

Jigsaw Activity - Pros & Cons of Energy Sources

Learning Goal:

Students will understand various sources of electrical energy and articulate the environmental, economic, and social pros and cons of each energy source.

Instructions:

Step 1: Organize the class into groups of five.

Step 2: Have each group member choose a different topic to research: a) natural gas b) in-situ oil sands mining c) solar d) wind and e) hydro. Use the template on the next page. Encourage students to focus their research on these types of energy sources **in Alberta** as much as possible.

Step 3: Put students in the class who are working on the same energy source into “expert groups” to work together on their research (e.g. everyone researching solar can do their research in a group together).

Step 4: When groups are finished and understand their energy source, have them return to their original jigsaw group and take turns teaching their group members about their energy source. Provide students with extra templates so that they can fill them in while they learn from their peers.

Resources to get started:

Link	Source
https://energyiq.canadiangeographic.ca/main/energy_map#3&-203+91&94+53&1&0&1	Canadian Geographic Energy Map
https://www.oilsandsmagazine.com/technical/in-situ	Oil Sands Magazine
https://www.teachpeel.ca/lesson-plans	People for Energy and Environmental Literacy (PEEL). Lesson Plans 3-9 about energy sources
https://www.studentenergy.org/topics	Student Energy
energyeducation.ca	University of Calgary

Name: _____ Homeroom: _____

Energy Source: _____

Explain or draw a picture of how the energy source is converted into electricity or heat

Environmental Pros and Cons

Examples: Land use, water use, carbon emissions, impact on biodiversity & endangered species

Pros	Cons

Economic Pros and Cons

Examples: Overall cost, cost per kilowatt hour, revenue, consumer cost

Pros	Cons

Social Pros and Cons

Examples: Job stability, impact on communities, impact on health

Pros	Cons