Water Issues in the Media Lesson 11

Grade 8, Science and Technology

Critical Learning

- All media, including media about science and technology, are constructed.
- Media can shape our attitudes, behaviour, and ideas about the world.
- All media express explicit and implicit values.
- It's important to question media, to be aware how we interact with media personally, and to speculate about the way that media might be used.

Guiding Questions

- How do media influence what we know and believe about science and technology?
- How can I use the media and other resources to help me form my own opinions on an issue?

Curriculum Expectations

Relating Science and Technology to Society and the Environment
1. assess the impact of human activities and technologies on the sustainability of water resources.

1.2 assess how various media sources (e.g. Canadian geographic; the science section in newspapers; Internet websites; local, national and international news on television and radio) address issues related to the impact of human activities on the long-term sustainability of local, national or international water systems.

Learning Goals

Students will be able to:
- understand that different people and groups have different perspectives on issues
- examine media sources related to science and technology, and evaluate them for bias and perspective

Instructional Components and Context

Readiness
- Shared reading
- Listening strategies

Terminology
- Bias
- Implied messages
- Values
- Perspectives

Materials
- 3 media articles on a water issue suitable for a read-aloud

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Minds On (Elicit and Engage) | Pause and Ponder

Small Groups ➔ Responding from a Perspective

Explain **role play**, (e.g., its purpose and guidelines). Identify a current local news issue. Provide each group of 4-5 with (1) a card that identifies a community perspective and (2) a group 'hat' or other prop to signify their role. Display question prompts to provide a purpose for listening:

- What is the issue?
- On which "side" of the issue are you? Why?
- What do you think is the solution? Why?

Groups engage in role play. Debrief, focusing on understanding perspective and role play procedure.

Display or play a current media piece on a water issue in the media form just studied, (e.g., bottled versus tap water or selling water to the United States). Cue students to listen from their community perspective and to respond to the question prompts from that perspective.

Read Aloud, and use a think-aloud to demonstrate comprehension strategies, (e.g., making connections, where students might need support in making sense of the piece).

In a **Think-Group-Share**, groups discuss their group perspective on the media piece and record and post their thoughts. One member of the group dons the group hat to share the group's perspective with the class.

Facilitate a discussion to debrief the role play, focusing on how people respond to media from a range of perspectives.

Whole Class ➔ Brainstorming

Collectively brainstorm a list of water-related issues, recording and posting them in class.

QuickTip
Review active listening strategies prior to role play and read- aloud. See **Listening Guide**.

QuickTip
Provide feedback on credibility of perspectives and avoidance of stereotypes.

QuickTip
This activity is more effective if students understand the media form. Select a media form, (e.g., newspaper article, radio newscast, or online editorial), and share several examples with students. In groups, students identify common features, (e.g., for **news reports**). Debrief to co-create an **anchor chart** of key features of the media form.

Vocabulary: Define bias.

Action! (Explore and Explain)

Whole Class ➔ Taking a Critical Stance

Suggest that media are written from a variety of perspectives. Read aloud or play a second media piece on the same water issue. **Display questions for taking a critical stance.** Read the article loud again, this time doing a **think-aloud** that models how to use the questions as a lens for understanding the article.

Read or play a third media piece on the same topic. Use **carousel brainstorm**: Write one question for taking a critical stance on a piece of chart paper. Give each group one question and a different coloured marker. The group writes response to the question. At a signal, groups rotate to another question, taking their markers with them. They review the previous group's response and add their own comments. Repeat until groups return to their first question. Groups prepare a summary of responses and report out to the whole class.

Debrief, focusing on the issue of perspective in information sources and how it's possible to evaluate sources as credible. Co-construct an anchor chart with guidelines for evaluating information sources as credible and timely.

QuickTip
See the **Media Literacy Guide, pp. 4-5, the Critical Literacy Guide,** and the **Differentiated Instruction Literacy Cards**.

QuickTip
See the **Think Literacy Subject-Specific Examples: Library Research, Grades 7-12** for organizers and approaches to resource evaluation, pp. 20-23. Criteria include: authority, accuracy, currency, completeness, objectivity and format of the information source.

