ECO-DILEMMA!

Activity Information:

Grade Appropriate Level: Grade 10-12
Duration: 30 minutes for activity introduction, describe roleplay & rules & approximately two 40-minute periods for the roleplay sessions, and discussion, not including student research and preparation of presentations.

Materials: Large floor space with room to display poster boards. Simple costume/prop items like hard hats, protest signs, stuffed animals or hiking gear can be included to increase the fun. *(optional).* Marking Rubric provided.

Objectives
Through a [townhall meeting scenario,](#) students will creatively explore topics related to sustainable forest management, think critically about all competing values and develop their problem-solving and conflict-resolution skills.

Introduction:
Advise students they will participate in a townhall meeting, which is a public gathering of residents of all views, to hear and discuss proposed plans impacting a community.

Prescribed Learning Outcomes: English, Social Studies, Science

Scenario/Context:
In the city of (INSERT NAME), an area of five hectares ([like five](#) [football fields)](#) is proposed for timber harvesting. The area is public land near a popular lake, and hiking trail that is not part of a provincial or designated park and about 15 kms from the rural town centre. The proposed logging area can't be seen from the road where tourists travel.

Some unique species of plants and animals live in the area that some residents fear may be impacted if trees are removed. The public has expressed concerns about this plan so the town hall meeting is a chance for everyone to gather and hear all points of view and that of "roleplayed experts (students)" before the plan is reviewed and/or approved by the provincial government. Various, local Indigenous groups have expressed both support and concern about the plan so far. As part of economic reconciliation, some of the Indigenous are part-owners in the

logging company. Because the area is at risk of forest fire, due to its close proximity to the town's homes and businesses, a decision must be made quickly as fire season approaches. The B.C. town Lytton was destroyed in a 2021 forest fire, with other towns like Barriere and Kelowna were severely damaged in previous catastrophic fires. At least 238 homes were lost or damaged in the 2003 Okanagan Mountain Fire in Kelowna.

The logging plan proposes to remove both dead trees susceptible to forest fire and some healthy trees that are needed for local mills to create timber used to build homes, create jobs and other forest products used in daily life. (For example, did you know toothpaste has some forest products?)

The B.C. government's Firesmart manual recommends removal and thinning of trees that are close to residential communities. (Watch our video about forest fire prevention).

Meanwhile, old-growth protestors are attempting to halt any logging in the area. B.C. Premier Horgan has asked them to stop, suggesting they're just creating conflict for fundraising purposes. Some protestors are stopping traffic from entering or leaving the town, blockading roads for hours, causing missed doctor appointments and daycare pickups. Some people are angry while others are neutral or unsure. Others are sympathetic with the protestors.

Tempers are high and no one in charge has suggested any solutions!

Some local residents whose jobs at the mill depend on the local harvesting plan going ahead are concerned their mill will shut down if these trees aren't harvested.

As students, this is your chance to collaborate with those who may not share your views, make your case and together maybe create a plan that can accommodate all the concerns!

Instructional Strategies:

1. Assuming a class of approximately 30, split students into the following groups representing the various roles they'd represent (about 3-4 students per group role):

   ROLES:
   - Forest Industry/Company
   - Environmental Expert: Wildlife Biologist or Water Quality Technician
   - Park enthusiast (Hiker, Camper etc.)
   - Government Regulator (Ministry of Forests)
   - Old growth protestor
   - Members of public (residents concerned about forest fire, residents who are unsure, neutral, worried about machinery noise etc.)
   - Minister of Finance (Local Provincial Politician MLA) who collects a portion of the revenue from trees that are harvested and sold, which is used to fund hospitals/health care, education (schools, salaries) & social programs townsfolk depend on.
   - Forestry Worker/Union/Labour member

If you can, invite someone from the Indigenous Community such as the Indigenous Resource Network to participate and contribute indigenous perspectives.

Give each group the scenario (described above).

After they read the scenario, teacher to do a quick show of hands to ask students how many would be in favour of the harvesting plan and how many against? (KEEP TRACK OF THOSE RESULTS FOR LATER IN THE LESSON).

Ask what percentage of BC's forests do students think are logged each year? Did anyone get it right?

