

Saint John's Outdoor University Field Trip Overview

Water

Objective: Students will explore part of the Watab Creek watershed using maps and models to determine the factors that led to the watershed formation. Students will also examine where water is located in and how water moves through the watershed. The effect of the Saint John's community on the watershed will also be explored through collecting and identifying aquatic macroinvertebrates.

Field Activities:

Make it Rain: This activity will allow the students to 'create' a thunderstorm using body movements and sounds.

Where is the Watershed?: This activity will allow the students to first learn about watersheds using a model, then explore the Watab Creek watershed using maps to determine where and how the water is flowing.

Water Critters and Water Quality: This activity will allow the students to use equipment to collect and identify aquatic macroinvertebrates from the wetlands. Students will then determine the quality of the water based on the dominate types of invertebrates found.

Water Race: This activity will allow the students to review important terms in the water cycle (precipitation, condensation, evaporation, infiltration, run-off) while participating in a team relay race.

Key points and themes covered in each class:

- What a watershed is and how land topography influences watershed flow
- Where and how water collects in a watershed
 - Surface water, ground water, atmospheric water
- How water moves through the water cycle
 - Precipitation, condensation, evaporation, infiltration, run-off
- Aquatic macroinvertebrates role as indicator species for water quality
- How Saint John's modified the watershed to create the wetlands and the community's effect on the watershed
- Ways humans positively and negatively affect water

Minnesota K-12 Academic Standards addressed during activities:

Strand	Code	Benchmark
SCIENCE		
3. Earth and Space Science	4.3.2.3.1	Identify where water collects on Earth, including atmosphere, ground and surface water, and describe how water moves through the Earth system using the processes of evaporation, condensation and precipitation.
	4.3.4.1.1	Describe how the methods people utilize to obtain and use water in their homes and communities can affect water supply and quality.
SOCIAL STUDIES		
3. Geography	4.3.1.1.1	Create and use various kinds of maps, including overlaying thematic maps, of places in the US; incorporate the "TODALS" map basics, as well as points, lines and colored areas to display spatial information.
	4.3.4.9.1	Explain how humans adapt to and/or modify the physical environment and how they are in turn affected by these adaptations and modifications.