



7.7 Who Will Save the River Valley?

Story Extension for This Lesson:

This lesson is linked to a question asked in the beginning of the intermediate story: "Why do we boil water before we use it?" A good entry point to connect the lesson with the intermediate story is this passage:

Alex stands in the kitchen, leaning against the counter, watching as Sam fills a large metal pot with water from the sink.

"Why do we boil the water before we use it?" Alex asks Sam. Sam shrugs, "I don't know. I read some article that said it's undrinkable if we don't."

"Mom!" Alex yells to the other room. "Why do we have to boil the water?"

"The Bay of Quinte is polluted," their mom responds. "That's where we get our water from."

Sam's nose wrinkles, "It definitely smells bad sometimes."

Grade: 7

Strand: Interactions in the Environment

Big Ideas:

- Ecosystems are made up of biotic (living) and abiotic (non-living) elements, which depend on each other to survive. (Overall expectations 2 and 3)
- Ecosystems are in a constant state of change. The changes may be caused by nature or by human intervention. (Overall expectations 1 and 2)
- Human activities have the potential to alter the environment. Humans must be aware of these impacts and try to control them. (Overall expectation 1)

Overall Expectations:

1. assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts
2. investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem
3. demonstrate an understanding of interactions between and among biotic and abiotic elements in the environment

Specific Expectations:

1.2 analyze the costs and benefits of selected strategies for protecting the environment

2.4 use appropriate science and technology vocabulary, including sustainability, biotic, ecosystem, community, population, and producer, in oral and written communication

2.5 use a variety of forms to communicate with different audiences and for a variety of purposes

3.1 demonstrate an understanding of an ecosystem (e.g., a log, a pond, a forest) as a system of interactions between living organisms and their environment

3.5 describe how matter is cycled within the environment and explain how it promotes sustainability

3.7 explain why an ecosystem is limited in the number of living things (e.g., plants and animals, including humans) that it can support

3.8 describe ways in which human activities and technologies alter balances and interactions in the environment

3.9 describe Aboriginal perspectives on sustainability and describe ways in which they can be used in habitat and wildlife management

Inquiry Skills:

Inferring, Reviewing, Discussing, Explaining

Instructions:

Part 1:

Hand out the song lyric sheet (**River Valley by Moxy Fruvous**) and play "River Valley"
<https://www.YouTube.com/watch?v=Fv2ph5Ms2N8>

Part 1:

Play "River Valley" for the class to listen and follow along on their lyric sheet. In small groups of four, have students discuss and write jot notes on sticky notes to the following questions:

- What is the message behind the song? What evidence can you use to support your opinion?
- Is this song and its message representative of Alex and Sam's thoughts? What evidence from the story you can use to support your opinion?

Invite students to share their thoughts with the class. Be sure to invite your students to post their notes on a wall or on a piece of chart paper. These notes will serve as an ideas page for the class to refer to throughout this learning task.

Part 2: Bring On Your Creativity

For this challenge, students are required to create an art piece to reflect what Alex and Sam thinks is happening to their water in their community. This is an open ended task so be flexible and allow your students to find a medium that helps express their thoughts. Students can:

- write a song
- create a skit
- create a sculpture
- create a diorama
- illustrate a comic strip
- illustrate and create a graphic novel
- etc.

If you have a teacher that teaches the arts in your school, collaborate with them for ideas, especially in the area of assessment and evaluation. For this task, you can still access for process skills.

Materials List:

- Post-It Notes
- chart paper
- pencils
- pens
- arts supplies based on student need

Connections:

This lesson can be used in conjunction with the Arts curriculum.

Subject Area:

Art

Connects to:

Grade 7, Grade 8

Assessment Strategy:

It is recommended you focus your assessment on process skills. To help get you started on this path, a series of charts have been provided for you. Information provided in the charts are Introducing the Framework.

Handouts/Assessments:

- - River Valley Song Lyrics
- Process-Skill-Reviewing-3
- Process-Skill-Discussing-6
- Process-Skill-Explaining-1-2
- Process-Skill-Infering-9

River Valley by Moxy Fruvous

From the album Bargainville

Who will save the river valley? That's my drinking water
This was once a sacred place now, look at what we've got here
I'll pretend there isn't any problem, just do my job
And if I don't like the standard of living, go move to Russia...

Me and Pete went swimming last night, he's my friend from boy scouts
All the fish were floating upright, we got scared, and we got out

Mother says don't play down where your father does his job
And though he's got to make living, or move to Russia...

