

# Lesson Plan



## Time Needed

2 class periods

## Materials (for each student or group of students):

- *Natural Inquirer* scientist and engineer cards
- Writing utensil
- Student Card Template
- Colored pencils, crayons, or markers
- Tape

Scientists and engineers are people who collect, evaluate, and test information. Scientists and engineers also propose answers or solutions to questions or problems. People of all different ages, backgrounds, and ethnicities can become scientists. *Natural Inquirer* scientist and engineer cards introduce a diversity of scientists and engineers within the USDA Forest Service. Scientists and engineers share information about their titles, their education, their current research and work, and also the characteristics which they feel enable them to be good scientists and engineers.

In this activity, students read the cards and present the information to their classmates. After learning about a number of different science and engineering careers, students create a card of their own. This activity enables students to learn more about USDA Forest Service scientists and helps students imagine their own potential future as a scientist or engineer.

## Methods:

### Prep

Order a free set of *Natural Inquirer* Scientist and Engineer cards (<http://www.naturalinquirer.org/Scientist-Card-Ordering-Page-v-55.html>) or print out a set of cards from the *Natural Inquirer* website.

Make copies of the student scientist card template for each student. Using an extra copy of the student scientist card template, create a card for yourself to use as an example for the students.

## Day One

Divide students into small groups. Ask the class, who are scientists and who are engineers? In their small groups, ask students to brainstorm a list of words, phrases, and ideas that come to mind when they hear the word scientist and engineer. Give the students a few minutes to brainstorm. Then, have a class discussion to see what the students came up with while brainstorming. During this discussion, also ask students to name some different types of scientists and engineers.

Explain to the students that they are about to participate in an activity that will inform them more about USDA Forest Service scientists and engineers.

Distribute the scientist and engineer cards among the class, with each student receiving at least one card. If you prefer, have students come to the front of the class one by one to randomly draw a card from the deck.

Give the students a few minutes to read their card. Then, have the students speak to the rest of the class and give a brief summary of their card. For example, "My scientist is Dr. Chris Fettig. He is a Research Entomologist. He knew he wanted to be a scientist since elementary school and his most exciting discovery was changing the way trees smell to trick bark beetles."

Continue this procedure until all students have presented their scientist and engineer card to the class.

## Day Two

Distribute a copy of the student card on page 4 to each student. Use the template on page 3 as a

reference for filling out the template on page 5.

The student card template is designed so the page can be folded in half and one side of the card will be on each page. Because of this design, the top half (front) of the card appears upside down. The students will need to fold the paper in half once they receive it. Then, the front of the card will be on one side of the paper and the back of the card will be on the other. Use clear tape or a glue stick to hold the two sides together. If tape is used, the sides should be taped together after the students have completed the card. This ensures the tape will not interfere with the student's writing. It is also recommended that the student card template is printed out on card stock if possible because this will make them more durable.

Have the students individually complete the student card. For the students' pictures, have the students bring in a photograph of themselves to be glued onto the page, or have the students use crayons, colored pencils, or markers to draw a picture of themselves.

Once all students have completed their student cards, ask students to share their cards with the class.

## Student Card Template

|   |                   |
|---|-------------------|
| Student's School                                    | Student's Picture |
| Student's Name<br>Type of Scientist they want to be |                   |

|   |   |
|---|---|
| Student's Name  | <u>Most Exciting Outdoor Adventure</u>                      |
| <u>Important Scientist Characteristics</u>  |   |
| <u>Example of research question I would like to answer:</u><br><br><u>Technology or equipment used to answer my question:</u> | <u>Why do you think it would be cool to be a scientist?</u> |

A large empty rectangular box with a rounded rectangle inside it, intended for drawing or writing.

|   |   |
|---|---|
|   | <u>Most Exciting Outdoor Adventure</u>                      |
| <u>Important Scientist Characteristics</u>  | <u>Why do you think it would be cool to be a scientist?</u> |
| <u>Example of research question I would like to answer:</u><br><br><u>Technology or equipment used to answer my question:</u> |   |