

Lessons from the Birds: A Rachel Carson Puppet Play

Teacher Guide

Shakespeare-in-the-Schools



Creative teaching. Lifelong learning.

Description

It's not easy being green! But, as Carson wrote, children have the unique ability to appreciate their environment. Her pioneering spirit and enduring legacy are brought to life for them through a new puppet play. Geared (but not limited) to the K-5 crowd, *Lessons from the Birds: A Rachel Carson Puppet Play* brings its namesake's love of ecology, science and conservation to children through the use of familiar places, animal faces and creative puppetry. True to Carson's cause, children will leave with greater appreciation of the world's natural beauty and an enhanced desire to protect.

Program Objectives

Students will identify how Rachel Carson changed America's awareness of the environment. They will gain an understanding of the interconnectedness of marine ecology, and how pesticides can influence the health of rivers and oceans. They will also explore the historical world of Rachel Carson, and be encouraged to follow in her footsteps, becoming ecologically-aware themselves.



Academic Standards

This program may be used to address PDE Academic Standards in the following curriculum areas:

Reading, Writing, Speaking, Listening

- 1.3 Reading, Analyzing and Interpreting Literature
- 1.6 Speaking and Listening

Science

- 3.3 Biological Sciences

Environment & Ecology

- 4.4 Agriculture and Society
- 4.5 Integrated Pest Management
- 4.6 Ecosystems and their Interactions

History

- 8.2 Pennsylvania History

Arts and Humanities

- 9.1 Production, Performance and Exhibition of Dance, Music, Theatre and Visual Arts
- 9.3 Critical Response
- 9.4 Aesthetic Response

Health, Safety & PE

- 10.3 Safety and Injury Prevention

Family and Consumer Sciences

- 11.3 Food Science and Nutrition

Grades K-5

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Before the Program About Rachel Carson

Rachel Carson, writer, scientist, and ecologist, grew up simply in the rural river town of Springdale, Pennsylvania – just 15 miles from Pittsburgh. She graduated from the Pennsylvania College for Women (now Chatham College) in 1929, studied at the Woods Hole Marine Biological Laboratory, and received her MA in zoology from Johns Hopkins University in 1932.

She was hired by the U.S. Bureau of Fisheries to write radio scripts during the Depression and supplemented her income writing feature articles on natural history for the Baltimore Sun. She began a fifteen-year career in the federal service as a scientist and editor in 1936 and rose to become Editor-in-Chief of all publication for the U.S. Fish and Wildlife Service.

She wrote pamphlets on conservation and natural resources and edited scientific articles, but in her free time turned her government research into lyric prose, first as an article "Undersea" (1937, for *The Atlantic Monthly*), and then in a study of the ocean, *The Sea Around Us*, which was followed by *The Edge of the Sea* in 1955. These books constituted a biography of the ocean and made Carson famous as a naturalist and science writer for the public. Carson resigned from government service in 1952 to devote herself to her writing.

Disturbed by the use of synthetic chemical pesticides after World War II, Carson reluctantly changed her focus in order to warn the public about the long-term effects of misusing pesticides. Her book *Silent Spring* (1962) is arguable the single most important stimulus to environmental preservation as we know it today. It appeared at a time when there were no restrictions on different uses of chemicals. Carson's work challenged the practices of agricultural scientists and the government and called for a change in the way humankind viewed the natural world.

Carson was attacked by the chemical industry and some in government as an alarmist, but she courageously spoke out to remind us that we are a vulnerable part of the natural world and subject to the same damage as the rest of the ecosystem. She testified before Congress in 1963 to call for new policies to protect human health and the environment.



Rachel Carson died in 1964 after a long battle with breast cancer. Embedded within all of Carson's writing was the view that human beings are but one part of nature distinguished primarily by their power to alter it, in some cases irreversibly. Her witness for the beauty and integrity of life continues to inspire new generations to protect the living world and all its creatures.

from Linda Lear, author of *Rachel Carson: Witness for Nature*,
<www.rachelcarson.org>

Rachel Carson, author of *Silent Spring*. Official photo as FWS employee. c. 1940.

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Before the Program Activities and Discussions

Some ideas and questions for classroom exploration before the show:

- Where does your water come from? Do you know where that water has been before it gets to your home or school?
- How is the natural world connected to create a web of life? Can you think of a time that something happened to one part of nature (a plant, animal, or event) that affected some other part?
- What do you do when you see something going wrong around you? What do you do to set it right? Give some examples.
- How do actors tell a story on stage? What about writers, teachers, and newscasters? What kinds of stories or information do they tell?



