



UPPER DESCHUTES  
WATERSHED COUNCIL

# EDUCATION PROGRAM

Connecting youth to the natural world by providing place-based education opportunities for children throughout Central Oregon



## THE UPSTREAM PROJECT

The Upstream Project is a dynamic watershed education program that focuses on providing local K-12 students with immersive, hands-on education experiences through streamside science, creative writing, stewardship, exploration, and art. Seeking to educate and empower the next generation of watershed stewards, we have developed interdisciplinary activities and curricular materials that inspire students to connect to our rivers and streams. Many of our programs are aligned with Next Generation Science Standards and can be catered to your curricular needs. Whether through outdoor field experiences or a classroom visit, we look forward to supporting your classroom and inspiring your students with our holistic watershed education program!



“ Our students were able to explore Whychus Creek and learn about its history, challenges, and restoration opportunities. Thanks to the Upper Deschutes Watershed Council, students spent multiple days creating beautiful artwork and poetry to express their newfound sense of place and sense of stewardship for the creek! ”

- Samra Spear, Sisters High School





# THE UPSTREAM PROJECT

## ONE WATER

### Learning objectives

Through six in-class sessions and two field experiences, students will explore where our water comes from, who uses it, where it goes after it is used, how it is treated, and how they can conserve and protect this vital resource. This program is designed for 5th grade and high school students.

### Timeframe and season

One to two-and-a-half hour programs offered in the classroom and outside throughout the year.

## STUDENT STEWARDSHIP PROJECTS

### Learning objectives

Through research, project monitoring, writing, art, science, and outdoor exploration, students learn about local stream restoration and complete their own stewardship projects. In the spring, students may have an opportunity to present their watershed findings at *Students Speak: A Watershed Summit*.

### Timeframe and season

Half to full-day activities throughout the year.

## HOMETOWN WATERS

### Learning objectives

Students will explore the Tumalo watershed through science and hands-on learning. One program within Hometown Waters is *Tribal History/Shared History*, a curriculum developed and approved by the Confederated Tribes of Warm Springs. *Tribal History/Shared History* guides students to learn about Native American history and explore connections between nature and culture.

### Timeframe and season

Half to full-day activities throughout the year.

## STUDENTS SPEAK: A WATERSHED SUMMIT

### Learning objectives

Students of all ages are invited to showcase their stream stories, artwork, science projects, or music at *Students Speak*, our watershed summit held annually in May. This is a unique opportunity for students to take the stage and share their watershed projects with their teachers, parents, and peers in a professional forum.

### Timeframe and season

May.



# OUR NGSS-ALIGNED CURRICULUM

*The Next Generation Science Standards (NGSS) are nationally recognized K-12 science content standards utilized by schools throughout Central Oregon and beyond. These standards communicate learning and performance expectations in regard to specific science content, and we align much of our watershed education curriculum to reflect these standards throughout each grade level.*

## KINDERGARTEN

Through hands-on activities, students deepen their awareness and stewardship of local rivers and streams. They will observe patterns in how plants and animals meet their survival needs and adapt to their environment. Students will explore solutions that reduce human impacts on land, water, and wildlife. Activities include studying fish, insects, and plants in and around the stream, while developing a connection to the local ecosystem.

### Standards

K-LS1-1; K-ESS2-2; K-ESS3-1; K-ESS3-3

## SECOND GRADE

Through hands-on activities, students will engage in observation and stewardship of watershed ecosystems. They will explore plant and animal diversity in different habitats, study rivers and streams in Central Oregon, examine watershed structures, and investigate the impacts of water on the land. Activities include riparian plant studies, macroinvertebrate sampling, exploring healthy stream habitat features, and lessons about the water cycle.

### Standards

2-LS2-1; 2-LS2-2; 2-LS4-1

## FIRST GRADE

Through hands-on activities, students engage with their local rivers and streams, building awareness and developing a sense of stewardship. Students will investigate how plants and animals have various structures which enable them to survive in different environments. Activities include studying fish, insects, and plants in and around the stream, highlighting how the adaptations of these organisms support their survival.

### Standards:

1-LS1-2; 1-LS3-1

## THIRD GRADE

Through hands-on activities, students will engage in observation and stewardship of watershed ecosystems. They will investigate how organisms have unique characteristics to survive in various habitats and how environmental changes can affect the plants and animals that live in these habitats. Activities include macroinvertebrate studies, water quality testing, riparian investigations, and lessons about healthy stream features and fish habitat.

### Standards

3-LS4-3; 3-LS4-4; 3-LS3-2

## FOURTH GRADE

Through hands-on activities, students will explore the effects of humans on watershed ecosystems while engaging in observation, critical thinking, and stewardship. They will discuss how plant and animal structures support survival, growth, and behavior, and observe and measure the effects of water and vegetation on erosion. Activities include macroinvertebrate studies, water quality testing, riparian investigations, and lessons about healthy stream features and fish habitat. We also offer *Tribal History/Shared History*, a curriculum developed and approved by the Confederated Tribes of Warm Springs. *Tribal History/Shared History* helps educators and students explore where natural and cultural resources overlap.

### Standards

4-ESS3-1; 4-LS1-1; 4-ESS2-1

## MIDDLE SCHOOL

Through hands-on activities, students will engage in observation, stewardship, critical thinking, and scientific design to learn about their local watershed. They will investigate surrounding rivers and streams, water use and its impacts, solutions for maintaining biodiversity, the growth and development of aquatic organisms, the hydrologic cycle, and human impacts on the environment. Activities include macroinvertebrate and native fish investigations, riparian surveys, river restoration studies, water quality testing and assessments, and lessons about healthy stream features and fish habitat. We are eager to collaborate to find ways to accommodate the scheduling challenges of middle school programs.

### Standards

MS-LS2-1; MS-LS2-4; MS-LS2-5; MS-LS1-5; MS-ESS2-4; MS-ESS3-3; MS-ESS3-4

## FIFTH GRADE

Through hands-on activities, students will explore the effects of humans on watershed ecosystems while engaging in observation, critical thinking, and stewardship. Students will also have the opportunity to collect and analyze data to investigate a measurable question using scientific inquiry. Activities include macroinvertebrate studies, water quality testing, riparian investigations, and lessons about healthy stream features and fish habitat. We also offer *One Water*, a comprehensive watershed program that explores our local watershed—the source of our drinking water, usage, treatment, and conservation—and empowers students to protect this vital resource.

### Standards

5-LS1-1; 5-LS2-1; 5-ESS2-1; 5-ESS2-2; 5-ESS3-1

## HIGH SCHOOL

Through hands-on activities, students will engage in observation, stewardship, critical thinking, and scientific design to learn about their local watershed. They will explore factors impacting river ecosystems and biodiversity, design solutions to reduce the impacts of human activities on the environment, and take part in hydrology studies. Activities include macroinvertebrate and native fish investigations, riparian surveys, river restoration studies, water quality testing and assessments, lessons about healthy stream features and fish habitat, and hydrology studies examining watershed and stream models. We also offer *One Water*, a comprehensive watershed program that explores our local watershed—the source of our drinking water, usage, treatment, and conservation—and empowers students to protect this vital resource.

### Standards

HS-LS2-7; HS-LS4-6; HS-ESS2-5; HS-ESS3-4

## SCHEDULE A PROGRAM WITH US TODAY.

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Follow our work.