

Grade 10-12: INVESTIGATING TRADITIONAL ECOLOGICAL KNOWLEDGE

Students interview Elders or respected community members and explore various EnviroCareers profiles to investigate Traditional Ecological Knowledge (TEK) and its application in environmental occupations.

CURRICULUM CONNECTIONS

Related Outcomes

This lesson will contribute to the student's ability to

- consider further studies and careers in science- and technology-related fields;
- synthesize information from multiple sources and make inferences based on this information;
- provide examples of how TEK, science, and technology are an integral part of their lives and their community.

Related Coursework

This lesson works well in classes studying

- environment and communication related careers;
- worldviews, including traditional perspectives and the western scientific approach;
- Traditional Ecological Knowledge or Aboriginal Studies;
- public speaking and interviewing.

PREPARATION

Learning Objectives

During this lesson, students will

- generate definitions of Traditional Ecological Knowledge (TEK) and western science as a group by synthesizing and discussing the examples and ideas presented in the EnviroCareers Perspectives;
- compare and contrast TEK and western science as valid, complementary scientific approaches by reading, analyzing, and discussing Perspectives excerpts as a group;
- explain how the EnviroCareer TEK advisor helps to preserve and promote the use of TEK by reading and discussing the occupation's profile in small groups;
- provide examples of TEK on a specific topic and its uses in various EnviroCareers by interviewing an Elder/adult and exploring related EnviroCareers profiles;
- practice oral communication and listening skills by conducting an interview and delivering an oral presentation to the class.

Total Time 240 minutes, including 60 minutes for in-class research and 60 minutes for presentations (can vary depending on the number of students), plus additional time for interviews.

Material Required

- Perspectives from the nine EnviroCareers sections on the Aboriginal EnviroCareers website/CD-ROM (Copy and paste each Perspectives excerpt into one document to create a single handout. One handout per student.)
- Overhead projector or chalkboard for recording notes
- Copies of the profile for TEK advisor from the EnviroCareers section of the Aboriginal EnviroCareers website/CD-ROM (one per student)
- Access to the EnviroCareers profiles either on the website, CD-ROM, or as print copies (one per student). If available, audio and/or video recording equipment for students to use during the interview
- Letter explaining the activity to be distributed to parents and interviewees

DELIVERY



TIME

40 minutes



PROCESS

1. **Introduction: Introducing TEK and Western Science**
(*Reading for Meaning and Discussion*)
 - 1.1 Distribute copies of the Perspectives paragraphs to each student.



TEACHER'S NOTES

- TEK is generally spoken as either T-E-K or as "teck"
- Review Balancing Perspectives in



20 minutes

- 1.2 Instruct students to take notes during the following discussion. As a class, read the paragraphs aloud. Together
 - a. Brainstorm definitions for “TEK” and “western science.”
 - b. Discuss the main idea of each paragraph.
 - c. Identify examples of TEK and western science as presented in the paragraphs, as well as those that students may know of.
 - d. Discuss the apparent similarities and differences between the TEK and western scientific approaches.
- 1.3 Distribute the EnviroCareers profile for TEK advisor. Divide students into groups of 3 or 4. Instruct groups to read the profile and answer the following questions
 - a. What is a TEK advisor?
 - b. What are the main duties of a TEK advisor?
 - c. Why is this occupation important?
- 1.4 After 15 minutes, discuss the groups’ responses as a class.
- 1.5 Ask students to choose a partner and select a Perspectives topic they will explore in the main activity.

