

**2008
Winning Lesson Plan
from Roslindale,
Massachusetts**

*What kind of bugs will we
find at the Boston Nature
Center?*

by Erin L. Flynn
John D. Philbrick
Elementary

Subject: Animals
Grade Level: Kindergarten
Duration: Three one-hour
periods and one two-hour
field trip

Overview and Purpose

Students predict what kinds of bugs (small animals) they will find at the Boston Nature Center. They visit the nature center and collect small animals such as beetles, worms, slugs, and flies. Students draw and write about what they find, then compare their results to their predictions. The purpose of this lesson is to investigate a local habitat while thinking scientifically.

This lesson is a perfect introduction to inquiry for kindergarten learners. Before their first trip to the nature center, students are genuinely interested in what they see on their trip. The lesson begins with a real question, “What bugs will we find at the Boston Nature Center?” Students learn inquiry skills—they make predictions before their trip, record observations during the trip and discuss their results once they get back. Students also learn how to share what they have learned with the larger school community by creating a display board with their results. In addition, this lesson models how to make the most of partnerships with local organizations.

Goals for the Unit

This lesson is part of a larger unit about animals. At the core of the unit is the FOSS kit, *Animals Two By Two*. In this unit, students learn how to compare two different animals. While comparing and contrasting is itself an important skill, this activity also forces students to notice the small details that make things different. In comparing red wigglers and earthworms, for example, students are encouraged to take a closer look at the properties of each animal. While the science classroom at the Philbrick houses all the critters that are part of the FOSS kit, it is invaluable for students to observe these animals in their natural habitat. At the nature center, students also discover that many animals live in an urban neighborhood.

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Educational Standards Addressed

(Massachusetts Science and Technology Learning Standards)

Life Sciences

- Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air and water.
- Differentiate between living and nonliving things. Group both living and nonliving things according to the characteristics they share.
- Describe ways in which many plants and animals closely resemble their parents in observed appearance.
- Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air and shelter).

Inquiry Objectives

- Ask questions about objects, organisms, and events in the environment.
- Make predictions based on observed patterns.
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

Objectives

- Students will be able to make predictions, record observations and discuss results.
- Students will discover what animals live at the Boston Nature Center.
- Students will be able to describe the habitat of animals at the Boston Nature Center.
- Students will be able to handle organisms gently and explain why living things need to be returned to their habitat.

Materials

Sweep nets, plastic terraria (bug boxes), hand lenses, recording sheets, colored pencils, field guides

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Procedures

Day One

During science class, students discuss their upcoming field trip to the Boston Nature Center. Students brainstorm animals that they might see while the teacher scribes on chart paper. Then, each student records a prediction by drawing an animal on a blackline master supplied by the teacher. Students are encouraged to sound out the name of the animal, but the teacher also scribes for students when necessary.

Day Two

Kindergarteners visit the nature center with their classroom teacher, parent chaperones, and a teacher naturalist. While some students use sweep nets to collect flying insects, other students turn over rocks and leaves to find organisms on the ground. After about thirty minutes of collecting, students go inside to observe the organisms using hand lenses. Students are given blackline masters and colored pencils so they can draw and label some of the organisms they collected. If they want to, students share their work. Finally, the class releases the organisms back into their habitats.

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Procedures (Cont'd)

Day Three

At their next science class, students share details about their trip with the science teacher. The teacher scribes the names of all the animals that they saw at the nature center. Then, the class compares their prediction list to the list of animals that they saw. The class uses this information to create a Venn diagram. Animals they did not see but had predicted are in one circle, animals they did see but had not predicted are in the other circle, and the overlap is for animals that were both prediction and actually observed. The teacher explains that a Venn diagram is useful tool for comparing, and it is also a good way to represent their results.

Day Four

Students help the science teacher design a display board for the Philbrick Science Showcase. Each year, our school organizes a science showcase that is a little different from a traditional science fair. Instead of individual projects that are judged, each class creates a class project to share what they have learned. While traditional science fairs are a competitive event, our science showcase is a celebration of learning. Work from every student is displayed with the project—we attach many examples of predictions and results to a tri-fold board, while the rest of the student work is bound into a small book. The tri-fold board shows the Venn diagram that the students created, as well as photographs from our field trip. Students are reminded to invite friends and family to the Science Showcase, so that the larger community can appreciate their hard work!

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Extensions Beyond the Classroom

A field trip to the Boston Nature Center is a critical part of this lesson plan. However, students at the Philbrick School have many opportunities to explore outdoors. Kindergarten students go on many quick trips into the schoolyard throughout the school year, to learn how to be good observers both inside the classroom and outside the school walls. We are lucky to have a nature center so close to our school, but a similar lesson could also take place right inside an urban schoolyard. Students might wonder, “What is under the big rock near the swings?” or, “What lives in the wood chips near the back door?” Schoolyard investigations prepare students for outings to larger venues, and they encourage learners to take a closer look at world around them.



The Kindergarten board at the Philbrick Science Showcase.