

Outdoor Survey

Parent Guide

Read the “Directions” sheets for step-by-step instructions.

SUMMARY

In this activity, children will explore the outdoors on the lookout for plants and animals, and the ways that people have changed the natural environment.

WHY

Sometimes it is easier to learn about a place when you are looking for specific information.

TIME

- 10–30 minutes, depending on interest

RECOMMENDED AGE GROUP

This activity will work best with children in grades 1 through 4.

CHALLENGE WORDS

- *category*: a kind, class or type of something
- *survey*: to gather information about

GET READY

- Read the book *Rachel Carson and Her Book That Changed the World* to learn about one of America’s most famous biologists and her work in the environmental movement. A reading guide is available at http://americanhistory.si.edu/ourstory/pdf/environment/environment_read.pdf.
- Some children like to use worksheets to have a sense of accomplishment or to follow specific instructions. Other children would rather just talk about what they see. Think about your child’s preference to decide if you will use the *ThinkAbout* sheet or just talk through the questions.

YOU NEED

- *Directions* sheets (*attached*)
- *ThinkAbout* sheet (*attached*)
- *Step Back in Time* sheets (*attached*)

More information at <http://americanhistory.si.edu/ourstory/activities/environment/>.



Outdoor Survey

Directions, Page 1 of 2

For adults and kids to follow together.

1. First, decide on how large of an area you will survey and how long you will survey. If you live in a place with lots of gardens, trees, or natural space, you may want to do a small area and only a few minutes. If you live in a place without much natural space, you may want to use a larger space and up to twenty minutes.
2. As you start looking, make a tally mark for each category you see. The tally marks will help you count in many different categories at the same time. After you finish your tally, make a total count for each category.
3. Decide on one category to focus on and look for all the differences in that category. It will be easiest to focus on the category for which you have the highest total count. Talk together about how things in the same category can still be different.
Tip Build vocabulary together by describing the differences. For example, if you saw birds of different colors, describe each of the colors you saw, such as “plain brown” or “mustard yellow.”
4. After looking for things in the natural world, use your sight, smell, and hearing to check for ways people have changed the natural world in your neighborhood. Do you hear traffic or people talking? Do you smell food cooking or someone’s perfume? Do you see buildings or sidewalks? How would your neighborhood be different if no one made those changes?

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- To explore more with math, estimate how many animals might pass through the area in an entire day.

Tip About how many minutes did you spend doing your survey? Divide the total number for the bird category by the number of minutes you spent doing your survey. Then multiply that number by 1440 (since there are 1440 minutes in each day) to get an estimate of about how many birds might pass through in an entire day. You can do the same thing with any other category.

- To learn more about your outdoors, go to the same place at a different time of day (first thing in the morning, middle of the day, or around sunset) to compare your findings. Do you notice any differences between the two times of day?
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More information at <http://americanhistory.si.edu/ourstory/activities/environment/>.



Outdoor Survey

ThinkAbout

	plants	insects	birds	other animals
tally				
totals				

Thinking about all of the plants/birds/other animals/insects I saw, they were different in:

size color shape texture movement weight

More information at <http://americanhistory.si.edu/ourstory/activities/environment/>.

Outdoor Survey

Step Back in Time, Page 1 of 2

For more information, visit the National Museum of American History website <http://americanhistory.si.edu/ourstory/activities/environment>.

Rachel Carson's love of nature started when she was a young girl. Beyond her mother's love of nature, Rachel's frequent trip outdoors were also motivated by a nature-study movement in the early 1900s, with books and articles advising parents to help children understand nature and want to protect it. Rachel's favorite magazine, *St. Nicholas*, included nature-study articles and illustrations and when she was only ten, Rachel published her first piece of writing in *St. Nicholas*.

In school, Rachel worked very hard and encouraged her classmates to take their studies seriously as well. In addition to top grades, she also worked on and wrote for her school newspaper. Her teachers were important role models who encouraged her to grow up to be a writer or a scientist—and she ended up becoming both!

Although it was very hard for women scientists to publish their writing in the 1930s and 1940s, Rachel's scientific research and storytelling skills helped her become well known for books and articles about the oceans. But in the late 1950s, Rachel felt that she needed to share the newest science about how widespread use of man-made pesticides hurt the environment. She did a lot of research in libraries, wrote to other experts on the topic, and spoke to other authors to get ideas on the best way to share her research. In 1962



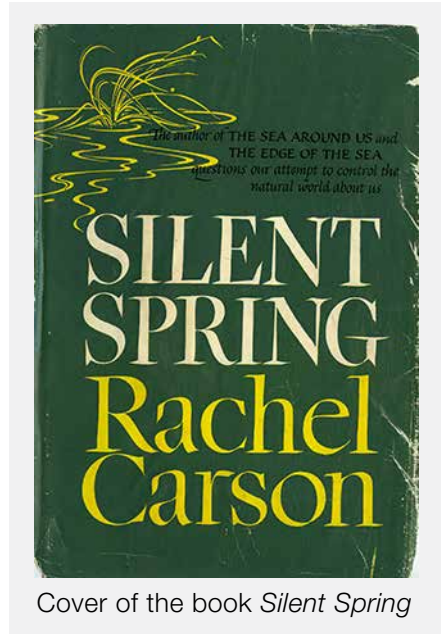
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she published the book *Silent Spring*, which brought a lot of attention to pesticides and other ways that people change the environment.

Some people think that the modern environmental movement might not have started without *Silent Spring*'s wake-up call. Today, the environmental movement has made great changes in the ways everyday people, companies, and governments think about balancing the needs of people with nature's needs. Some topics that environmentalists today think are important include: how people change the places animals live, what chemicals people put in the air or water, and how people make and use energy. What environmental topic is most important to you?



Cover of the book *Silent Spring*

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Outdoor Survey

Teacher Guide

Read the “Parent Guide” and “Directions” sheets for step-by-step instructions.

OBJECTIVES

The students will be better able to:

- Classify things they see into existing groups.
- Describe and compare things in terms of shape, texture, size, weight, color, and motion.
- Identify instances of human impact on their local environment.
- Systematically collect information.

STUDENT PERFORMANCE CRITERIA

- Accurately totals tally.
- Discussion reflects reasonable comparisons of members of the same group.

STANDARDS

NCHS History Standards

K-4 History Content Standards

- 4C: The student understands historic figures who have exemplified values and principles of American democracy.

AAAS Science Benchmarks

Grade K-2 Benchmarks

- 12-D-1: Describe and compare things in terms of number, shape, texture, size, weight, color, and motion.

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