

**Grade Level:**

5th

Time:

45 Minutes

Season:

All

Objectives:

Students will be able to...

- Identify what a naturalist is and does.
- List the qualities of a naturalist
- Identify famous naturalists and their work.
- Understand the connection between naturalists and conservation

Key Concepts:

- Conservation
- Observation
- Research

Materials:

- Internet access
- Pencils
- Naturalists' books

Naturalists

Summary

Many of our country's wildlife refuges, national parks, and other natural areas wouldn't be here today without some influential naturalists. Students will research and learn about some key naturalists and what they did.

Background

These will be brief backgrounds of some naturalists. Students will dive deeper into each and share their findings.

Naturalist:

A person who spends time outdoors, records observations, and develops knowledge of nature.

Conservationist:

A person who advocates for the protection and preservation of the environment and wildlife.

John Muir

John Muir was born in Scotland in April 1838. When he was eleven years old his family emigrated to the United States to Wisconsin. When he wasn't working on the fields, he and his younger brother roamed the woods and fields, that was the start of his passion and love for the natural world. He became an inventor and woodworker and would take his inventions to fairs and competitions where he won admiration and prizes. In 1867 he suffered a blinding eye injury that spurred him into a wanderlust. He walked and sailed thousands of miles eventually ending up in California's Sierra Nevada and Yosemite.

He turned toward writing and published 300 articles and 10 major books about his travels, philosophy, and encouraging everyone to get outside. He is often called the "Father of our National Park System" and played a large role in the act of Congress that created Yosemite National Park. He also help with the creation of Sequoia, Mount Rainer, Petrified Forest, and the Grand Canyon. He helped found the Sierra Club and served as its president until his death.



Background (continued)

Theodore Roosevelt

Theodore Roosevelt was born in 1858 in New York. He went to Harvard College and later was elected to the Assembly of New York State. After the death of his wife and mother in 1884, Roosevelt went to the Badlands of the Dakota Territory and invested in a cattle ranch. He remained there for a couple of years where his passion for hunting, and the outdoor life grew.

In 1886, he returned to New York, remarried, and returned to politics. He became vice-president for less than a year and became president after the assassination of President McKinley. Later he was elected to a full term as president. As president, he established 150 national forests, 51 federal bird reserves, four national game preserves, five national parks, and 18 national monuments. He played a key role in the creation of the National Wildlife Refuge System.

J. N. (Ding) Darling

Jay Norwood Darling was born in Michigan in 1876. He began a cartooning career in 1900 and would use his skills to bring public attention to wildlife and conservation issues. He had a passion for waterfowl conservation and was a part of President Roosevelt's Committee for Wildlife Restoration. He was later appointed as the head of the Biological Survey and served there for 18 months.

Darling played an important role in the initiation of the Federal Duck Stamp, a program which uses the proceeds to purchase wetland and waterfowl habitat and created the first duck stamp.

Aldo Leopold

Aldo Leopold, also known as the father of wildlife conservation, was born in 1887 in Iowa. He had an interest for the natural world, spending his time observing, sketching, and journaling. He graduated from Yale Forest School in 1909 and pursued a career with the U.S. Forest Service in Arizona and New Mexico.

In 1935 he assisted in founding and establishing the Wilderness Society, which was dedicated to expanding and protecting wilderness areas. Later in 1937, Leopold and his work with wildlife conservation was key in founding the Wildlife Society, which is dedicated to the protection and management of wildlife. Leopold wrote and became one of the first advocates for wildlife management.

Byrd Baylor

Byrd Baylor was born in Texas in 1924. She used the natural world around her to provide inspiration in her stories. Byrd lived in an adobe home with no electricity using typewriters to write her stories.



Rachel Carson

Rachel Carson was born in 1907, in Springdale, Pennsylvania. She was a writer, scientist, and ecologist. After college, she was hired by the U.S. Bureau of Fisheries to write radio scripts focusing on natural history. She worked as a scientist and editor and soon rose to become the Editor-in-Chief of all publications for the U.S. Fish and Wildlife Service.

She resigned from the U.S. Fish and Wildlife Service to pursue writing full time in 1952. She wrote several award-winning books and articles. One of her most famous ones, *Silent Spring*, came after she saw the misuse of chemical pesticides. She fought legal battles against the chemical industry to call for new policies to protect human health and the environment.

Set-Up

1. Provide a variety of short books about naturalists.
2. After students read a book they will research each naturalist, have available websites and tablets/laptops available.

Procedure

1. Ask the students: "Have you ever met someone who loves the outdoors? How does this person act while outside?"
2. Ask the students, "what qualities do these people have while outside?" And write their response on the board.
 - Your list may vary depending on student answers. Some of the main qualities of a naturalist are they are curious, respectful, inquisitive, observant, full of wonder, patient, prepared, and a problem solver.
3. Ask the students: "Do you know any famous naturalists or conservationists?" Write their answers on the board.
4. Divide the class into groups of 3-4 students/group. Each group will be assigned one person/book about a famous naturalist or a book that they wrote. Provide a copy for each student in the group.
5. Your list of Naturalists may include John Muir, Theodore Roosevelt, J. N. Ding Darling, Aldo Leopold, Rachel Carson or any that are relevant to your area!



Procedure (continued)

6. After students have read the book have students research why this person is famous/ what conservation work they did.
7. They will have 20 minutes to complete this part.
8. After 20 minutes have passed, rearrange the groups up so that each group includes one person who learned about each naturalist. (If you had four students in each group you will then have four groups)
9. In their groups, each student will share what they learned about their naturalist.
10. Once each group has had enough time for everyone to share, bring the class back together for discussion.
 - How do you think these naturalists were influential in today's world?
 - What qualities of a naturalist did the person you studied have?
 - How does the work of naturalists affect conservation today?
 - Do you have to be famous or do monumental work to be a naturalist or conservationist?

Vocabulary

- **Naturalist:** a person who spends time outdoors, records observations, and develops knowledge of nature.
- **Conservationist:** A person who advocates for the protection and preservation of the environment and wildlife.
- **Inquisitive:** curious or questioning.

North Dakota Curriculum Standards

This lesson helps support these standards:

Social Studies:

5.2.4 – Explain the significance of scientists, inventors and historical figures.

Science:

5-ESS3-1 - Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Resources

Books for Youth

Books, books, and more books....do you have books?

White Horse Hill National Game Preserve