Deepwater Horizon oil spill at Chandeleur Islands LA
By Jeffrey Warren, Grass Roots Mapping project.
Myk60640 at en.wikipedia [Attribution], from Wikimedia
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Puppetry in *Lesson from the Birds*

Lessons from the Birds makes extensive use of puppetry to tell the story of Rachel Carson. The use of puppets in performance and theatrical settings has a long history. While in America puppets are often associated with children's theater and educational performances (Jim Henson's Muppets and *Sesame Street* come to mind), in other cultures there are puppet shows for all ages and theatrical purposes. In an educational setting, puppet drama can be used to teach directly, as in *Lessons*, to encourage role playing and critical thinking, and to stimulate creativity and interpersonal communication skills.

In its most basic definition, a puppet is an inanimate object or representational figure (a human or animal form) that is manipulated or "given life" by a puppeteer. Through carefully planned movements and vocal additions, the puppet undergoes an apparent transformation from an inanimate thing to a living object. Puppets may range from the extremely lifelike to the abstract or non-representational. Even a simple object such as a wrench or a stapler can become a puppet if manipulated skillfully!

The puppets used in *Lessons from the Birds* are hand puppets, meaning they are manipulated by opening and closing one hand, usually for the mouth of a speaking puppet. While this might be one of the more familiar puppet styles for many students, there are a lot of other kinds of puppets in the world! Global performance traditions and puppet types that may be of interest to classrooms include:

- Human-arm or "live hand" puppets, which usually use two puppeteers and a large fabric body; this is the style of many main Muppets characters.
- Body or carnival puppets, which are larger than the puppeteer's body and may take several people to manipulate through rods, strings, or joints; Julie Taymor's *The Lion King* uses this style of puppet.
- Glove puppets have interior "pockets" for the fingers in the head and arm areas of the puppet, so that the thumb can move one arm and the pinky another; Mister Rogers' puppets are of this type.
- The Japanese *bunraku* theater, uses three visible and highly trained puppeteers per puppet to elicit an impressive degree of realism in their performances.
- Marionettes are puppets operated by strings or wires, with the puppeteer above the puppet. Many special marionette theaters and troupes continue to exist today.
- An Indonesian shadow puppetry form, called *wayang kulit*, uses elaborate semi-translucent leather puppets to create shadows on a fabric; they are manipulated by rods from below.

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Make a Puppet with Your Class

Puppet activities are easy to facilitate and allow students to explore active storytelling and role play. Here are some simple puppets that can be created:

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- **Finger puppets** – glue a rectangle of felt or paper into a form that fits around the finger, and decorate with eyes, fabric, feathers, markers, or other materials.
- **Sock puppets** – decorate an old sock with eyes and a mouth, or for a more substantial form insert a dowel into a Styrofoam ball and put the sock over it before decorating.
- **Rod puppets** – cutouts of figures or characters on card stock or thick paper can be glued to popsicle sticks or rods and manipulated for an easy puppet experience.

Many other puppet styles and scenarios for puppet-based activities are widely available online.



Learning questions for puppet activities:

What is your puppet made of?

How can you move it to make it “come to life”?

What kinds of stories might your puppets tell?

Have two puppets “talk” to each other.

Does it feel different to tell a story with a puppet than it would to tell it yourself?



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Vocabulary

Chemical – a substance with useful properties, often man-made and possibly harmful to the environment. Examples of potentially harmful substances include cleaners and pesticides.

DDT – one of the first widely used pesticides, it was used in the early 20th century to kill pest insects. It was later found to cause cancers and illness in wildlife, especially birds.

Environment – contains all of the living and nonliving things on Earth. Animals, plants, rocks, and natural processes like rain and erosion are all a part of our environment.

Pesticide – a chemical that is used to remove unwanted animals from crops and gardens, especially insects, rodents, and invasive plants.

Plankton – tiny drifting organisms in the ocean or freshwater that provide a food source for many larger animals

Pollution – the introduction of contaminants into the environment; pollution causes harm to the organisms that live in that environment

Resistance – an adaptation of organisms to tolerate (or not be affected by) pesticide use; as a result, more and stronger pesticides need to be used to remove resistant organisms

Discussion & Research Questions

After the performance, here are some questions for your class to consider:

- What did Rachel Carson have to say to the world? What problems did she see, and how did she start to fix them?
- Where does the water go after it rains? What path does that water take to get to the ocean?
- Why do we need to be good to the natural environment around us? What might happen if we hurt the environment too much?
- What is the danger of pesticide use? What might happen if we use too much pesticide, or dispose of it incorrectly?
- What do you do when you see something wrong in your environment? How can you do something to help?

In-Class Activities - HEALTHY OCEAN DRAWING

In the play, Rachel Carson shows us the importance of a healthy ocean. What does a healthy ocean look like? Draw a picture of a healthy ocean individually or as a whole class. Use pictures as a jumping-off point for discussion:

- Have you ever been to the ocean, or another large body of water? What did you see?
- What do the organisms (plants and animals) in your picture need to survive? How do your actions affect how healthy, or sick, these creatures in the ocean become?
- What can we do to make sure that ocean organisms stay healthy?



