

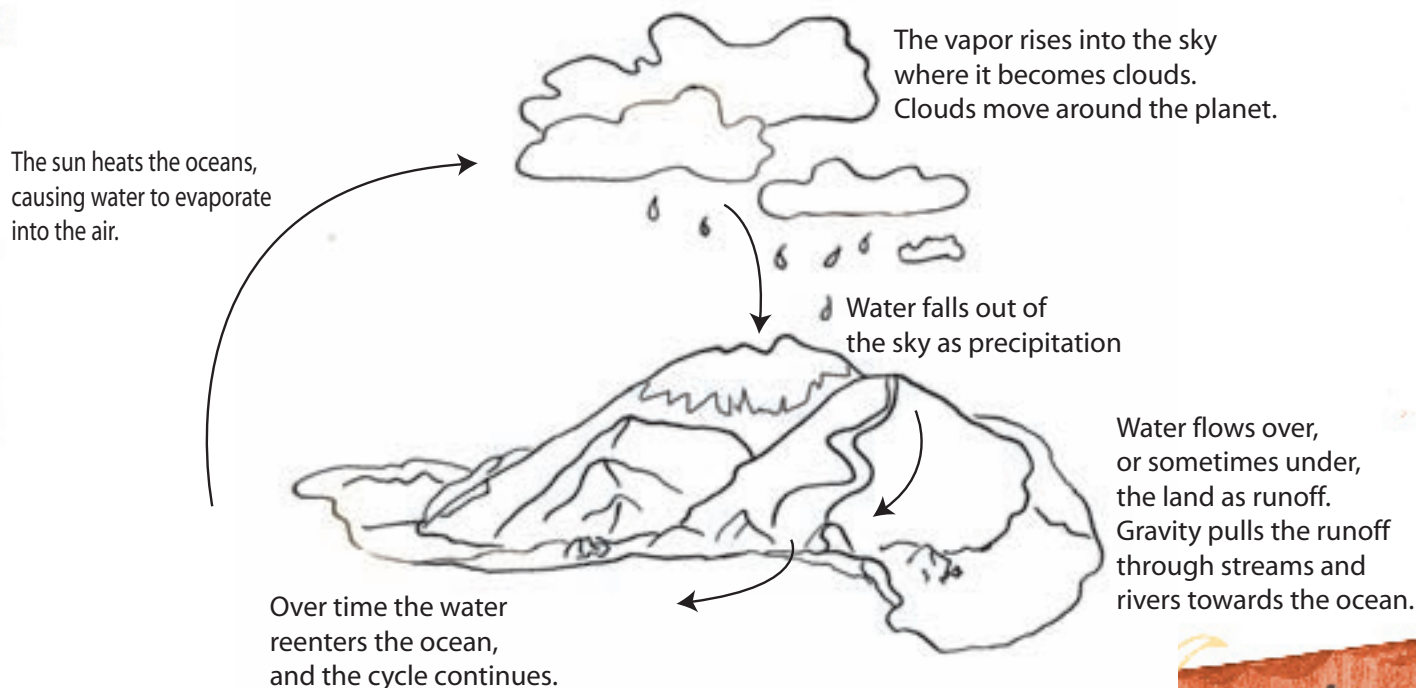
World Wide Water

Though we may not swim with sea lions like Nim, we all depend on water to live. Water covers the entire planet and is constantly moving and changing. The **water cycle** is the movement of water around the planet. Changes that take place in the water cycle as a result of humans affect the whole world.

While water is always moving through the water cycle, some of it is held in **reservoirs** for a long period of time. A reservoir in the water cycle is a place where water stays put for a period of time. At any given time, there is more water in storage than is moving through the cycle. When the climate is cold, water may be stored in glaciers. When the climate is warm the water may be stored in the oceans.

People can influence the water cycle in many ways. Since water travels all over the planet, a change in one place affects people living far away - even people in different countries! Human activities that change the water cycle include cutting down trees and building cities.

Oceans, rivers, and clouds all cross over many geographic regions and political boundaries as they travel. Water truly is an international resource. To keep water safe where you are it takes a global effort of everyone protecting the water.



Think about it:

Man made surfaces such as concrete prevent the normal flow of water and pollutants flow directly into the rivers. Notice the storm drains in your neighborhood. What is running down your storm drains into the ocean? What can you do to protect the worlds water?

Nim's Dictionary
Precipitation - water falling from clouds to the Earth's surface, like rain or snow.
Runoff - water moving across the land.
Evaporation - liquid water becoming a gas.
Water cycle - the continuous movement of water on, above, and below the surface of the Earth

World Wide Water

Name: _____

Date: _____

Activity steps:

1. Create "pollutants" by coloring the map provided. Color your "pollutants" onto the map according to the list below. (Why did you choose to place each where you did?)

Types of pollution:

Pesticides - Orange	Human waste and Garbage – Brown
Fertilizers - Red	Other types of waste – Yellow
Industrial runoff - Black	

2. Crumple up the map into a ball and then spread it out almost flat again. This will create elevation changes that mimic mountains.