95%
of BC forests are
publicly owned

200M
seedlings planted
annually

0.35%
of BC forests
harvested yearly

41M
hectares
of certified forests in
BC

Answer here. (from NaturallyWood.com a partnership between BC and Canadian governments, industry and academics.) *Naturallywood Infographic above.*
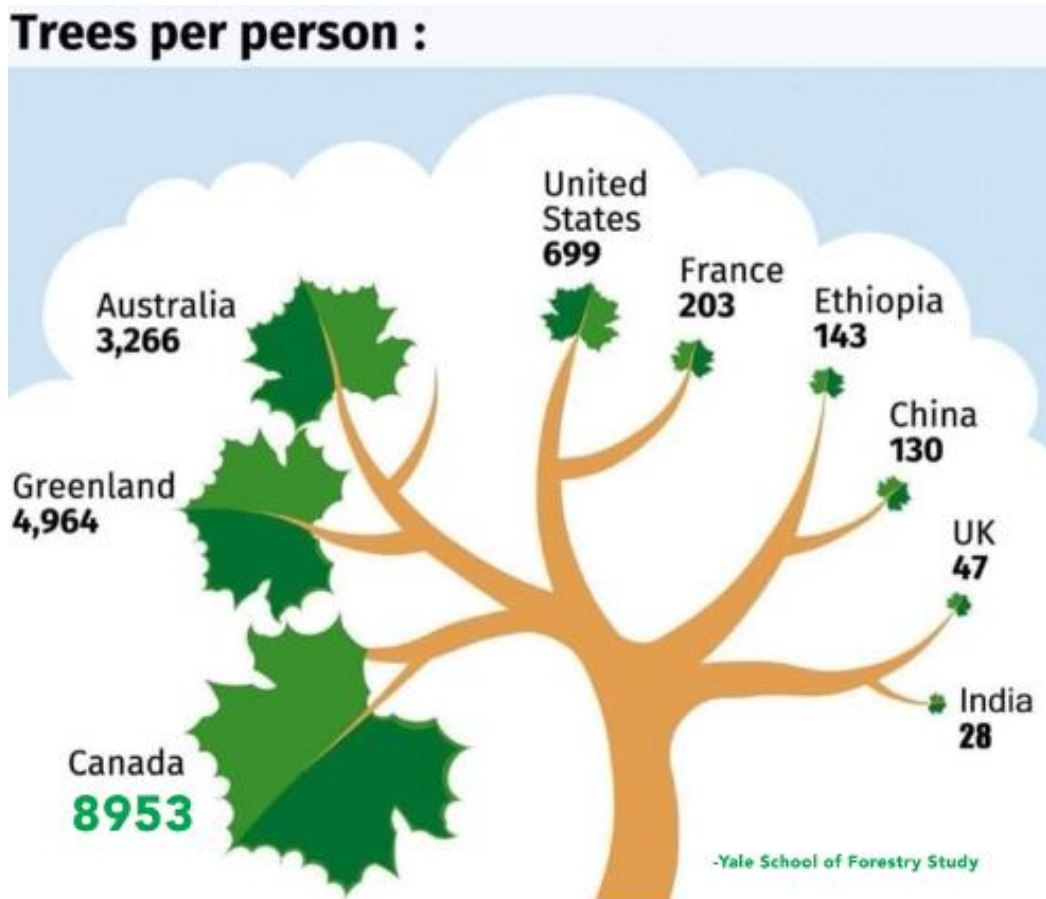
Question:
Ask students how many trees per person exist in Canada?

Then share this answer from Yale University with them afterwards.

Did anyone guess close to the right answer? (Prizes optional)

Answer: Yale University study found Canada has 8,953 trees per person.

Trees per person :

Australia
3,266

United
States
699

France
203

Ethiopia
143

China
130

Greenland
4,964

UK
47

Canada
8953

India
28

-Yale School of Forestry Study

2. Teacher to keep track of those initial voting support and opposition results as you'll ask that same question again after all groups have presented to see if any opinions have changed. Once students are in their set groups, they would conduct some internet research for their group to help determine their key presentation points for their town hall meeting. Their research should be in bullet points with charts/diagrams on poster boards, citing sources. They can interview local experts as part of their research if time permits. Ensure students get a good balance of sources that aren't just Wikipedia or from one special interest group. Did they check for bias? Are their statistics from credible sources or just a social media post or single news article?

