



Revised 4/20/20
Neal Smith National Wildlife Refuge

A Sense of Wonder

5th Grade

60 Minutes

Spring

Summary

Read passages from Rachel Carson's book *The Sense of Wonder*. The class discusses the meaning of some of Rachel's quotes and the word wonder. Why does Carson believe that wonder is important? A field leader explains that there are two meanings of the word wonder- to ask a question and to be in awe. Students record a T-chart in their nature journal with the left side labeled "Wonder-Question" and the other side "Wonder-Awe". Then students go outside and search for the "Wonder Awe" and write about it in their journals while sitting quietly. To conclude the lesson, students share their feelings and observations about moments of wonder that they experienced in the prairie. (Preparation before beginning-teacher or leader should prepare by reading the Background Information at the end of lesson).

Iowa Core Standards

Literacy

Reading Informative Text

- **RI.5.1**
 - Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RI.5.2**
 - Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
- **RI.5.4**
 - Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.



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- **RI.5.8**
 - Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

Writing

- **W.5.1**
 - Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- **W.5.4**
 - Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

Speaking and Listening

- **SL.5.1**
 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.5.4**
 - Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Materials and Resources

- *The Sense of Wonder* by Rachel Carson (page 67-69)
- Blank paper or nature journals & Pencils
- White board & Dry erase marker

Presentation

Tell students they will be learning what a naturalist is and can be a naturalist if they choose. They will have time to wonder about nature and share what they discover.



Directions

1. Ask students to tell you what a naturalist is. What kind of job is that? (scientist) What does a naturalist do? (observes nature, writes things down, shares discoveries with others) Record their answers on the white board as students record them in their notebooks. Are *they* naturalists?
2. Ask students to tell you the qualities of a naturalist. How does a naturalist behave outside? Record a list on the white board and fill in any qualities they may have missed. A completed list includes prepared, quiet, observant, patient, curious, respectful, full of wonder, inquisitive, in the moment, and sharing. Students should also record this list in their notebooks.
3. Briefly introduce Rachel Carson as a naturalist and author. See section, “Background Information,” for details.
4. Set up a T-chart on the board with the students to discuss the two kinds or definitions of wonder. Use student responses to fill in both sides of the chart. Ask for examples of wonder questions for the left side of the chart (“I wonder what’s for dinner?” “I wonder what we’re doing in science tomorrow?”) Ask for examples of amazing things for the wonder-amazing side of the chart. (when a baseball player hits a homerun, the buzzer-beater shot of a basketball game, a choir singing, my mother, a loon, a sunrise...)

Wonder- A Question	Wonder-Amazing

5. Start a wonder word list for continuation during the reading. Wonder words are synonyms for “wonder” such as beauty, surprise and mystery. Encourage students to use their “ten-dollar words”. Here are several examples:
 - a. Beauty, surprise, mystery, joyful, spectacular, peaceful, amazing, fantastic, magnificent, wonderful, terrific, magical, thrilling, awe-inspiring



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6. Read the night sky section of *The Sense of Wonder* found on pages 67 through 69. Begin the reading with the paragraph which contains the quote “What if I had never seen this before? What if I know I would never see it again?” Ask students to jot down any wonder words they hear; individual words which are synonyms for “wonder.” You may also add them to the list on the board.
7. Invite students to join you on a search for wonder outside. Help them prepare their journal or notebook page. At the top of their investigation page, they should write the title “Searching for Wonder.” Be sure to include the date and the location. On the white board, model what their data sheet will look like by dividing the page in half horizontally. Allow them to choose two wonder words from the list on the board or choose their own. Place one word in each half. Instruct the students that they should write and/or sketch and label examples of those kinds of wonder in each quadrant.
8. Time to take the students outdoors. Before doing so, remind everyone that they are naturalists and should practice being naturalists in the field. How should they behave? (quiet, observant, patient, etc.) In the field, they must stay in their small group with their chaperone and stay on the trail.
9. Allow for as much time as possible in the field. Move from group to group to answer questions, model good naturalist behavior, and remind students to record their examples of wonder.
10. During outdoor time, have students spread out and sit in the prairie in their own personal “bubble space” where no other student is within arm’s reach. They will sit quietly and still for up to 15 minutes to observe and record nature. Person space allows for quiet reflection and a more intimate experience in nature without interference from classmates.
11. When finished journaling, have students form a circle outside in the grass. Remind them of those two key questions, “What if I never saw this before? What if I knew I would never see it again?”. Wrap up by asking a few students to share the wonder they found with the class.
12. Ask students to free write on their experience. (Ask a few students to share with the class. How can they be more open to sensing wonder? Ask them how