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In-Class Activities - LETTER TO CANDY

Candy, Rachel's dog, learns a lot from Rachel about how to let people know about what's happening to our world. As a class, write a letter to Candy describing what you see in the world, and what you're going to do about it.

- Think about what actions you can take in the classroom, and what you can do at home with your family.
- When you're finished, Candy wants to know what you're doing!
Send it to SITS at:

Shakespeare-in-the-Schools
Attn: Tamara Goldbogen
1617 Cathedral of Learning
Pittsburgh, PA 15260



Mixed Breed Face by Trysha [GFDL (www.gnu.org/copyleft/fdl.html) or CC-BY-SA-3.0 (www.creativecommons.org/licenses/by-sa/3.0/)], from Wikimedia Commons

Meet the Performer

Elena Alexandratos, a proud alumna of the University of Pittsburgh, is an adjunct instructor with the Department of Theatre Arts. Off-Broadway she was seen as Catherine in the American premiere of *Lady Susan*. She returned to Pitt to teach and portray the title role of Brecht's *Mother Courage* in the fall 2003. Since then, she has appeared in *Arms and the Man* and *The Boundary*. A few Pittsburgh credits include: For the Public Theater, *Much Ado About Nothing*, *Medea*, *Romeo and Juliet*, *You Can't Take It with You*, and *Cyrano de Bergerac*. For Pittsburgh Irish and Classical Theatre: *Hamlet*, *The White Devil*, and *Too Clever by Half*. For Unseam'd Shakespeare Co.: *The Comedy of Errors*, *Measure4Measure*, and *Private Lives*. For Quantum Theatre: *Antony and Cleopatra* and *Six Characters Looking for a Writer*. For Starlight Productions: *Macbeth*; and for Pittsburgh Musical Theatre: *Chicago*.

In addition, Elena is a voice for various CD-ROM and voice-over projects in the tri-state area. She was previously seen in Shakespeare-in-the-Schools' touring production of *Macbeth [redux]*.

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Further Explorations

*Note to Teachers: the Music and Art Department has an extensive collection of CDs, LPs, images and DVDs, many of which may be sent out to your local library branch for your convenience. Call the Music or Art Department at 412-622-3105 and the staff will assist you in researching materials appropriate for your grade and curriculum. You may also search for materials on-line at <http://catalog.einetwork.net/search>

Books

Archer, Jules. *To Save the Earth: the American Environmental Movement*. New York: Viking, 1998.

Carson, Rachel. *The Edge of the Sea*. Boston: Houghton Mifflin, 1955.

---. *The Sea Around Us*. New York: Oxford University Press, 1951.

---. *The Sense of Wonder*. New York: HarperCollins, 1998.

---. *Silent Spring*. Boston: Houghton Mifflin, 1962.

---. *Under the Sea Wind*. New York: New American Library, 1941.

Gow, Mary. *Rachel Carson: Ecologist and Activist*. Berkeley Heights, NJ: Enslow, 2005.

Lantier, Patricia. *Rachel Carson: Fighting Pesticides and Other Chemical Pollutants*. New York: Crabtree Pub., 2009.

Piddock, Charles. *Rachel Carson: A Voice for the Natural World*. Pleasantville, NY: Gareth Stevens, 2009.

Rivera, Sheila. *Rachel Carson: A Life of Responsibility*. Minneapolis: Lerner Publications, 2007.

Shea, George. *Rachel Carson: Founder of the Environmental Movement*. Farmington Hills, MI: Blackbirch, 2006.

Venezia, Mike. *Rachel Carson: Clearing the Way for Environmental Protection*. New York: Children's Press, 2010.

Video

Rachel Carson's Silent Spring/a Peace River Films production for The American Experience. Neil Goodwin, writer and producer; Margaret Drain, senior producer; Judy Crichton, executive producer. PBS Video, 1993.

On the Web

North American Association for Environmental Education

Contains links to activities and materials that feature art and music as part of environmental education

<http://eelink.net/eeactivities-arts-based.html>

The Life and Legacy of Rachel Carson

Site maintained by Rachel Carson biographer Linda Lear; biographical information and significant photo library

<http://www.rachelcarson.org>

Rachel Carson Homestead

Site maintained by Rachel Carson's birthplace, now a center continuing her work. Contains many lesson plans and teacher resources related to Carson

<http://www.rachelcarsonhomestead.org>

Rachel Carson Sense of Wonder Contest

An arts contest (photo, dance, poetry, essay) based on Rachel Carson's work held by the EPA and designed to express a "sense of wonder" about our natural world. 2011 submissions due in June.

<http://www.epa.gov/aging/resources/thesenseofwonder/index.htm>

Rachel Carson Institute of Chatham College

Center for research and policy on environmental education, the role of women as environmental leaders, and school outreach; targeted to educators and college students

<http://www.chatham.edu/rci/index.html>