

YOUTH FOR WATER AND CLIMATE ACTION

EXPLORING OUR WATERSHED

Lake Champlain

Grade Level:

9-12

Timing:

1-2 class periods/90 minutes

Subjects:

Environmental Science, Earth Science, Biology, Chemistry

Learning Objectives:

- +Reflect on nearby waterways and issue impact
- +Make predictions and plans for future scenarios and ecosystem-based management solution
- + Investigate local climate and water issues
- + Share and compare learnings with peers and/or local stakeholders

Driving Question:

What are the biggest water and climate issues impacting my region and how does that influence the present and future of the local environment?

Summary:

Students will work in groups (or as individuals at home) to learn more about one of the following topic areas related to water and climate change in the winter months: heavy precipitation, aquatic invasive species (AIS), harmful algal blooms (HABs). Local data, case studies, and youth-led solutions are presented in the form of individual topic area fact sheets. Students will share their findings, integrating water data, research about ecosystem-based management solutions and current regional efforts. Students will share their findings with peers in the classroom and/or project partners across the region.

Regional Connection:

Water and climate issues vary greatly across regions and also between waterbodies located within the same region. During this lesson, students will take a closer look at the issues of heavy precipitation, aquatic invasive species (AIS), harmful algal blooms (HABs), and will compare and contrast the impacts locally and across regions.

NYS Science Learning Standards (NYSSLS)

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

Climate Literacy Principles, Water Literacy Principles:

Solutions to environmental problems can balance the needs of people, nature, and the economy through science-based decision making.



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Supplies:

Individual Water and Climate Issue Fact Sheets

Advance Homework:

- a) Create topic groups based on Factsheet themes and have them read the relevant Factsheet for homework, prior to class.

In class:

- b) Group students together based on their assigned factsheets to discuss the questions on their assigned factsheets.
- c) Have students share their findings to the rest of the class.
- d) As a class, watch the following videos:

[Toxic Algae Blooms](#)

[Adirondack lakes: Insights into a changing climate](#)

- e) Discuss the following as a class:

- **How might Adirondack lakes be impacted by warmer fall temperatures?**
- **How might heavy precipitation events impact other water quality concerns such as road salt or HABs?**
- **What might we hope to learn more about?**

