

Traveling Through the Water Cycle

Teaching the LifeStraw®: Student Activities

Grade level 6-8

National Science Content Standards:

A: Science as Inquiry

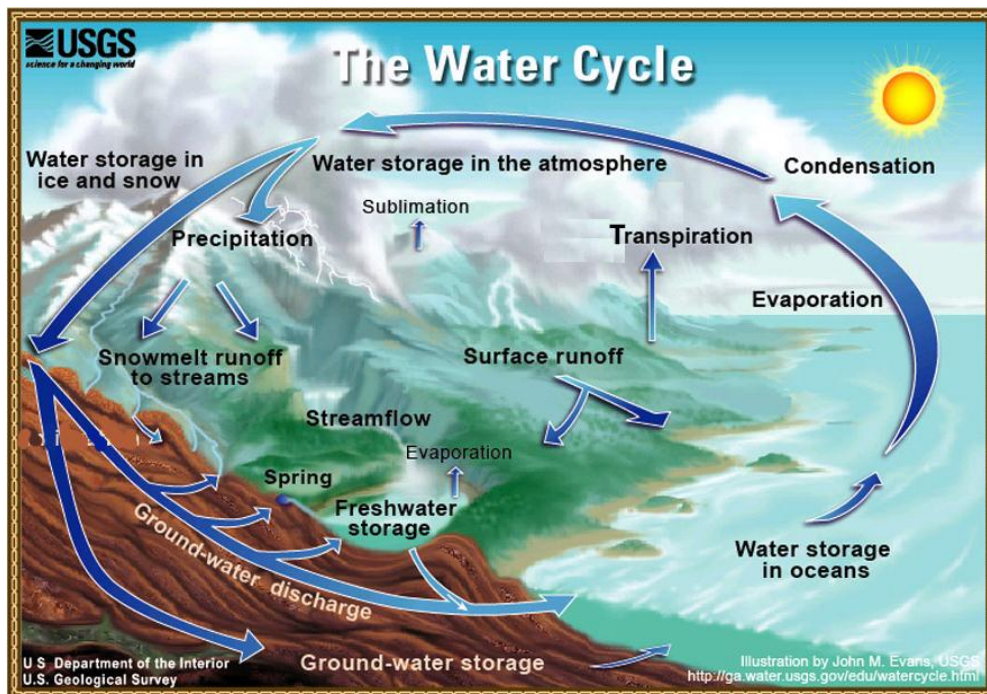
F: Science in Personal and Social Perspectives

OBJECTIVE:

To enable students to demonstrate and reinforce their knowledge of the water cycle, as well as employ map-reading skills and creative writing ability.

DESCRIPTION:

Students will imagine a water molecule's trip from Kenya to the Bronx, traveling across the geographic land and waterscape as it simultaneously journeys through the water cycle.



Graphic credit: USGS

INSTRUCTIONS for Students:

Imagine you are a water molecule. Write a short story that describes your journey through the hydrologic cycle beginning at Ajia's home in eastern Kenya to Luis's home in the Bronx, New York. Look at a globe or a world map and identify specific geographical features you might



encounter on your journey and what happens to you when you do! *Warning:* Watch out for the rain forests of Mount Kenya, and the coffee plantations there - you might end up in a cup of coffee! Note what happens when your journey takes you to Mt. Kilimanjaro, Lake Victoria, or even the Sahara desert. And when you leave the continent of Africa, keep an eye out for the Bermuda triangle, and the crocodiles of Florida! Or if you approach the United States from the cold North Atlantic, beware of the Old Sow whirlpool outside of Eastport, Maine. It's the largest whirlpool in the western hemisphere! Where might you go next?

Remember:

- Refer to your water cycle graphic and make sure you (the water molecule) experience **at least five** phases of the process. Underline each as you name it in your journey.
- Remember, you are a world-traveling molecule and as such must sight-see! It's up to you whether you choose well-known tourist spots, or out-of-the way locations, but be sure to visit **at least five** countries. Bon Voyage!

WRAP-UP:

- As an extension, measure the total "distance" your molecule traveled by using a ruler, world map and the map distance key.
- Using what you know about water pollution and scarcity from the Guide, can you identify locations in your journey that were unpleasant in human terms? Be sure to indicate what phase of the water cycle you were experiencing when you visited those locations. (The places can be **real** - a visit to the storage tank at the Hunts Point Waste Water Treatment Plant in The Bronx, for example, or **imagined** - dropping into a polluted river near a Mumbai (India) slum, or evaporating in a dried-up stream bed in Eastern Kenya.)
- Given that residence times for water molecules in oceans can be many (thousands) of years, your voyage might not have been as quick as you think! Now re-imagine your water molecule's voyage in the future - if not 3,200 years from now - perhaps 10 years or 20 years. Maybe your future water molecule finds the freshwater situation on Earth far improved! Perhaps scarcity, pollution, and climbing global temperatures are no longer issues the world needs to grapple with. How do you imagine the situation has changed? How might your journey be affected?