

Science Lesson: Learning through Other Cultures – Understanding the Bond between Human Beings and Our Environment – An Indigenous Perspective

Lesson Objectives

1. The students will learn about the role of the environment on the health of Indigenous people through reading and viewing segments from the Native Voices Exhibition and nDigiDreams.
2. The students will brainstorm the role of the environment in their lives and determine the significance that the environment plays on their health, diet, and lifestyle.
3. Students will use the Tox Town Web site and Environmental Health Student Portal to learn about specific hazardous substances that may impact their lives.
4. Students will participate in discussion to consider how the Indigenous people's approach to the environment differs from the general population's approach.
5. Students will use storytelling to tell future generations how they used the land, what they did to save it, and what they hope their children will do to protect it.

Grade Level

Middle school grades 6 to 8

Materials Needed for Lesson

- A computer with Internet access
- Whiteboard, blackboard, or flip chart
- H.1 – Hazards Where I Live
- Six long strips of paper

Lesson Time

Two 45-minute periods required to complete the lesson activator, research, and debriefing activities. Extension can be completed as homework.

Lesson Activator

Discover the relationship between Indigenous people and their environment. Students use this activity to discover how Indigenous people use their environment and the important role of storytelling in keeping these traditions and lifestyle choices going from generation to generation.

Teacher Directions

1. Ask students the following question: "How do you use, or what do you get from your environment?"
Note: You may need to give examples like food, hiking, a place to play sports, and water.
2. Record their responses on a flip chart, whiteboard, or blackboard.
3. Explain to the students that they will view a few short video clips about how Indigenous people view the environment and the role the environment plays in their lives. You will also need to explain that sometimes Indigenous people use the art of storytelling to pass on traditions and knowledge.
4. Ask students to record specific examples of how Indigenous people use the environment as they view the clips.

Environment

Health comes from the land, Earl Kawa'a

<http://apps2.nlm.nih.gov/nativevoices/interviews/index.cfm?mode=video&speaker=31&clipId=43>

Land

Health and wellness embedded in the land, Marjorie Mau, M.D.

<http://apps2.nlm.nih.gov/nativevoices/interviews/index.cfm?mode=video&speaker=36&clipId=10>

Respect of plants equal to respect and one's relationship to the land, Allison Kelliher, M.D.

<http://apps2.nlm.nih.gov/nativevoices/interviews/index.cfm?mode=video&speaker=32&clipId=12>

Water

Contamination of water leading to illness, Wilmer Stampead Mesteth

<http://apps2.nlm.nih.gov/nativevoices/interviews/index.cfm?mode=video&speaker=72&clipId=25>

Water is medicine, necessary, cleansing, hydrating, essential to life, Britta Guerrero

<http://apps2.nlm.nih.gov/nativevoices/interviews/index.cfm?mode=video&speaker=22&clipId=23>

The Art of Storytelling

Ogeebiccon Roots, National Library of Medicine

http://www.youtube.com/watch?feature=player_embedded&v=2pnuJFVIDKs

Honoring the Earth, nDigiDreams

<http://www.ndigidreams.com/CarolineEdwards.html>

5. After watching the video clips, debrief by asking the following question: "What did you learn about the way Indigenous people approach their relationship with the environment?" Write responses on the board.
6. Compare the list that the students wrote before viewing the video clips with the one they wrote after viewing the video clips, and ask the following question: "What are the similarities and differences between how you view the environment, and how Indigenous people view the environment?"

Lesson

In this lesson, students will learn about the impact that certain hazards have on our environment. They will use what they learned during the "Lesson Activator" to think about the threats that overuse of some hazardous substances has on the way we use our environment.

Teacher Directions

1. Write the following substances on paper strips and place in random order on the board: "Greenhouse Gases," "Ozone," "Particulate Matter," "Plastics," "Volatile Organic Compounds (VOCs)," and "Pesticides." Make sure the strips are large enough to be viewed from the back of the classroom. Give a brief definition of each term.
2. Ask the students, as a class, to rank the hazardous substances in order from greatest impact on their environment and lifestyle to the least impact on their environment and lifestyle.
3. Discussion question: "Why did you place these hazards in this order?"
Note: *This is an "I think task."*
4. Divide students into groups of four or five, and assign each a hazard mentioned during the discussion above. Introduce the Tox Town Web site and Environmental Health Student Portal as resources to use during this exercise.

5. Provide students with the Research Form H.1 -- "Hazards Where I Live." Ask students to provide good detailed answers when responding to the questions.
6. As a group, students will report on their findings, and discuss how the resolutions they came up with compare to the steps that Indigenous people might take.
7. Go back to the list of hazards and ask students if they would change the order of the list. If changes are made, ask students to explain the rationale behind increasing or decreasing the hazard's position on the list.

Extended Activity

The Storyteller: The Indigenous people have kept their practices alive through the act of storytelling. They talk about their own history and practices. Create a story to be passed down to your children about how you use the land, what you did to save it, and what you hope your children will do to protect it.

Hazards Where I Live (H.1)

Hazard Name:	
Where is it found?	
What is it used for?	
How can it affect your health and lifestyle?	
What can be done to limit your exposure?	
What can we do as a society to limit unnecessary production and use of this substance?	