

# WATER EDUCATION

For Grades 6-12



Cascade Water Alliance offers fun, hands-on lessons for students to explore the fascinating world of water! All lessons are tailored to our region and are offered, free of charge, to schools within the water service areas of Cascade members.

## AquaPals

[Grades 6-12]

Cascade Water Alliance and Nature Vision have developed the AquaPals program to facilitate student awareness on local water conservation practices. Classes may participate in AquaPals in one of two ways: as a one-time project day after an initial Cascade Water Alliance sponsored program or as a Blue Team series where the class receives multiple programs that culminate in a project day. If classes choose the one-time project day, they will design posters to highlight water saving methods and discourage water wasting habits with their entire school.

[Contact us](#) today to learn more or register!

## Salmon Cycle

[Grades 6-12]

Discover the connection between salmon, people, and the water we share. The salmon life cycle and what this keystone species requires from its ecosystem is discussed. Students will explore water quality issues and understand why healthy salmon habitat is good for Northwest ecosystems and people, too!

## Water Supply

[Grades 6-9]

Do you know where your drinking water comes from? Discover the path clean water takes from its natural source all the way to your faucet! Students will explore the human and natural factors that affect our water supply, and what actions they can take to keep this important natural resource pristine as our population grows.

All programs can now be taught in small groups in person, remotely via video call, or in hybrid format with a shortened lesson and supplemental materials:  
<https://naturevision.org/cascade-water-alliance/#remoteteachingprograms>

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## Drip Irrigation

[Grades 6-7]

Students will explore how drip irrigation systems can help us use water more efficiently in home and school gardens. Students will experience an example of systems thinking between natural cycles and human-built environments through interactive games and models.

## Watershed Ecosystems

[Grades 6-8]

We all live in a watershed, and it is up to us to keep the water that flows through it clean and plentiful. We introduce students to their own local watershed and to the plants and animals that share this important ecosystem with us. Students will also learn how a healthy environment cleans water naturally and gain insight on the impact of humans on this system. Positive human actions on the combined natural and human built environments are discussed. It is okay to register as a separate program or as prerequisite to Watershed Field Experience.

## Water Conservation

[Grades 6-9]

Did you know that our area receives less rainfall in the summer months than Miami, Florida? Join us for an interactive lesson that will explore what our community can do to conserve our water indoors and outdoors. Students will learn why we need to save water and what every person can do to use water wisely to help keep more water in our local water bodies for wildlife and future generations.

*Programs are provided by:*



CITY OF  
**ISSAQUAH**  
WASHINGTON



# WATER EDUCATION

## Microplastics

[Grades 6-8]

Plastics have only existed for a short time, but have largely impacted our environment. We typically think of larger plastic pieces as pollution, but recently scientists have begun to study the impact of microplastics on our environment. This multi-session program focuses on the creation and transportation of microplastics, how they impact our water resources and environment, and what we can do to work toward a solution. Students will learn about how everyday people are helping scientists gather data, with an optional teacher-led participation in community science data collection.

## Microplastics

[Grades 9-12]

Recently scientists have begun to study the impact of microplastics on our environment. This multi-session program focuses on the creation and transportation of microplastics, how they impact our water resources and environment, and what we can do to work toward a solution. Students will engage in debate regarding individual and collective action to address this issue and have the opportunity to engage in optional teacher-led community science data collection.

## Carbon, Climate, and Conservation

[Grades 6-8]

Humans have a direct impact on climate change due to our use of resources like water and fossil fuels. This class covers the basics of the carbon cycle, carbon sequestration, and the connection between climate change and water conservation. Students will learn how to measure the amount of carbon stored in trees, to calculate their carbon footprint, and to consider individual and collective solutions to this global issue.

## Carbon, Climate, and Conservation

[Grades 9-12]

Climate change is one of the most pressing issues of our time. In this class, students will learn how human resource use impacts our carbon emissions, in addition to the impact this has on global climate. Students will discuss the benefits of reforestation and carbon sequestration and the challenges that individuals and communities must address when implementing solutions.



# WATER EDUCATION

## Water Cycles Round

[Grade 6]

Review the steps of the water cycle and pretend to be a water droplet. Travel to all the places water goes within the water cycle, including lakes, rivers, streams, mountains, the ocean, plants, animals, and you! Understand simple ways to conserve water at home.

