

SCIENCE·3D

CROCODILE COUNTRY

In this packet, sample student answers are provided in **red** and notes to teachers are in **blue**.

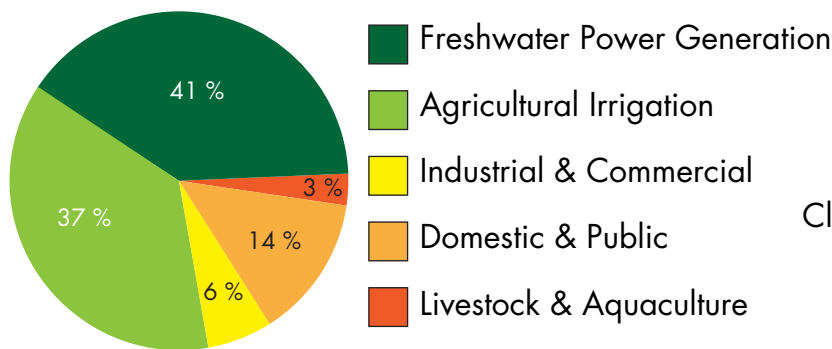
This **Explore Your Backyard** activity has students explore water. Topics include how society uses water, how students use water in their daily lives, and how they can reduce their use of water. Then, they observe a water habitat and record how it might be impacted by humans. An alternate activity has students explore how invasive species modify local ecosystems.



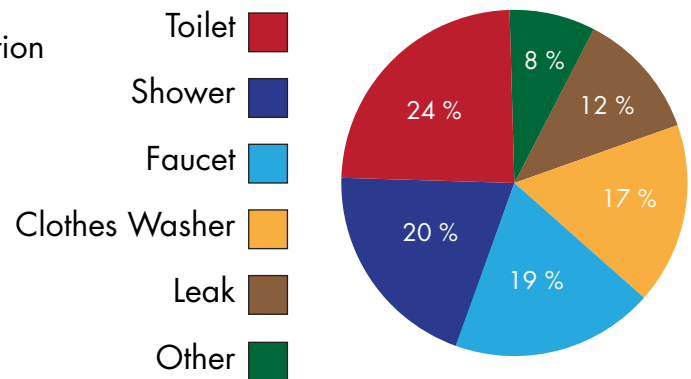
For periods of the year there is water everywhere in the Okavango Delta. At other times, it can be scarce. Animals have to find water. People need water too. They need it to drink and bathe. They need it to use in toilets. Their pets and livestock need water. Water is also used to manufacture machines and electronics.

Let's research water in your backyard. The figures below show how freshwater is used in the United States. A portion of the freshwater used in the "domestic & public" category is used in people's homes. Figure 2 shows how water in homes is used.

