

Voices from our Community

Program Type: Classroom, afterschool or community center program	Audience Type: Grades 6–8, ages 11–14 (emphasis on Native youth)
Program Length: 1–2 Hours	Class Size: Up to 30 students

Description: Students interview a Native American elder and a Native or non-Native scientist to gather different perspectives about the natural world.

Topics: Traditional knowledge, history, environmental science, generational learning, careers in science

Process Skills Focus: Critical thinking, listening, inquiry, writing, observing

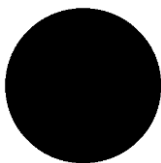
LEARNING OBJECTIVES

For Next Generation Science Standards alignment, see end of outline.

- Students will learn about traditional knowledge and careers in science from Native American elders and a Native or non-Native scientist in their local community
- Students will experience how cultural identity can impact career choices and knowledge about the environment
- Students will learn basic interviewing skills

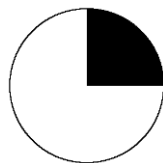
TIME REQUIRED

Advance Prep



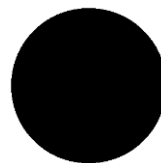
60 minutes

Set Up



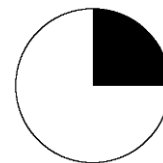
15 minutes

Activity



60+ minutes

Wrap-Up



15 minutes

PROGRAM FORMAT

<u>Segment</u>	<u>Format</u>	<u>Time</u>
Introduction	Instructor-led Activity	30 min
Native Elder Interview	Participant-led Activity	30–60 min
Native or non-Native Scientist Interview	Participant-led Activity	30 min
Wrap-up	Instructor-led Activity	5 min

SITE REQUIREMENTS

Most any space can work for this activity as long as people can hear each other and the space is comfortable for guest speakers (e.g., a chair).

SUPPLIES

Supplies	Amount
8.5"×11" paper	1 per student
Pen or pencil	1 per student

ADVANCE PREPARATION

- Locate a Native American elder and a Native or non-Native scientist who are interested in being interviewed by a group of youth.
 - Suggestions for where to find a Native American elder:
 - Tribal government center
 - Powwows
 - Community college
 - University with Native American Studies Department
 - [American Indian Science and Engineering Society \(AISES\)](#)
 - [Society for Advancement of Chicanos/Hispanics and Native Americans in Science \(Sacnas\)](#)
 - Urban native coalition
 - Indian walk-in center
 - Tribal museum
 - Tribal or cultural center
 - Family members of youth
 - Retirement or assisted living center
 - Local Native-owned companies and businesses
 - Suggestions for where to find a Native or non-Native scientist:
 - Family members of youth
 - Natural resources department
 - Medical facilities
 - A local Native American department or association of a college or university such as the [American Indian Science and Engineering Society](#)¹
 - Local companies that employ scientists
- Cultural sensitivity should be taken into consideration when reaching out to an elder and asking for an interview. The facilitator is encouraged to speak with people in the Native community and learn protocol for asking an elder to present. This protocol may vary among different communities.
- An honorarium is often appropriate to offer in return for someone sharing cultural knowledge.
- **Always** have a gift to present a guest from the Native community. This gift can be flowers, food, a card signed by the students, or even a gift made by the students.
- Provide the interviewees with information about the type of questions students will be asking and ask them if they feel comfortable answering the questions.

¹ <http://www.aises.org/>

SET UP

An interview can take place in a variety of settings. Students sitting in a semi-circle with an elder or scientist in front can work well. Facilitators are encouraged to create an informal atmosphere and not have students sit in their desk in a traditional classroom layout. Non-traditional learning environments like sitting in a circle outside or in a communal space can foster more conversation and create a more comfortable atmosphere for guest speakers and students.

INTRODUCTION

Interview Process

30 minutes

Suggested script is shaded. Important points or questions are in **bold**. Feel free to improvise as needed.

Introduction

The facilitator introduces students to the interview activity and leads a conversation about how different experiences can shape people's perceptions about science and the environment. Although conversations can vary, an example dialog is provided below.

Today we will be interviewing a Native elder and a scientist from our local area to learn about their lives and what they think of nature, science and the environment. Interviewing different types of people can create different types of experiences and our interview with an elder may be different than our interview with a scientist. For example, elders might like to share information by telling stories about their life while a scientist might like to answer a list of questions about their work.

Our first interview will be with _____ (name). An elder is a person of an older generation who has a great deal of knowledge, lived experience and information about their family, community, culture and local environment. Elders are traditionally very well respected in Native communities. How many of you know elders in your family or community? Do you look up to them and treat them with a great deal of respect? I hope so.

