

Global Connections Exchange

Global Scientist B: Water Experimentation

OVERVIEW

Topic	Water Conservation
Age range	10-12
Subject	Arts & Sciences
Duration	8 weeks

DESCRIPTION

This course is a study of the importance of water, global water issues and solutions, water pollution, water scarcity, and the design of aquifers and water filters. Students learn through hands-on investigations and experiments and by collaborating and communicating with global partners.

TASK TOPICS	LEARNING OBJECTIVES Students will:
Task 1: Getting to Know Our Partners	<ul style="list-style-type: none"> be able to share their culture with their global partners by creating a video to describe a typical school day, favorite activities and sports, and favorite holidays or celebrations. interact with their global partners about their videos.
Task 2: Build an Aquifer	<ul style="list-style-type: none"> demonstrate understanding of how aquifers work. build an aquifer and describe how they work in addressing real water problems.
Task 3: Build a Water Filter	<ul style="list-style-type: none"> demonstrate understanding of how water filters work. build a water filter and discuss access to clean water.
Task 4: Build a Desalination Filter	<ul style="list-style-type: none"> demonstrate understanding of how desalination filters work. build a desalination filter and discuss access to fresh water.
Task 5: Reflection	<ul style="list-style-type: none"> reflect on the importance of water, global water issues and solutions, water pollution, water scarcity, and the design of aquifers and water filters in their own and other cultures. reflect on sharing their culture and water related learning with their global partners.

United Nations Sustainable Development Goals (UN SDGs)

- Goal 6** Ensure availability and sustainable management of water and sanitation for all
- Goal 14** Conserve and sustainably use the oceans, seas and marine resources for sustainable development

ISTE Student Standards

- 1.1 Empowered Learner
- 1.2 Digital Citizen
- 1.3 Knowledge Constructor
- 1.4 Innovative Designer
- 1.5 Computational Thinker
- 1.6 Creative Communicator
- 1.7 Global Collaborator

New Jersey Student Learning Standards

3-5-ETS1-1: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time or cost.

6.3.5.GeoGI.1: Use technology to collaborate with others who have different perspectives to examine global issues, including climate change and propose possible solutions.

8.2.5.ED.3: Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions.

MS-ESS2-4: Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.