Proportion of Water Used by Sector



How We Use Water in Homes



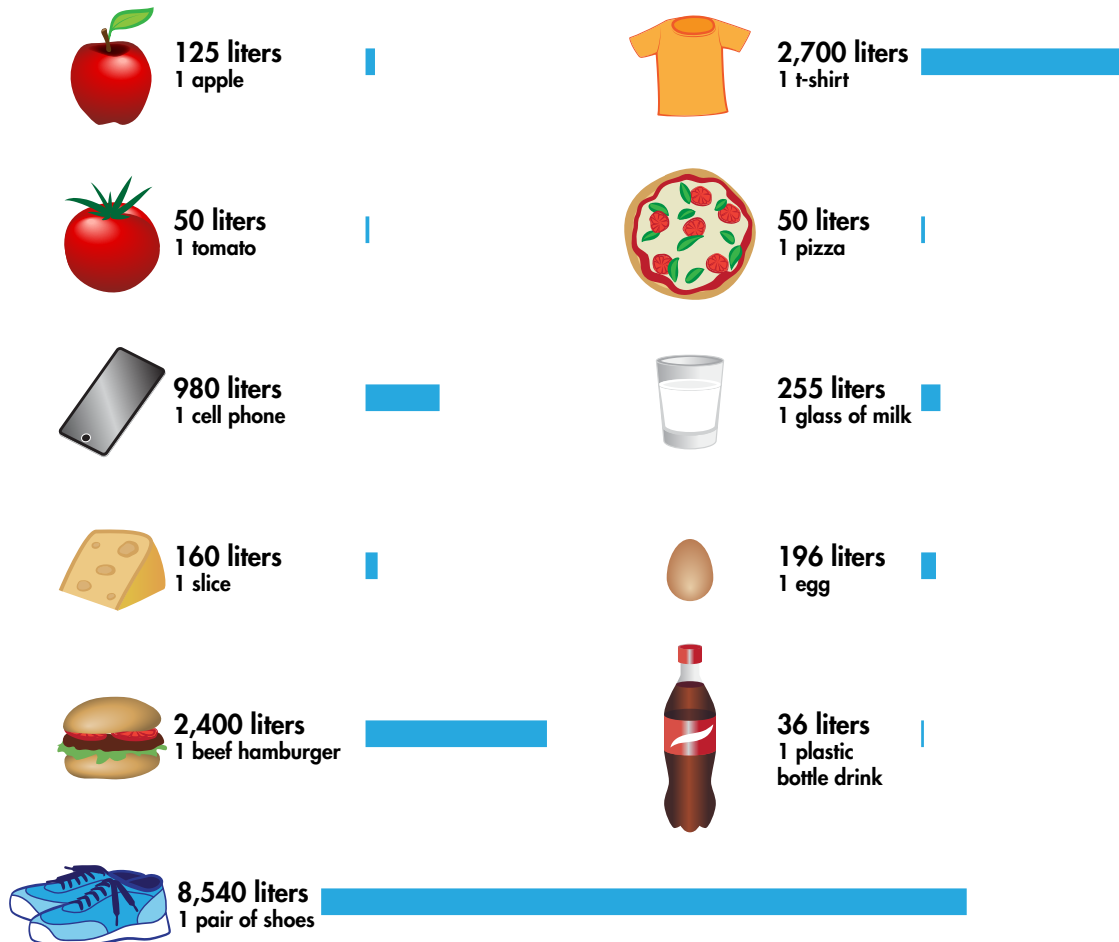
- Over the course of a week, or a timeframe your teacher tells you, **record** all of the ways that you think you use water. Once recorded, rank them in order of how much water you think is used. (The activity that uses the most should be ranked as #1).

Water Use	Rank
Bathing and showering	1
Washing clothes	5
Washing dishes	4
Cooking and food prep	3
Watering the lawn and garden	6
Drinking	2

Extend the Lesson: Have students compare and contrast their uses of water and how their ranks.

A “water footprint” is a measure of how much water an item, person, or country uses. Things that we eat, drink, and wear, all have a water footprint. Because water is an important resource, it is important that we try to reduce our use of it. The diagram below shows the water footprint of common items.