Give students some basic information about the person they will be interviewing and how they should act during the interviews and in the presence of a Native elder. Students should:

- Be polite and attentive
- Not speak out of turn or without raising a hand first
- Be patient in waiting for the speaker to answer a question
- Speak loudly and clearly when asking a question
- Be mindful of not asking questions that are too personal

Before we meet with each of our presenters, we need to create a list of questions that you as a class will ask these presenters during the interviews. To get an idea of what type of questions we want to ask, let's think about what these people might want to share with us. **Many of you have grandparents and know other people of the same generation as _____ (guest speaker). What do you think _____ (guest speaker) might like to share with us?**

Since we are focusing on learning about science and the environment, let's also think about how older generations may have interacted with nature and the environment when they were your age. **What experiences might they have had that could be different from your own? For example, would the way their family acquired food have been different? Would they have spent more time playing outside without modern technologies? Who can think of a question they would like to ask?**

Have students take 3–5 minutes to work on their own or with the person next to them to come up with 2–3 questions each. Suggest that students also have the option of asking an elder to tell a story related to their topic of interest rather than just a straightforward question. Interacting with an elder can be a way to explore cultural protocols and allow an elder time to reflect and share information in his or her own way.

Go around the room and ask each student/group what they came up with and make a list of questions on the board for students to ask during the interview. See the list below for examples of good interview questions.

Now that we have a list of questions for our Native elder, let's think about what we want to ask our scientist.

Our next interview will be with _____ (name). He/she is a _____ scientist and works for _____. Let's now come up with a list of mostly new interview questions.

Give students enough time to repeat the process of either working alone or in pairs to come up with a list of new questions. Try to encourage the students to come up with questions related to being a scientist, what type of education scientists need for their jobs, and how working with the Native community has influenced scientists' perceptions of science and the natural world (if applicable). See the list of example questions below.

Teachers can ask students to take notes on each question asked during the interviews or take a moment after each interview to write down 3–5 facts they learned about each interviewee.

Educators are encouraged to draw specific attention to the skills of interviewing as a social science, such as defining a research question, interviewing people, listening and observing, and analyzing the responses as part of the scientific process.

GROUP ACTIVITY

Native Elder Interview

30–60 minutes

Example questions for a Native elder:

1. Could you share some information about your family with us?
2. What was life like when you were between 11 and 14 years old?
3. From your perspective as a Native elder, what do you think is important for youth to know about the environment and why?
4. How can I best take care of myself, my community, and the Earth?
5. What inspired you as a child? What continues to inspire you now?
6. What are your concerns with respect to our community?
7. What are your concerns with respect to our Earth?
8. What advice do you have for us?

GROUP ACTIVITY

Native or non-Native Scientist Interview

30 minutes

Example questions for a Native or non-Native scientist:

1. What are your hobbies?
2. Where are you from?
3. What is your current job/position?
4. What education and/or experience did you need to get your job?
5. As a child, did you have any hobbies, interests, or experiences that helped prepare you for success in _____ (interviewee's field)?
6. When did you realize that you wanted to be a _____ (interviewee's profession)?
7. Did you have a mentor or teacher who inspired your interest in your current career or expertise?
8. What do you think was the most important thing you learned growing up?
9. What is your dream? What do you most hope to accomplish in your life?
10. Did you have to overcome any obstacles on your path to becoming an expert in your field?
11. Who do you look up to as heroes in your field? In your community?
12. Do you have any advice for students who are interested in pursuing a career in _____ (interviewee's field)?
13. What projects are you working on now?
14. How does the research / work you do affect people's lives?
15. How does the research / work you do affect us here in our community?
16. What do you like most about your work?
17. What inspired you as a child? What continues to inspire you now?

WRAP-UP

5 minutes

- **It's very important to present a gift to any guest speaker from the Native American community.** Have a student or two present a gift to the interviewees at the end of the interviews and thank them for visiting.

- After both guest speakers have left the classroom, engage students in a conversation around how the interviews were different and what they learned about how each speaker engages with nature and science. Talking about how differences in age, careers, culture, etc. can encourage students to think about how different people experience science and nature in different ways.
- Ask students to turn in their notes or 3–5 facts they learned about each interviewee to get credit for participating.
- Either have the class make one large thank-you card or have students each make individual thank-you cards to send to the guest speakers.