2. Main Activity: Interviewing an Elder or Adult
(Discussion and Independent Study)

- 2.1 Introduce the main activity. For example: “Assuming the role of TEK advisors, you and your partner will investigate TEK related to your chosen topic by interviewing an adult or Elder in the community. Also research how TEK can be used in other EnviroCareers related to your topic.”
- 2.2 Outline the assignment
 - a. “Select someone in your community who is likely to know about your selected topic to interview.”
 - b. “Contact your interviewee to schedule a date, time and place to interview them.”
 - c. “Develop a list of interview questions.”
 - d. “Conduct the interview and record your findings.”
 - e. “Research ways in which TEK is used in various EnviroCareers by reviewing related EnviroCareers profiles.”
 - f. “Develop an oral presentation on the TEK examples you learned, related EnviroCareers, and ways in which this TEK can be used in the workplace. Illustrate your findings using visuals such as PowerPoint slides or overhead transparencies. Present your findings to the class.”
- 2.3 Discuss the appropriate way for contacting and making a request to an Elder or adult, and for showing respect for the person’s knowledge.

60 minutes
(Varies based on student numbers)

the Additional Resources section of this guide if you require more information about TEK and western science.

- 1.2.a Some examples of main ideas in the Perspectives excerpts include
 - beliefs about, and governing our use of, the natural world;
 - sustainable practices for using natural resources, including plants and animals;
 - use of indicators (observable signs) and technological data to interpret and/or predict events in the environment, e.g. climate change.
- 1.2.c Encourage students to think of examples of TEK they already know, but may not call TEK.
- 1.2.d Ask leading questions to draw out responses related to the similarities and differences described in Balancing Perspectives.

Prior to this lesson, write an introductory letter for parents and interviewees explaining the assignment. Be sure to include

- A description of the assignment;
- The lesson’s goal;
- The time, date, and locations of the interviews;
- Your name, contact information, and an invitation to contact you if they have any questions;
- The type of class the students are completing the assignment for.



- 2.4 Brainstorm potential interview questions such as
- How did you learn about...?
 - What interesting observations/events have you personally experienced related to...?
 - What stories did your Elders share with you about...?
 - How have you used this knowledge?
 - Do I have your permission to write your story down and share with other student's in my class?

2.5 Allow students class time to develop their interview questions, contact their interviewees, and research related EnviroCareers. If necessary, assign remaining work as homework.

2.6 Students conduct their interviews, compile their findings and prepare their oral presentations.

3. Closure and Evaluation: Presenting TEK Research (Presentations and Discussion)

3.1 Conduct student presentations.

3.2 Debrief activity by discussing

- "What traditional teaching did you find the most interesting? Why?"
- "How important do you feel it is to pass TEK on to future generations?"
- "How can EnviroCareers help to keep TEK alive?"
- "How do you feel TEK and western science influence the way you think about the environment?"



2.3 Research the protocol in your community for approaching Elders. If possible, ask the school's counsellor or Elder committee chairperson for direction.

2.4 For a 5 - 10 minute presentation, suggest students develop three to five open-ended interview questions. Adjust the presentation time as necessary for your class.

2.5 As an additional courtesy, you might have students write a letter thanking their interviewees for agreeing to be interviewed. If applicable, ensure students observe local protocol for addressing Elders.

2.6 Each pair of students should arrange an appointment, preferably during the school day, to conduct their interview at the person's home or workplace.

2.6 Students may wish to take a recording device to the interview, but need to ask permission of the Elder ahead of time to use it.

2.6 Review oral presentation skills and techniques if they have not been introduced in a previous unit.

3.1 Book students' required presentation technology prior to the class.

Evaluation Considerations

Did students

- follow the protocol for addressing an Elder;
- distinguish between examples of TEK and of western science;
- relate examples of TEK to possible applications in EnviroCareers;
- explain the importance of preserving and respecting TEK as a scientific approach;
- demonstrate effective oral communication skills during their presentations?

SUGGESTIONS FOR ADAPTATION

- Invite students' interviewees into the school to be interviewed during a class period. Make it an event, and provide snacks and present thank you gifts to each of the interviewees.
- For Grade nine, students can describe their findings in a written report they can read to the class as their oral presentation.
- As a follow up assignment for Grades 11 or 12, instruct students to research western scientific data related to their chosen topics. Students will compare/contrast these findings with their TEK findings and present their work using a comparison matrix.
- To extend this activity, allow students to produce a video, create a multimedia product, compose a song or write a play based on one of the traditional teachings they learned about during the activity.