

It's hands-on, it's real life, it's

X-STREAM SCIENCE

Free inquiry-based learning opportunity lead by local experts to connect students to their watershed through real world science.



It's Experiential

Students get outside to participate in hands-on, scientific inquiry by collecting biological, chemical and physical data on the water and surrounding land. Content is curriculum connected and place based.

It's Stewardship

Water quality, quantity and land use data is collected, analyzed and stored to to be monitored and compared over time. This data will help students and decision makers make good choices to help our watersheds.



What are we testing?

BIOLOGICAL

Benthic
Macro-
Invertebrates
(BMI)

Turbidity
Temperature
Conductivity
Water Quantity

PHYSICAL

HABITAT &
LAND USE

Riparian
Area,
Human
Development

CHEMICAL

pH
Nitrogen
Phosphates
Dissolved Oxygen

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It's lead
by the
questions:

- What is the HEALTH of our local stream environment?
- How are different LAND USES changing WATER QUALITY?
- How do HABITAT variables affect aquatic LIFE SYSTEMS?
- What CHANGES can we see OVER TIME?

X-Stream Science has 3 parts:

1. In-class preparation
presentation

Watershed experts will provide an overview of the reasons for monitoring, the parameters we will study and the scientific protocols students are expected to follow.

2. Stream-side
Experiential Learning

All equipment, materials and guidance will be provided for this half or full-day outdoor experience. Students collect benthic macro invertebrate samples, as well as physical and chemical water and land data.

3. In-class data analysis
and debrief

What is affecting the stream?
How does this affect our environment and community?
Students will analyze and reflect on the data, then upload it to the website. This could be a starting point for additional activities.

Additional components are possible as add-on activities for longer-term inquiry projects.

Cross-Curricular Competencies; apply attitudes, skills and knowledge in:

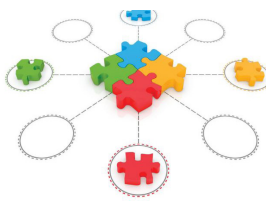
ID & Apply Career
and Life Skills



Team Work & Good
Communication



Manage
Information



ID & Solve
Complex Problems



Think Critically



CONTACT ME

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