR ACTIVITIES

Frog Hunt
Calling all Frogs
Field Mark Find

BOOKS FOR KIDS

- Burgess, Thornton, *The Adventures of Grandfather Frog*, Dover Publications, 1992. (Fiction; Age 8-11; Grade 3-6)
- Burgess, Thornton, *The Adventures of Old Mr. Toad*, Dover Publications, 1998. (Fiction; Age 8-11; Grade 3-6)
- Cassie, Brian, *Amphibians (First Field Guide)*, Scholastic Press, 1999. (Informational; Age 8 and up)
- Gibbons, Gail, *Frogs*, Holiday House, 1994. (Informational; Age 5 and up; Grade K and up)
- Himmelman, John, *A Wood Frog's Life*, Children's Press, 1999. (Informational; Age 5 and up; Grade K and up)
- Kalman, Bobbie, and Jacqueline Langille, *What is an Amphibian?*, Crabtree Publishing, 2000. (Informational; Age 7 and up; Grade 2 and up; Lexile 940L)
- Kottke, Jan, *From Tadpole to Frog*, Children's Press, 2000. (Informational; Age 4 and up; Grade K and up)
- Napoli, Donna Jo, *Prince of the Pond*, Dutton Books, 1992. (Fiction; Age 5-8; Grade K-3; Lexile 460L)
- Pascoe, Elaine, *Tadpoles*, Blackbirch Press, Woodbridge, CT, 1996. (Informational; Age 10 and up; Grade 5 and up; Lexile 930L)
- Pfeffer, Wendy, and Holly Keller (Illustrator), *From Tadpole to Frog*, Harper Trophy Books, 1994. (Informational; Age 4-8; Grade K-3; Lexile 520L)
- Robinson, Fay, and Jean Cassels (Illustrator), *Fantastic Frogs*, Cartwheel Books, 2000. (Informational; Age 4-8; Grade K-3; Lexile 190L)
- Spilsbury, Louise, and Richard Spilsbury, *The Life Cycle of Amphibians*, Heinemann Library, 2003. (Informational; Age 8 and up; Grade 3 and up)

THIS MONTH'S ACTIVITIES

Puppet Show: learn the basic amphibian life cycle and observe the variations that distinguish one amphibian from another.

Amphibian Life Cycle Sort: sequence life cycle cards depicting the stages in metamorphosis of three common species of amphibians.

Frog Look and Listen: recognize similarities and differences between 5-9 species of common frogs by viewing photos and listening to their calls.

Frog Finder Journal Activity (Grades 3-6): create a visual and audio field guide to identify common frogs.

Journal Activity (Grades K-2): record observations about some common frogs.

Going on a Frog Hunt: look for frogs and other amphibians in any stage of development.

Calling All Frogs: imitate the male's courtship call of different species of frogs.

Field Mark Find: observe distinguishing identification features close up and match these field marks to different species of frogs.



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FROGS AND TOADS ALIGNMENT WITH NEXT GENERATION SCIENCE STANDARDS

Grades K-2

- **Core Idea LS1A:** All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find and take in food, water and air. p.144
- **Core Idea LS1B:** Plants and animals have predictable characteristics at different stages of development. Plants and animals grow and change. Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. p.146
- **Core Idea LS1C:** All animals need food in order to live and grow. They obtain their food from plants or from other animals. p.147
- **Core Idea LS1D:** Animals have body parts that capture and convey different kinds of information needed for growth and survival – for example, eyes for light, ears for sounds, and skin for temperature or touch. Animals respond to these inputs with behaviors that help them survive (e.g. find food, run from a predator). p.149
- **Core Idea LS2A:** Animals depend on their surroundings to get what they need, including food, water, shelter, and a favorable temperature. Animals depend on plants or other animals for food. They use their senses to find food and water and their body parts to gather, catch, eat, and chew the food. p.151
- **Core Idea LS3A:** Organisms have characteristics that can be similar or different. Young animals are very much, but not exactly, like their parents and also resemble other animals of the same kind. p.158
- **Core Idea LS3B:** Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. p.160
- **Core Idea LS4D:** There are many different kinds of living things in any area, and they exist in different places on land and in water. p.166

Grades 3-5

- **Core Idea LS1A:** Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior and reproduction. p.144
- **Core Idea LS1B:** Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles that include being born (sprouting in plants), growing, developing into adults, reproducing, and eventually dying. p.146
- **Core Idea LS1C:** Animals and plants alike generally need to take in air and water, animals must take in food, and plants need light and minerals; anaerobic life, such as bacteria in the gut, functions without air. Food provides animals with the materials they need for body repair and growth, is digested to release energy to maintain body warmth and for motion. p.148
- **Core Idea LS1D:** Different sense receptors are specialized for particular kinds of information, which may then be processed and integrated by an animal's brain, with some information stored as memories. Animals are able to use their perceptions and memories to guide their actions. p.149
- **Core Idea LS2A:** The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Either way, they are “consumers.” p.151-152
- **Core Idea LS4D:** Scientists have identified and classified many plants and animals. Populations of organisms live in a variety of habitats, and change in those habitats affects the organisms living there. p.167

Grades 6-8

- **Core Idea LS1B:** Organisms reproduce, either sexually or asexually, and transfer their genetic information to their offspring. Animals engage in characteristic behaviors that increase the odds of reproduction. The growth of an animal is controlled by genetic factors, food intake, and interactions with other organisms, and each species has a typical adult size range. p.146
- **Core Idea LS4D:** Biodiversity is the wide range of existing life forms that have adapted to the variety of conditions on Earth, from terrestrial to marine ecosystems. Biodiversity includes genetic variation within a species, in addition to species variation in different habitats and ecosystem types (e.g., forests, grasslands, wetlands). p.167

Note: The Disciplinary Core Ideas listed above are taken from Grade Band Endpoints in *A Framework for K-12 Science Education*. Additionally, our activities give children opportunities to engage in many of the Science and Engineering Practices and reflect on the Crosscutting Concepts as identified in the Next Generation Science Standards.

FROGS AND TOADS ALIGNMENT WITH COMMON CORE STANDARDS

Grades 3-5

- **Common Core Writing Standard 8:** Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

Note: The Common Core Standards listed here are in addition to the ones that our activities typically address, as listed in the Four Winds document, *The Nature Program: Alignment with Learning Standards*.