Water Footprint



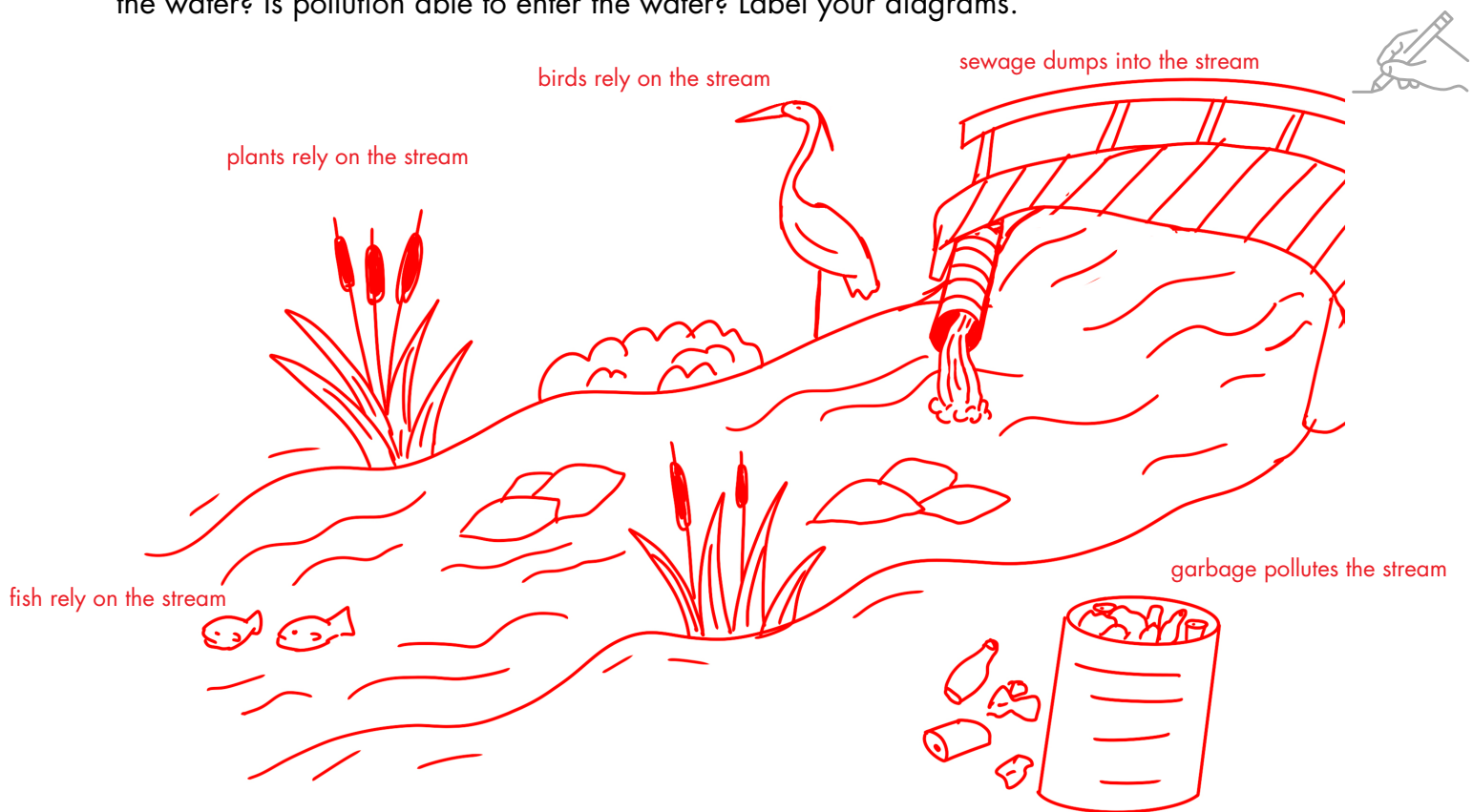
2. **Create** a poster that describes ways to reduce your water footprint. Think about the direct ways you use water (like drinking, bathing, and cleaning) and the indirect ways you use water (like through electricity and food).

Answers will vary. Some poster topics may include items like: drinking filtered water instead of using plastic bottles, eating foods that use less water to make, reducing consumption of materials that take a lot of water to manufacture, making sure taps are turned off in-between uses, watering plants less frequently, using less energy, etc.

Question 3 is meant to get students thinking about how waterways near their homes might be influenced by people. If you can't get students out to make observations on their own, have them conduct an online or library investigation of a particular waterway. To complete the lesson, consider having students discuss ways that people could help protect the waterway or clean it up if it is polluted. To explore water quality, have them look up the Cuyahoga River and learn why it caught on fire decades ago.

Spend time outside near a body of water – a pond, a lake, a river, a stream, or the ocean. Or, **research** a body of water that your teacher assigns you. **Observe** the organisms around the water. **Observe** how humans might affect the water. Are there roads, people, cities, or garbage nearby?

3. **Draw** pictures in the space below to show 1) organisms that rely on the water and 2) how humans might cause negative changes to the water. For example, do people use too much of the water? Is pollution able to enter the water? Label your diagrams.



Alternative Backyard Exploration: Organisms can make large changes to ecosystems. Sometimes, they are positive. For example, alligators can dig ponds that have water during the dry season. That means the ponds provide a place where fish and other species that need water can survive during dry times. Other changes to environments might not be positive. Invasive species – species that are introduced by humans and take over a new area – can be a real problem. Invasive lizards that eat crocodile eggs in their normal habitat are spreading across Florida and Georgia. They may cause populations of alligators to be threatened if the lizards eat too many eggs. Your assignment: Go outside, and identify ways that plants and animals change the habitat. Research invasive species in your local environments. Create a poster that shows where the invasive species are from and what they are doing to your local environment.