Consolidation (Elaborate, Evaluate, Extend)

Pairs ➔ Evaluating Sources of Information

Pairs of students select a water issue and locate at least two sources, (e.g., magazine, Internet, television, newspaper) on the issue. Independently, students read the sources of information, apply the critical questions, and complete a **Both Sides Now**. Students compare their thinking with partners.

Individual ➔ Reflection

Facilitate a brief **discussion**. In their Water Portfolio, students summarize their learning about interpreting and evaluating sources of science information, using the articles as examples.

QuickTip
Have sources ready for students who have difficulty finding resources independently.

 Minds On

Role Play

Role play is a strategy that that allows students to act out characters in a particular situation. This taking of positions enables students to explore others' concerns, values, and perspectives in a risk-free way.

Possible perspectives/roles include the following. Select those appropriate to each issue. A hat is suggested for each role; the purpose of the prop is to render the perspective visible and to facilitate assuming that perspective in a role play.

>**Businessperson** – your role is to make money for your shareholders and to have a profitable company *(fedora)*
>
>**Politician** – your role is to make sure you are re-elected *(top hat)*
>
>**Environmentalist** – you are interested in protecting the environment *(hat made from natural fibres)*
>
>**Farmer** – your role is to make sure you have enough water to grow your crops *(straw garden hat)*
>
>**Student** – your role is to make sure you have enough room to play and enjoy your sports *(baseball cap, skull cap)*
>
>**Climatologist** – you are concerned about climate change *(a sun hat or toque depending on season)*
>
>**Parent** – you are very busy and concerned with the well-being of your family *(mom – a visor; dad – a ball cap)*

Facilitate a discussion to debrief the role play:
- the likelihood of multiple perspectives of people writing about the same issue
- the question of whether it's possible for the writer of an article to be free of bias
- whether the media reflect reality or construct reality

Facilitate a discussion of the recorded perspectives: Identify:
- commonalities
- where each perspective might adjust and compromise
- how we might reach consensus, a win-win solution.

News Reports

Key features of the news report form include:
- headline including at least 2 of the most important - who, what, when, where, why, and how information
- a lead paragraph expressing at least 3 Ws and H
- short paragraphs of 1-2 sentences each
- inverted pyramid structure: most important information first, least important information last

Anchor Chart

An anchor chart is a strategy for capturing students' voices and thinking. Anchor charts are co-constructed. By making students' thinking visible and public, they "anchor," or stabilize and scaffold learning. Anchor charts should be developmentally appropriate and clearly focused, accessible, and organized.

Think-Group-Share

Think-Group-Share is one variation of Think-Pair-Share in which students discuss their thinking in a small group before sharing with the whole class. Sometimes, teachers structure the activity so that students discuss with a partner and then with a small group and finally with the whole class. Building from a Think-Pair-Share to a Think-Group-Share is a way to scaffold collaborative learning skills.

Bennett and Rolheiser (2001) describe Think-Pair-Share as "one of the simplest of all the tactics" (page 94). As pointed out by Bennett and Rolheiser and *Think Literacy* (page 152), students require skills to participate effectively in think-pair-share, such as:
- active listening
- taking turns
- asking for clarification
- paraphrasing
- considering other points of view
- suspending judgement
- avoiding put-downs.

These skills can be modelled and explicitly taught. During group work, teachers can provide oral feedback and reinforce expectations.

Bennett and Rolheiser (2001) note additional considerations:
- the level of thinking required in a think-pair-share
- accountability and level of risk, e.g., are all students expected to share with the whole group? (page 94).

See **Think Literacy Cross-Curricular Approaches, Grades 7-12,** pages 152-153.

See Bennett, Barrie, and Rolheiser, Carol (2001). *Beyond Monet: The artful science of instructional integration.* Ajax, ON: Bookation.

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Read Aloud

A read aloud is a planned oral reading of a text. It can be used to engage students while developing background knowledge and fostering critical thinking skills. As the teacher models oral reading, listeners build listening and comprehension skills and increase their vocabulary foundation by hearing words in context.

See **Think Literacy Subject Specific Examples, Language/English**.

