

# Global Connections Exchange

## Global Scientist A: Water Conservation

### OVERVIEW

<b>Topic</b>	Water Conservation
<b>Age range</b>	10-12
<b>Subject</b>	Arts & Sciences
<b>Duration</b>	8 weeks

### DESCRIPTION

This course is a study of the importance of water, global water issues and solutions, water pollution, water scarcity, and personal water usage. Students learn through investigations and by collaborating and communicating with global partners.

TASK TOPICS	LEARNING OBJECTIVES Students will:
<b>Task 1: Getting to Know Our Partners</b>	<ul style="list-style-type: none"> <li>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.</li> <li>interact with their global partners about their videos.</li> </ul>
<b>Task 2: The Water Cycle</b>	<ul style="list-style-type: none"> <li>learn about the water cycle.</li> <li>learn about how the water cycle works in their own and their partners' environment.</li> </ul>
<b>Task 3: The Importance of Water in Our Community</b>	<ul style="list-style-type: none"> <li>demonstrate understanding of the importance of water for life in their community and their partners' community.</li> <li>learn about groundwater and aquifers and how they can become polluted.</li> </ul>
<b>Task 4: How Much Water Do We Need?</b>	<ul style="list-style-type: none"> <li>learn about global water scarcity.</li> <li>calculate their personal water usage to learn about how much water they use on average. Then compare it to their partners' average use.</li> <li>learn about how to reduce water usage.</li> </ul>
<b>Task 5: Reflection</b>	<ul style="list-style-type: none"> <li>reflect on the importance of water, global water issues and solutions, the water cycle, water.</li> <li>reflect on pollution, water scarcity and personal water usage in their own and other cultures.</li> <li>reflect on their culture and water related learning with their global partner.</li> </ul>

### 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-LS4-4:** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

**3-ESS2-2:** Obtain and combine information to describe climates in different regions of the world.

**4-ESS3-2:** Generate and compare multiple solutions to reduce the impacts of natural Earth processes and climate change have on humans.

**3-5-ETS1-2:** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

**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.

**8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data.

**8.1.5.DA.4:** Organize and present climate change data visually to highlight relationships or support a claim.

**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.

**9.4.5.CI.2:** Investigate a persistent local or global issue, such as climate change, and collaborate with individuals with diverse perspectives to improve upon current actions designed to address

the issue.

**MS-LS2-4:** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

**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.

**MS-ESS3-4:** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

**9.4.8.IML.7:** Use information from a variety of sources, contexts, disciplines, and cultures for a specific purpose (e.g., 1.2.8.C2a, 1.4.8.CR2a, W.5.8, 6.1.8.GeoSV.3.a, 6.1.8.CivicsDP.4.b, 7.1.NH.IPRET.8).

**9.4.8.IML.8:** Apply deliberate and thoughtful search strategies to access high-quality information on climate change (e.g., 1.1.8.C1b).