OPTIONAL EXTENSIONS

- Students can conduct a one-on-one interview with a community or family member. A brief summary of the interview and answers to their interview questions can then be shared with their class and/or turned into their teacher. This activity could be completed to earn extra credit.

BACKGROUND INFORMATION

[Guidelines](#)² for interviewing a Native elder:

1. Cordial greeting of the elders. Inquire if they had a good sleep. Inquire if they have anything of importance to communicate right then.
2. Give reason(s) for meeting.
3. Consider presenting a release form for the elder to sign.
4. Try to approach the subject from all angles. Remember that most students don't know much about Native stuff, but they love it.
5. Take breaks at appropriate times.

[Tips](#)³ for students for conducting interviews:

STEP 1: Research, research, research. Then research some more. The only way to come up with good questions is to know everything there is to know about your subject.

STEP 2: Contact the person you wish to interview. Ask when a good time would be to do the interview. Be polite! Say "please" and "thank you." Try to set up the interview in person. If this isn't possible, then set up a phone interview.

STEP 3: Read over your research and brainstorm a list of 15 questions. The more specific your questions are, the better! And never ask questions that can be answered with a simple yes or no.

STEP 4: Come prepared with:

A pencil

A notebook

A list of good questions

A recording device (always ask permission before recording an interview)

STEP 5: Be on time! Arrive at your interview with plenty of time to spare. If you've never been to the place where your interview is taking place, go early and scout it out. There is nothing more unprofessional than a reporter who is late.

STEP 6: Conduct your interview in an organized, timely manner.

STEP 7: Even if you are recording an interview, take notes. **Don't try to write every word said. It will slow down the interview. Just take down the highlights.**

STEP 8: Review your research and your interview notes. **Circle or highlight quotations that you think will be good for your article. Now you're ready to begin writing!**

² <http://ankn.uaf.edu/NPE/CulturalAtlases/interview.html>

³ <http://www.scholastic.com/teachers/lesson-plan/how-conduct-interview>

RESOURCES

Links and resources for cultural guides:

[Alaska Native Knowledge Network](http://ankn.uaf.edu/Publications/Knowledge.html)⁴

[Guide to Implementing the Alaska Cultural Standards for Educators](https://education.alaska.gov/standards/pdf/cultural_standards.pdf)⁵

[Indian Education for All - Montana Office of Public Instruction](http://opi.mt.gov/programs/indianed/IEFA.html)⁶

[Navajo Culture](http://serc.carleton.edu/research_education/nativelands/navajo/culture.html)⁷

GLOSSARY

Vocabulary	Definition
Elder	A person who has gathered knowledge and wisdom about his or her culture; not all elderly people are elders
Indigenous/Native	An individual who has an ancestral claim to a particular environment or region
Traditional knowledge	Wisdom held by elders that is passed down to younger generations
Ways of knowing	Information gained by patient observations, life wisdom, and accumulated knowledge
Western science	A system of knowledge which relies on certain laws that have been established through the application of the scientific method to phenomena in the world around us

⁴ <http://ankn.uaf.edu/Publications/Knowledge.html>

⁵ https://education.alaska.gov/standards/pdf/cultural_standards.pdf

⁶ <http://opi.mt.gov/programs/indianed/IEFA.html>

⁷ http://serc.carleton.edu/research_education/nativelands/navajo/culture.html

**NEXT GENERATION
SCIENCE STANDARDS**
Practices

- Planning and carrying out investigations
- Obtaining, evaluating, and communicating information

Crosscutting Concepts

- Patterns
- Cause and effect

	Disciplinary Core Idea	K	1	2	3	4	5	MS	HS
Physical Science									
PS1	Matter and Its Interaction	n/a	n/a		n/a	n/a			
PS2	Motion and Stability: Forces and Interactions		n/a	n/a		n/a			
PS3	Energy		n/a	n/a	n/a				
PS4	Waves and Their Applications in Technologies for Information Transfer	n/a		n/a	n/a		n/a		
Life Science									
LS1	From molecules to organisms: Structures and processes			n/a					
LS2	Ecosystems: Interactions, Energy, and Dynamics	n/a	n/a			n/a		✓	
LS3	Heredity: Inheritance and Variation of Traits	n/a		n/a		n/a	n/a		
LS4	Biological Evolution: Unity and Diversity	n/a	n/a			n/a	n/a		
Earth & Space Science									
ESS1	Earth's Place in the Universe	n/a			n/a				
ESS2	Earth's Systems		n/a						
ESS3	Earth and Human Activity		n/a	n/a			✓		
Engineering, Technology, and Applications of Science									
ETS1	Engineering Design								