## All About Groundwater

[Grades 6-8]

Did you know that groundwater is an important water source for our local community? By using a watershed model, students will explore how groundwater is connected within our larger watershed systems, how our communities access groundwater, and what we can do to protect groundwater within the watershed.



## Natural Filters

[Grade 6]

We will conduct this class in your schoolyard. Learn how nature filters the water that flows through our ecosystem. Students will participate in a demonstration of how wetlands clean water.

## Healthy Water, Healthy Soil

[Grades 6-8]

Through this hands-on lesson, students will gain an understanding of soil function and physical properties. Students will observe soil texture, structure, color, infiltration, test for key nutrients, and analyze soil pollution. We will make connections between soil composition and the impact of our daily water choices on the natural environment.

## Healthy Water, Healthy Ecosystems

Grades [9-12]

Experiment with soils from different watershed ecosystems in Washington and develop an understanding of what each ecosystem needs to be healthy and sustainable. Conduct an analysis of plant needs and create a restoration plan that matches an appropriate soil within an ecosystem. Determine how soil pollution creates disruptions within these ecosystems.

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## Dealing with Drought

[Grades 6-8]

Water is life, but what happens when there isn't enough to go around? This program explores how and why droughts occur, their impact on the ecosystem, and ways people can help make sure that all living things have the water they need to be happy and healthy.

## Dealing with Drought

[Grades 9-12]

Water is vital to life on Earth, but it isn't always easy to get. This program explores the natural and human causes for water shortages and what we can do to make sure that people, plants, and animals all have the water they need.

## Wildfire in the West

[Grades 6-8]

Wildfires are a natural and necessary part of our environment, but they can also be harmful. Learn how fire benefits our environment and what people can do to keep fire under control so our human and natural communities are safe.

## Wildfire in the West

[Grades 9-12]

Wildfire is a vital aspect of our ecosystems making room for new growth and helping some plants reproduce. With drier weather and warming climate, fires can also pose a danger. This program explores the benefits of fire to the ecosystem and what we can do to keep these fires from being harmful.

## Water and Energy:

### What's the Connection?

[Grades 6-8]

Understanding the connection between water and energy is an important part of conservation. When we save water we save energy, prevent carbon emissions, and help the environment.

## Water and Energy:

### What's the Connection?

[Grades 9-12]

Understanding the connection between the water and energy we use helps us care for our environment. This program explores this connection through real world tools and scenarios that explore how students can save water/energy, and reduce carbon emissions for a sustainable future.



# WATER EDUCATION

## **Watch the Flow Above and Below**

**[Grades 6-12]**

People need to use water wisely as it cycles through our human-built environment. Students will learn the basic infrastructure of how water flows from nature, through our cities and towns, and back again, and the impact of human behavior on water systems.



## **Watershed Field Experience**

**[Grades 6-12, Field]**

Students will visit a local lake, wetland, or pond near their school and explore it with a naturalist. Students will observe plants and animals in this environment, examine and identify local freshwater invertebrates, and will learn about the health of our greater watershed systems. Students may also participate in water quality tests for oxygen, pH, temperature, and more.

## **Aquatic Insects Dip Field Experience**

**[Grades 6-12, Field]**

Students visit a local accessible water site (pond, lake, or stream) and examine and identify aquatic insects based on which are water quality indicator species. Students may also participate in water quality tests for oxygen, pH, temperature and more. This program focuses on the importance of biodiversity within ecosystems and protecting watershed health.

**Bring Hands-on Science Lessons to Your Classroom!**

# WATER EDUCATION

**Engage your students  
with customizable  
science programs!**

## **Blue Teams**

**[Grades 6-12]**

Blue Teams are customized learning modules taught by a Nature Vision Educator. Each participating classroom completes a stewardship project that raises awareness of the importance of water. Projects may consist of native plant restoration that requires little water or other water conservation ideas. Blue Teams require a commitment of four to six hours to complete the classroom programs and stewardship project.

## **Community Science**

**[Grades 6-12]**

Students will investigate a local body of water after learning about water monitoring procedures and scientific research. Using these new skills, they will collect and analyze real-world data in order to help local scientists monitor the health of their watershed. These programs can be arranged either as a stand-alone series of classes or as a part of a longer Blue Team module.



**To schedule a program or field trip, visit  
[naturevision.org/program-registration](https://naturevision.org/program-registration)**

If you have any questions regarding Cascade Water Alliance, please contact Mike Brent, Water Resources Manager, at:  
**(425) 453-1810**