Questions:

1. Where does pollution go when it is released into the environment? _____

2. Why does pollution generated in one country not remain within the borders of that country? _____

3. How do pollutants travel from the ground to streams to the ocean to the atmosphere and fall back down on the earth in far away places? _____

4. How can you keep water clean for everyone on Earth? _____

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Educator Page

Directions:

Print the provided world map onto enough paper for teams of 4 students. Provide them with water-soluble markers, where each color represents a different type of pollution. Have them crumple the paper and add a different type of pollution to each region of the world, then spray the pages with a plant sprayer. Have the students describe where the pollutants traveled. Get them to discuss how the plant as a whole is an environment, even though

regions are broken up by political boundaries. Have them discuss and answer questions about how they predict these migrating pollutants will affect foreign relations.

Materials:

Printed maps

Water-soluble markers

Spray bottle, filled with water

National Standards:

Science: NCES Grades k-4 Earth and Space Sciences Standard D: changes in Earth and sky.

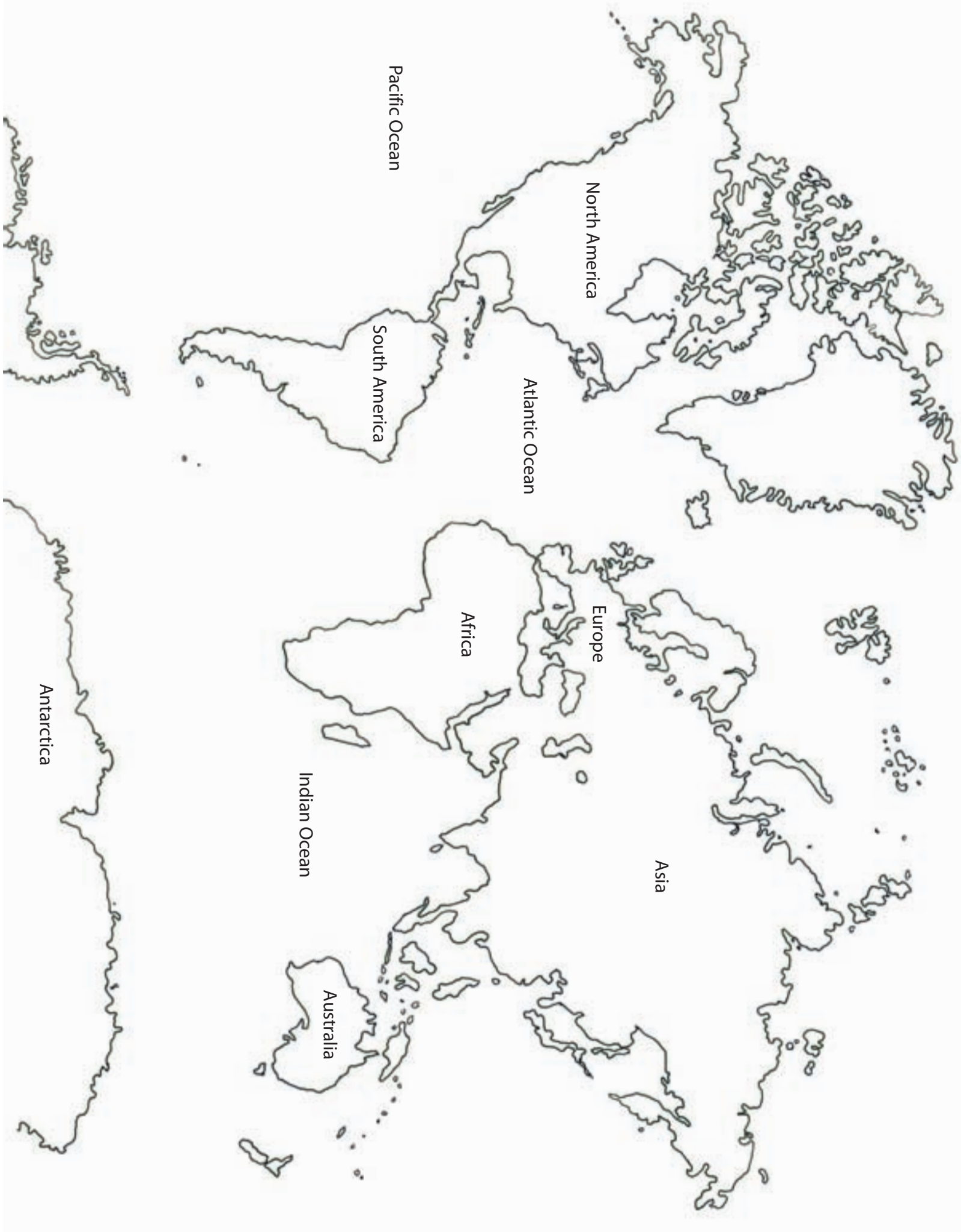
Science: NCES Grades K-4 Science in Personal and Social Perspectives Standard F: changes in environment.

Social Studies: NCSS Standard 1: What is government?

Social Studies: NCSS Standard 3: Principles of Democracy.

Social Studies: NCSS Standard 4: Other nations and world affairs.

Optional: Arrange a stream clean-up field trip with your class at whatever local water source that you have. Discuss the kinds of clean up that you were able to accomplish, and whether or not you felt that the local governments environmental protection measures were adequate.



Pacific Ocean

North America

South America

Atlantic Ocean

Africa

Europe

Asia

Australia

Indian Ocean

Antarctica