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or who they could share this discovery with when they return home? (Tell a friend or relative, write a poem or paint a picture to give away, etc.) Does your sense of wonder end when you leave the Neal Smith NWR (or other outdoor area you are observing)?

13. Encourage the students to keep going outside anywhere they are to search for wonder; it is free and is a good, healthy choice of activity.

Background Information

“If a child is to keep alive his inborn sense of wonder... he needs the companionship of at least one adult who can share it, rediscovering with him the job, excitement, and mystery of the world we live in.” – Rachel Carson, *The Sense of Wonder*

The purpose of this lesson is to introduce 5th graders to naturalists as scientists. Using Rachel Carson as a role model, they can practice being a naturalist and consider themselves as naturalists.

By their example, naturalists have much to teach us about being scientists. Like all scientists, naturalists make observations, record data, and share their discoveries with other scientists and with the public. They are skilled in exploring, observing, organizing, classifying, collecting, describing, inventing, and experimenting. In addition, many are talented artists and writers, daring travelers, and innovative researchers. It is naturalists who developed the concepts of species, extinction, and microorganisms, who invented microscopes that could make bacteria visible to humans. The scientific contributions, passion, and purpose of naturalists improve our quality of life and call us to live in balance with the land.

In this field investigation, former U.S. Fish and Wildlife Service employee and well-known author Rachel Carson serves as the naturalist model. Born and raised in Pennsylvania, Carson had an interest in nature even as a young child. Carson and her mother bonded over long walks in the woods where her mother taught her the names of plants, birds, insects, and animals. Her first written work was published at age 10 in a children’s magazine. Carson studied biology in college and graduate school, but she also had a passion for writing. She was able



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to combine these passions into her career when she wrote publications and radio scripts for the agency that would become the U.S. Fish and Wildlife Service.

In her first three books, Carson used her love of the water to explore themes of the ocean. Her books *Under the Sea Wind*, *The Sea Around Us* and *The Edge of the Sea* were love stories to the ocean. While Carson intended to continue with other projects, she became increasingly concerned about the toll the pesticide DDT was taking on natural landscapes. Her final book, *Silent Spring*, aimed to raise public awareness about DDT and the harm it can cause to the environment. Her careful research and vivid imagery helped catapult the issue into public consciousness. Even though she was dying of breast cancer, Carson found the strength to stand up to her critics and testify in front of Congress with her findings in the book. Through her efforts and those of others, DDT was ultimately banned for sale in the United States but is still being used in other parts of the world.

Carson's book *The Sense of Wonder* still inspires people who work to promote the study of nature. Carson talks about wonder as being that feeling which fills you with admiration, amazement or awe (www.dictionary.com). She writes "I sincerely believe that for the child and for the parents seeking to guide him, it is not half as important to know as to feel." In writing this story, Carson wanted to help parents gain confidence exploring nature with their children. She thought nature exploration and study were crucial to a child's development and well-being. Carson writes that a sense of wonder can serve as "an un-failing antidote against the boredom and disenchantment of later years, the sterile preoccupation with things that are artificial, the alienation from sources of our strength."

By hearing an excerpt from *The Sense of Wonder* and then going into the field to look for wonder, students learn that searching for wonder is a fun and worthwhile pursuit.



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Resources

Journal Prompt

Ask students to free write on their experience. (Ask a few students to share with the class.

How can they be more open to sensing wonder? Ask them how or who they could share this discovery with when they return home? (Tell a friend or relative, write a poem or paint a picture to give away, etc.) Does your sense of wonder end when you leave the Neal Smith NWR (or other outdoor area you are observing)?