

Spring Inquiry

Grades K-2



What to Expect

Our two-hour *Spring Inquiry* program at the Green Mountain Audubon Center is designed to provide students with opportunities for hands-on exploration of the spring world guided by a professional Audubon Teacher/Naturalist. During their time at the Center, students travel through and/or explore a field, vernal pool, beaver pond, forest and swamp. Throughout, we keep our eyes open for signs of spring, from singing birds to tadpoles to wildflowers. At the vernal pool, we use nets to catch and take a close look at the animals that rely on this fish-free habitat for breeding. At the beaver pond, we use binoculars to observe everything from kingfishers to basking turtles to nesting Canada Geese – and even beavers if we are lucky! Other activities that students might do include getting an up-close look at some real bird nests and eggs, singing like a bird to attract a mate, and migrating like a spotted salamander. Every exploration will be different, but each focuses on fostering scientific skills and habits of mind, including using senses to make observations, asking questions, and making predictions – all in and about the natural world.

Essential Question and Understandings

What signs of spring can we see in Vermont's fields, forests, and ponds?



- During spring in Vermont, it gets warmer and the days get longer.
- In the spring, animals that were dormant or hibernating become active and those, like some birds, that left for the winter migrate back.
- Many animals lay eggs and have babies during the spring.
- Vernal pools are important fish-free habitats where some amphibians and other animals lay their eggs.
- Birds and frogs sing in the spring to attract a mate and to defend their territories.
- Many plants are flowering and being pollinated during the spring.

Vermont Grade Expectations

S1-2: Scientific Questioning, Predicting & Hypothesizing – Students work with the Teacher/Naturalist to observe, ask questions about, and make predictions regarding patterns in the spring world (i.e. what animals are found in the vernal pool vs. beaver pond vs. forest; how the forest has changed since the winter and how it will change into the summer).

S30: Structure and Function – Survival Requirements – Students observe and discuss different physical structures and behaviors Vermont animals have that allow them to survive and reproduce (i.e. singing to attract mates, building a nest, migrating, camouflage, laying many eggs, flowers).

S31: Life Cycles and Reproduction – Students observe and discuss life stages in different organisms, with a particular focus on eggs in animals (i.e. birds: adults → eggs; frogs: eggs → tadpoles) and flowers in plants.

S38: Classification of Living Things – Students collect and/or observe a variety of plants and animals using tools such as binoculars and dip nets and sort and classify them using field guides.

Key Words

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| 1. Migrate | 6. Amphibian | 11. Flower |
| 2. Nest | 7. Salamander | 12. Pollen |
| 3. Egg | 8. Larvae | 13. Pollination |
| 4. Mate | 9. Tadpole | |
| 5. Territory | 10. Vernal pool | |



Recommended Books for Spring

Children's Books

- Allen, Judy and Tudor Humphries. *Are You a Dragonfly?* New York: Kingfisher Publications, 2001.
- Arnosky, Jim. *All About Frogs*. New York: Scholastic Inc., 2002.
- Arnosky, Jim. *Crinkleroot's Guide to Knowing the Birds*. New York: Bradbury Press, 1992.
- Aston, Dianna. *An Egg Is Quiet*. Chronicle Books, 2006.
- Boring, Mel. *Birds, Nests and Eggs*. Minocqua, Wisconsin: NorthWord Press, Inc., 1996.
- Heller, Ruth. *The Reasons for a Flower*. New York: Grosset & Dunlap, 1983.
- Himmelman, John. *A Hummingbird's Life*. New York: Children's Press, 2000.
- Hirschi, Ron. *Spring*. New York: Cobblehill/Dutton, 1990.
- Jenkins, Priscilla Beiz. *A Nest Full of Eggs*. HarperCollins, 1995.
- Lasky, Kathryn. *Pond Year*. Candlewick Press, 1997.
- Maass, Robert. *When Spring Comes*. Henry Holt & Co, 1996.
- Mazer, Anne. *The Salamander Room*. New York: Alfred A. Knopf, 1991.
- Pallotta, Jerry. *The Flower Alphabet Book*. Boston: Quinlan Press, 1988.
- Silver, Donald M. *One Small Square: Pond*. New York: Learning Triangle Press, 1994.
- Stevenson, James. *Mud Flat Spring*. HarperCollins Publishers, 1999.
- Winer, Yvonne. *Birds Build Nests*. Charlesbridge, 2002.
- Wolff, Ashley. *A Year of Birds*. New York: Puffin Books, 1988.

Teacher's Resource and Activity Books

- Albert, Toni. *A Kid's Spring Ecojournal: With Nature Activities for Exploring the Seasons*. Trickle Creek Books, 1997.
- Allison, Linda. *The Reasons for the Seasons: The Great Cosmic Megagalactic Trip Without Moving from Your Chair*. California: Yolla Bolly Press, 1975.
- Elliott, Lang. *The Calls of Frogs and Toads: Breeding Calls and Sounds of 42 Different Species*. Mechanicsburg, PA: Stackpole Books, 2004. (Includes Audio CD)
- Garett, Linda and Hannah Thomas. *Small Wonders: Nature Education for Young Children*. Woodstock, VT: Vermont Institute of Natural Science, 2005.
- Kenny, Leo P. and Matthew R. Burne. *A Field Guide to the Animals of Vernal Pools*. Westborough, MA: Massachusetts Division of Fish and Wildlife.
- Lingelbach, Jenepher and Lisa Purcell. *Hands-On Nature: Information and Activities for Exploring the Environment with Children*. Woodstock, VT: Vermont Institute of Natural Science, 2000.
- Newcomb, Lawrence. *Newcomb's Wildflower Guide*. Boston: Little, Brown and Company, 1977.
- Parella, Deborah. *Project Seasons: Hands-on activities for discovering the wonders of the world*. Shelburne, VT: Shelburne Farms, 1995.
- Vermont Birds*. Pocket Naturalist Field Guide. Waterford Press.
- Webster, David. *Exploring Nature Around the Year: Spring*. Englewood Cliffs, NJ: Julian Messner, 1989.