3. Teacher to determine the amount of time for each group playing a role to present. Feel free to adjust timing as needed to fit class time constraints.

4. Each role group should share draft outline with teacher to review through google doc or other collaborative tool before pasting their points on the poster board. Then, students put their group presentation onto the posterboard, appoint a group presenter who would also have presentation notes. Each presenter would refer to the poster board for class presentation at mock town hall meeting. Walk the "public" through all their points. Be

   prepared to answer questions. Students should rehearse, practice their presentation with group members, parents etc. to ensure it's on time, clear and coherent. Have some FAQs ready (frequently asked questions) in case they're asked.

5. Allow enough time for questions for each group (and for the teacher) from all those present at the town hall.

6. After all groups have presented their findings, Teacher to ask the same question about how many would support or oppose the harvesting plan now having heard from all of the groups? Did the numbers change, why or why not? What was learned? Can compromise be found? Share the poster boards with the rest of the school if it is possible to allow students to display and explain their group's position.

Reflection: Do students have a better understanding of the complexity of managing BC's natural resources and the balancing act between environmental, economic, social and Indigenous values? Would they be interested to note that the jobs in this field are some of the highest paid in Canada? In 2019, the average Canadian job paid just over $56,000/yr. "In 2019, natural resource jobs paid an average of $96,280 per year. The average Canadian job paid just over $56,783. Jobs in the energy sub-sector paid the highest annual wages & salaries, at $113,691 in 2019." - Statistics Canada

Were presentations coherent, concise and persuasive? Did students present clearly, speaking with authority on the subject and making eye contact with the audience? Did they answer questions to the best of their knowledge or if unsure of the answer, transparently suggest they'd look into that and get back to the audience?

Did students conduct appropriate research from multiple sources? Were any minds changed as a result of listening to all those views? A MARKING RUBRIC is provided. Scroll down past the links section.

Extension Activities:

Brainstorm the many careers associated with forest management. For example, is a helicopter pilot who flies foresters into remote areas a "forestry job"? Is someone who does soil sampling in a river as part of a tree harvesting plan a "forestry job"? Discuss.

FORED's YouTube videos interview a variety of Indigenous and non-Indigenous people who work in forestry and other natural resources and profile some inspiring youth leaders like Simon Jackson who helped competing interests craft a land-use plan that protected area for the white Kermode Bear (Spirit Bear) while balancing timber harvesting and Indigenous values.

SUSTAINABILITY CAREERS & Interviews with working professionals
https://www.youtube.com/user/SustainabilityCareer/videos

CAREER WEBSITES:
Environmental Careers Organization (ECO) Canada
Job Bank (Government of Canada)
Volunteer Connector
Charity Village
VolunteerMatch
WorkBC
Association of BC Forest Professionals students page
Town Forest Management Strategy Township of Langley
https://indigenousresourcenetwork.ca/
https://studentsforcanada.ca/
BC Government Natural Resource Operations
Nature Lab Forestry
BC Legislation around Forestry including Wildlife Tree Preservation
BC Homeowner Firesmart Manual
https://www.naturallywood.com/

FORESTRY LINKS:

Lignum
Canfor
West Fraser Timber
Timberwest (acquired by public sector pension funds) This forest company was bought by pension funds of

public sector workers. Good teaching point about how some people are invested in forest companies and maybe don't even know it!

Teal Jones Group
Forestry Innovation & Investment
Get Prepared (federal government wildfire page)
Mosaic Forests BC
UBC Faculty of Forests
Habitat Conservation Trust Foundation
Canadian Parks and Wilderness Society
Federation of BC Naturalists
BC Ministry of Forests
Canadian Institute of Forestry
Canadian Wildlife Federation
McGregor Model Forest Association
Naturally Wood: A partnership between the forest industry, research institutions, the federal government, BC government and other stakeholders.
Resource Works

INDIGENOUS LINKS:

Indigenous Resource Network
BC Ministry of Indigenous Affairs and Reconciliation
B.C. First Nations Forestry Council
Indigenous Partnerships Success Showcase
First Nations LNG Alliance View some advice from Karen Ogen-Toews, the CEO of the Alliance below on our YouTube site.
B.C. First Nations Forestry Council