This is my world, this is my world, don't let it go away
Is it a crime, spending my time, dreaming of yesterday

Meet me in the river valley, you can tell me stories
'Bout a time before pinstripe suits, dippers, grits, and stories

My mother sang the songs her mother taught her
And we'd be swimming off in cool, cool water
And when she'd call us from the yard
Running home it felt like god...

This is my world, don't take it away...
Is your favourite place controlled by developing ambitions?
Do you think you'll have some power signing a petition?
Are you fine with your surroundings? Are they gonna crumble?
I'm living in the river valley, come and join me for a tumble!

High up above, see the cars up on the viaduct
From sunrise to the last call they push their luck
And that would be fine
If the world was yours, and you were mine

Who will save the river valley? (this is my world)
Who will save the river valley? (this is my world)
Who will save the river valley? (this is my world)

Who will save the river valley?

Process Skill - Reviewing

Process Skill	Students	Teachers	What This Skill Should Lead To
Reviewing	☐ picking out key facts and information ☐ perusing information carefully and thoroughly ☐ making connections between key content and concepts ☐ listing new questions that have arisen as a result of their investigation ☐ identifying directions for future investigation	☐ to be done independently, in pairs, and/or in small groups ☐ encouraging students to justify their choices of key points ☐ encouraging students to use multiple reviewing strategies e.g., mnemonic devices, acronyms, music, concept maps ☐ encouraging students to make personal jot notes identifying key points ☐ encouraging students to make connections between key elements	Students will become more able to recognize key concepts and ideas. They will hone their ability to make connections—concept to concept, self to concept, concept to world—and thus become more aware of their own understanding (metacognition). This in turn will make them more independent learners.

Teacher Notes:

Process Skill - Discussing

Process Skill	Students	Teachers	What This Skill Should Lead To
Discussing	☐ sharing and interpreting collected data to make sense of it; analyzing whether the data supports or disproves their hypothesis ☐ listening carefully to what others say ☐ talking about problems that may have influenced the results and possible ways to correct them in the future ☐ making connections between their results, previous research, and existing theories ☐ debating or exchanging views about a concept ☐ evaluating the impact of the results and their applications in the real world ☐ generating new questions that may lead to further investigation	☐ prompting students to be clear and precise, and to use the appropriate scientific vocabulary ☐ prompting students to choose the best facts to support their ideas ☐ ensuring that discussions in written form (e.g., comments on blogs or social networks such as Ning) have structure and flow	Discussion allows students to expand their knowledge about a topic and understand different points of view. They learn to express themselves precisely and to explain their reasoning (e.g., how they arrived at their conclusion). Debate is a healthy part of the scientific enterprise, and discussions are an effective way to explore opposition and skepticism.

Teacher Notes:

Process Skill - Explaining

Process Skill	Students	Teachers	What This Skill Should Lead To
Explaining	☐ focusing on “why” and/or “how” ☐ choosing how to express ideas ☐ an opportunity to be creative and original ☐ creating suitable rubrics for the assessment of their explanation	☐ letting students choose the way in which they will explain their investigation, results, and conclusions (e.g., choice board) ☐ supporting students’ efforts to use precise vocabulary, and to express themselves effectively and succinctly ☐ an opportunity to assess student learning	Explanation leads to increased retention of the information explained, a deeper understanding of the ideas presented, improved communication skills, and a better use of scientific terminology.

Teacher Notes:

Process Skill - Inferring

Process Skill	Students	Teachers	What This Skill Should Lead To
Inferring	□ deducing information from incomplete evidence using reasoning or logic. The information does not need to be factual or correct. (For example, “The grass is wet in the morning, so I infer that it rained overnight.” This is a valid inference, but not necessarily a correct one— the wet grass could be from morning dew or a sprinkler system.) □ clarifying observations as evidence □ making a connection between what is known and what is unknown □ creating a tentative understanding of the situation without knowing or being given the “answer”	□ guiding students to make logical connections from available evidence □ encouraging students to consider alternative inferences □ scaffolded and deliberate □ using a modified K-W-L chart to show the process of making an inference: replace “What I know,” “What I want to learn,” and “What I learned” with “What I know,” “What I observed,” and “What I infer”	□ improved observation and deduction skills □ the ability to identify and analyze available evidence □ improved literacy skills as inferencing skills are applied to make meaning of written texts

Teacher Notes: