

Interconnection and the Earth's Spheres – Final Assignment

Do you know what is happening in your local, provincial, and nation-wide communities, and how actions or events are affecting Earth's spheres? This assignment will provide you with the opportunity to learn more about environmental activities that may be affecting the sustainability of Earth's spheres.



Guiding Question

In what ways are human activities affecting Earth's spheres in your community?

Step 1

Read through the ideas below and think about other environmental issues you may have heard of or are interested in learning more about. Each of these actions affect the Earth's spheres in many ways

- Using the herbicides Roundup and atrazine in a backyard garden
- From 1948 to 2021, Canada has experienced a 1.9°C of warming over that period
- Rising river levels and mosquito populations
- Sea surface temperature has been consistently higher during the past thirty years than at any other time since reliable observations began in 1880s
- Wildfire burning near Hope and Manning Park
- Destruction / Logging of Old-Growth Forests in B.C.
- Selenium Pollution from Coal Mines in Elk Valley B.C.
- Dam collapse at Mount Polley Mine that sent 24 million cubic metres of mine waste into Quesnel Lake and Hazeltine Lake
- Canada will ban the sale of fuel-burning new cars and light-duty trucks from 2035 in an effort to reach net-zero emissions across the country by 2050
- Effect of construction in Silver Valley (Maple Ridge) on wildlife habitats
- The effects of diverting water for a construction site (lowering water levels in streams and rivers)
- Adding fertilizers to a local field changes the makeup of the soil
- Proposal for a 26-home subdivision development on the banks of the Alouette River, at 240th Street
- The growing human population in Ridge-Meadows is filling a landfill site with wastes faster than originally planned. The site must be expanded, or another solution must be developed
- Forests are being cut for timber or cleared for land development
- Identifying and extracting oil and natural gas deposits from under the ground
- Mining commercially important minerals (BC and Canada)
- A report commissioned by Canada's Environment and Climate Change Department, warns that the country's oceans are going up between 1 millimetre and 4.5 millimetres each year.
- The City of Vancouver says coastal residents (Sea Wall; Kitsilano; etc...) can expect to see one metre of sea level rise by the year 2100, which would have serious effects on the ecosystem of Vancouver's shoreline.

Step 2

Pick an environmental issue / event for your assignment.

Step 3

Conduct research about your issue and any connection there may be to a local, provincial, or nation-wide community. Make sure you are using **reliable and credible** sources. Keep track of any source you use in a “References” list.

Step 4

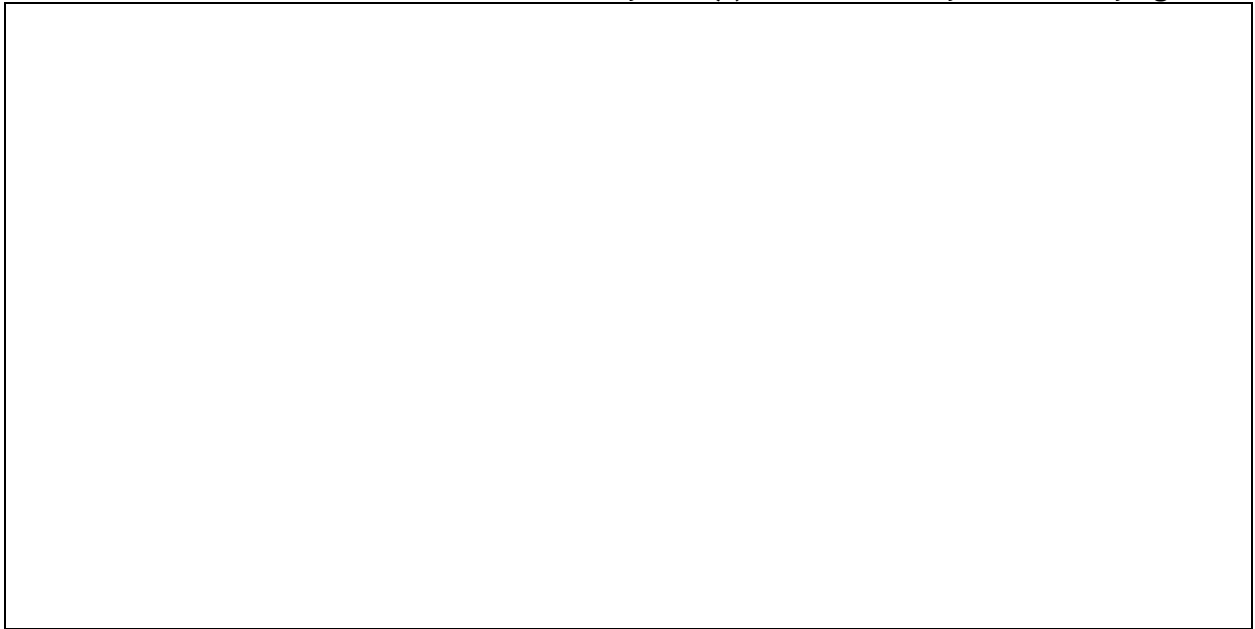
Identify which of the Earth’s spheres is being **immediately** affected by your issue. Explain how and why there is an immediate effect.

Step 5

Identify how other spheres may be affected because they are interconnected. What secondary consequences may occur as a result of the environmental issue you selected.

Step 6

Identify any ecosystems that may be affected by your issue. Make sure that you identify the abiotic and biotic factors that are relevant to the ecosystem(s) and issue that you are studying.



Step 7

Create an infographic, PowerPoint, poster, pamphlet, essay, video, or other project to present your findings. You may also choose to present your findings in other ways! Talk to your teacher if you have any questions

Step 8

Answer the following reflection questions:

1. What did you learn about the ways that human activities are affecting Earth's spheres?
2. What actions could be taken to reduce the impacts that you outlined in your assignment?
How could these activities be carried out sustainably?