Brainstorming

Students often assume that brainstorming is the generation of random ideas. Rather, brainstorming is an intense thinking process used by creative teams to generate ideas. Brainstorming requires attention, energy, persistence and divergent thinking. It also requires silencing the internal editor and building on the ideas of others. Divergent thinking strategies, (e.g., reversing concepts or combining unlike ideas) are helpful.

Action!

Questions for taking a critical stance:

Textual purpose(s)
- What is this text about?
- How do we know?
- Who would be most likely to read and/or view this text and why?
- Why are we reading and/or viewing this text?
- What does the composer of the text want us to know?

Textual structures and features
- What are the structures and features of the text?
- What genre does the text belong to?
- What do the images suggest?
- What do the words suggest?
- What kind of language is used in the text?

Construction of characters
- How are children, teenagers, or young adults constructed in this text?
- How are adults constructed in this text?
- Why has the composer of the text represented the characters in a particular way?

Gaps and silences
- Are there 'gaps' and 'silences' in the text?
- Who is missing from the text?
- What has been left out of the text?
- What questions about itself does the text not raise?

Power and interest
- In whose interest is the text?
- Who benefits from the text?
- Is the text fair?
- What knowledge does the reader/viewer need to bring to this text to understand it?
- Which positions, voices, and interests are at play in the text?
- How is the reader or viewer positioned in relation to the composer of the text?
- How does the text depict age, gender, and/or cultural groups?
- Whose views are excluded or privileged in the text?
- Who is allowed to speak? Who is quoted?
- Why is the text written the way it is?

Whose view: whose reality?
- What view of the world is the text presenting?
- What kinds of social realities does the text portray?
- How does the text construct a version of reality?
- What is real in the text?
- How would the text be different if it were told in another time, place, or culture?

Interrogating the text composer
- What kind of person, with what interests and values, composed the text?
- What view of the world and values does the composer of the text assume that the reader/viewer holds? How do we know?

Multiple meanings
- What different interpretations of the text are possible?
- How do contextual factors influence how the text is interpreted?
- What does the text mean?
- How else could the text have been written?
- How does the text rely on inter-textuality to create its meaning?

Think-Aloud

A Think-Aloud is an instructional scaffold that models thinking processes, making the invisible visible. In a Think-Aloud, the teacher verbalizes how effective readers process the text, (e.g., by monitoring comprehension and using strategies to construct meaning). While teachers can think aloud at any point in an instructional sequence, Think-Alouds are frequent during the modelling phase of the gradual release model and during Read-Alouds.

See **Think Literacy Subject-Specific Examples : Language/English, Grades 7-9**, *Engaging in Reading: Reading Between the Lines/ Inference*, page 3.

A Think-Aloud is a form of explicit instruction that requires teachers to be aware of their own thinking processes and that helps students think about their thinking. Developing metacognitive awareness is an important aspect of learning.

See **Metacognition Guide**.

Carousel Brainstorm

Carousel Brainstorm is a collaborative learning strategy for generating ideas about a topic. Also known as Graffiti, Carousel Brainstorm is usually set up by posting chart paper around the room with a heading or prompt. At each location, small groups are given a specified amount of time to record ideas from their talk. It allows for small group interaction and movement around the space. Groups rotate and review the notes on the chart paper before jotting additional ideas and questions. This procedure is repeated, usually so that each group has visited each posting. At the last stop, participants consolidate the information on the chart paper by drawing some conclusions, making connections, and identifying patterns.

See **Think Literacy Subject-Specific Examples: English, Grades 10-12**, p. 28.

Consolidation

Both Sides Now

Both Sides Now is a graphic organizer that helps students identify opposing points of view and draw conclusions. See an example on , **Think Literacy Subject-Specific Examples: Canadian History Since World War I and Civics**.

Both Sides Now		
Evidence that supports	**Question or Issue Statement**	**Evidence that opposes**
Decision		
Reasons		

Discussion

Examples of:

- the range of texts to which critical questions could be applied, (e.g., occasion cards, school textbooks, personal letters, advertising)
- how these questions help researchers select, interpret, and use sources of information
- how scientists in the lab try to counterbalance perspective and bias