MARKING Rubric On ECO-DILEMMA Lesson Plan

Project Goals:

- find information from multiple and credible sources on a topic
- present the research students found into coherent, poster board sections and written notes with references cited
- use appropriate graphics (either made by the student in a tool like Canva, or copied with source cited
- create a poster or visual display with a theme and proof points supporting their conclusion
- use talking points with authority to a small audience and knowledgably answer questions
- examine bias and unbiased sources of information Student expectations:
- introduce their topic with a central theme and proof points based on accurate, informed research
- offer adequate data so another person can understand and see the theme/conclusion being supported
- specific examples of their topic locally and globally and how their topic relates to sustainability

*Teacher may weight/grade the project as desired. Some may choose to focus more on written work while others may rank speaking presentation style more highly. Teacher may also use a group evaluation if appropriate and

modify for special needs learning styles. Some special needs students may want to present to a teacher solely.

RUBRIC Resource links: https://uwaterloo.ca/centre-for-teaching-excellence/teaching- resources/teaching-tips/assessing-student-work/grading-and-feedback/rubrics-useful-assessment-tools

https://teaching.cornell.edu/teaching-resources/assessment-evaluation/using-rubrics

https://examples.yourdictionary.com/simple-rubric-examples-for-teachers.html

SCROLL FOR MARKING RUBRIC on NEXT PAGE.

TIMELINES

SECTION	DUE DATE	COMMENTS
Topic (theme) and Outline		
Ideas & Sources for Data Collection		
Proof points (rough) based on research		
Graph or Infographic of Data plus visual examples		
Final Diagrams and Pictures Rough Draft of speaking notes		
Final Poster & Oral Presentation with notes		

Marking Rubric:

WRITTEN COMPONENT					
	1	**2**	**3**	**4**	**5**
Sources	Less than 2 sources, some not reputable	Less than 3 sources; not reputable	4 sources; 2 reputable, or less than 4 sources	4 sources; at least 3 reputable	more than 5 reputable sources
Organization/ Presentation	Disorganized, information not well laid out	Only a few distinct sections, not well ordered	Generally, well sectioned and ordered	Mostly logical section, most parts well ordered	Logical sections, well laid out and ordered
Central Theme/ Question(s)	Narrow question, or no question.	Narrow question with easy answer that does not encourage study.	Broad question with some area for study	Broad and meaningful question with good potential for research.	Detailed and meaningful question with good potential for research
Scientific Basis	Most facts demonstrate little understanding of the topic	Some facts copied or demonstrate lack of understanding	Some detailed facts based on sound science; some demonstration of understanding	Some detailed facts based on sound science; good demonstration of understanding	Detailed facts based on sound science that indicate understanding
Extent of Research	very little research	A little research	minimum amount of research	Good amount of research and effort	Indicates extensive research and effort
VISUAL COMPONENT					
	1	2	3	4	5
Posterboard or Powerpoint	Not eye catching; does not highlight topic or sections, poorly put together	Does not really highlight topic or sections, appears rushed or not well put together	Highlights topic; and few to no sections; generally well put together	Highlights topic and some sections; somewhat eye catching; generally carefully put together	Highlights topic; highlights sections; eye catching; carefully put together
Visuals/Infographics	Few visuals, not labelled or missing source/citation; do not enhance information.	Few visuals; some labelled/cited; do not really enhance information	Some visuals that enhance information. Labelled/cited but not organized or presented while speaking	Nicely organized to enhance information; labeled but not clearly explained	Nicely organized to enhance information; labelled/cited, clearly explained.
ORAL COMPONENT					
	1	2	3	4	5
Speaking style	Did not speak or did not appear to know what to say or how to use the poster to enhance their speech	Sometimes appeared unsure; did not refer to poster to enhance speech	Sometimes spoke confidently and made eye contact; sometimes used poster or visuals well with speech	Mostly spoke confidently and made eye contact; mostly used poster or visuals well with speech	Always spoke confidently and made eye contact; used poster or visuals well with speech;
Knowledge	Did not demonstrate much knowledge of the topic.	Only able to read off notes, not able to demonstrate a Concrete knowledge of topics.	Knew some of the info but read off notes; could not answer most questions.	Knew most info; made few references to notes; could answer some questions	Knows information from memory and could answer questions confidently