

Water Unit - 7th Grade

St. Brigid of Kildare School

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Cross-curricular ties -

Language arts - Students will read the book *A Long Walk to Water* by Linda Sue Park and work to make connections between the book and our unit to underscore the importance of water as a natural resource and the issues facing water in our world today (climate change, scarcity, pollution, run-off, etc.) Use with **Project WET - The Long Haul, Water Hauling Activity**

Art - Possibility of a mural to depict the Ohio Wetlands and incorporate "museum labels" to share what students have learned (about plants, macroinvertebrates, climate change, etc.) link to similar idea:

<https://www.outdooralabama.com/articles/south-alabama-middle-school-wins-national-environmental-art-contest>

Project WET - Make a Mural

Religion - Students tie to Pope Francis' encyclical, *Laudato Si*, Catholic Social Teaching, the USCCB statement on [Renewing the Earth](#) and the symbolism and importance of water in the Catholic faith. Connect with **Project WET - My Water Footprint** to help students see how much water they use individually and the impact this has on the earth.

Week One - The Water Cycle (Water travels in a cycle - Yes it does!)

Note: Students will have learned about atmosphere in a previous unit.

-Pretest (from Project WET Blue Planet)

-Bill Nye video - The Water Cycle + viewing guide

-**Project WET Blue Planet Activity** (followed by critical thinking questions - Google form + discussion)

-**Project WET The Incredible Journey - The Water Cycle**

Week Two - Ocean Currents (Water likes to "move it, move it")

Bill Nye video - Ocean Currents + viewing guide

Project WET Adventures in Density (Great Ocean Conveyor Belt)

Ocean Currents Demo (see PDF)

Coriolis Effect Demo

Ocean Currents - Tracking a Drifter activity (see word document)

Week Three + Four - Surface Water + Groundwater (Water likes to "move it, move it")

(continue Tracking a Drifter activity from previous week)

Presentation - Ocean trash based off of book *Tracking Trash: Flotsam, Jetsam, and the Science of Motion*. Introduction to OSCURS

<https://oceanview.pfeg.noaa.gov/oscurs/>

Project WET - Wetland Soils in Living Color

Permeability and Porosity activity/Wetland Soil Chart (soil samples from St Brigid wetland)

- Analyze soil from St. Brigid area

Introduction to Topographic Maps - Project WET Seeing Watersheds

- Exploration of Augmented Reality Sandbox (on loan from Franklin SWCD)

Introduction to Geographic Information Systems

What is a watershed?

- Project WET "Color Me a Watershed"

- US EPA - How's My Watershed (GIS application)
 - <https://www.epa.gov/waterdata/how-s-my-waterway>
- USGS Science in Your Watershed

Franklin SWCD - What's in our Water Student Workshop

- Exploration of Enviroscape Model (on loan from Franklin SWCD)

Calculation of Slope - Project WET "Just Passing Through"

- Application to St. Brigid Wetland

Project WET - Get the Groundwater Picture

- Exploration of Groundwater Model (on loan from Franklin SWCD)

Nutrient Cycling (nitrogen, carbon, etc.)

- Wonder of Wetland

Week Five + Six - Biomes (Focus on Wetlands)

Introduction to different ecosystems, abiotic and biotic factors and the interconnectedness of all parts of the system

- Lecture and notes on different systems w/ main focus on wetlands
- Possible use of Gizmos simulation

What is a macroinvertebrate? Mini-lesson - Project WET Macroinvertebrate Mayhem

Franklin SWCD - Splashing in Our Streams Student Workshop-Modified to St. Brigid Wetland on site

- Macroinvertebrates on Loan from Franklin SWCD
- Assess wetland diversity at St. Brigid of Kildare

Exploring Stream Inhabitants challenge + Identifying using Mighty Macros Field Guide-Field trip to Honda Wetland Area (Glacier Ridge) + Program

- [Complete QHEI?](#) Project WET - Water Quality? Ask the Bugs

Week Seven + Eight - Changes in our Water + Concluding Project

Overview - What is Climate Change and Why Does it Matter?

Project WET - 8, 4, 1, One for all! (water usage and sources)

Farmer - Brother Nick Renner - Presentation on H2Ohio Best Management Practices implemented at St. Charles Center (1150 acres)

Project WET - Nature Rules! (Climate Change)

How does climate change impact our Ohio Wetlands - Project WET - Stormwater

- Tie in data gathered from QHEI and info from Ohio Stormwater Conference

- Changing Weather Patterns
- Flooding

Pollution - Point vs. Nonpoint Source Pollution

- Project WET - Sum of Parts

How has pollution impacted our Ohio Waterways? Why does it matter? Project WET - Reaching Your Limits (how we treat water matters)

ODNR Presentation- Wetland Restoration/Creation as part of H2Ohio

Ohio EPA How's My Watershed - compare two watersheds - high versus low water quality, discuss possible factors.

Mural + Museum Placard Project (possible) (Could do an outdoor interactive project??)