



Biodiversity and Contaminants

Organization:

Title: Biodiversity and Contaminants

Summary: Students will be provided with a visual of a healthy ecosystem compared to an unhealthy ecosystem, to which they will then research how different species within that area are affected by contaminants.

Inquiry Question: Inquiry Question 4: What are Some Common Threats to Biodiversity?

Duration: 30 minutes to get started, research periods are up to teacher's discretion.

Learning Environment: Indoor

Season: All

Materials:

- Biodiversity and Contaminants.pdf
- Ecosystem Images.pdf

Curriculum Links:

Science and Technology: A1.1, A1.2, B1.1, B2.1, B2.2, C1.2, E2.8

Meta Data:

Content Type: Activity

Bundle: Gifts of the Earth

Theme: Biodiversity Crisis

Subject Area: Biology, Science

Curriculum Focus: 7

Instructions:

Contaminants in the Environment as a Threat to Biodiversity

1. Students learn about the impact of contaminants on biodiversity by familiarizing themselves with the following study, using the summary provided in **Biodiversity and Contaminants.pdf**

Patterson, S. A. (2019). The toxic effects of oil sands contaminants on developing amphibians [Master's thesis, Queen's University]. QSpace Library.

By reviewing study students learn that bitumen has a powerful impact on many species including wood frogs. This is especially problematic since wood frogs have many important functions in an ecosystem including, helping to control insect populations, acting as a food source, filtering water as tadpoles, eating pest species, etc.



2. Students engage in activity outlined in **Biodiversity and Contaminants.pdf** that helps students visualize biodiversity and gives them the opportunity to research how contaminants affect members of an ecosystem. Through activity students also reflect on what this means for the overall functioning and health of an ecosystem.