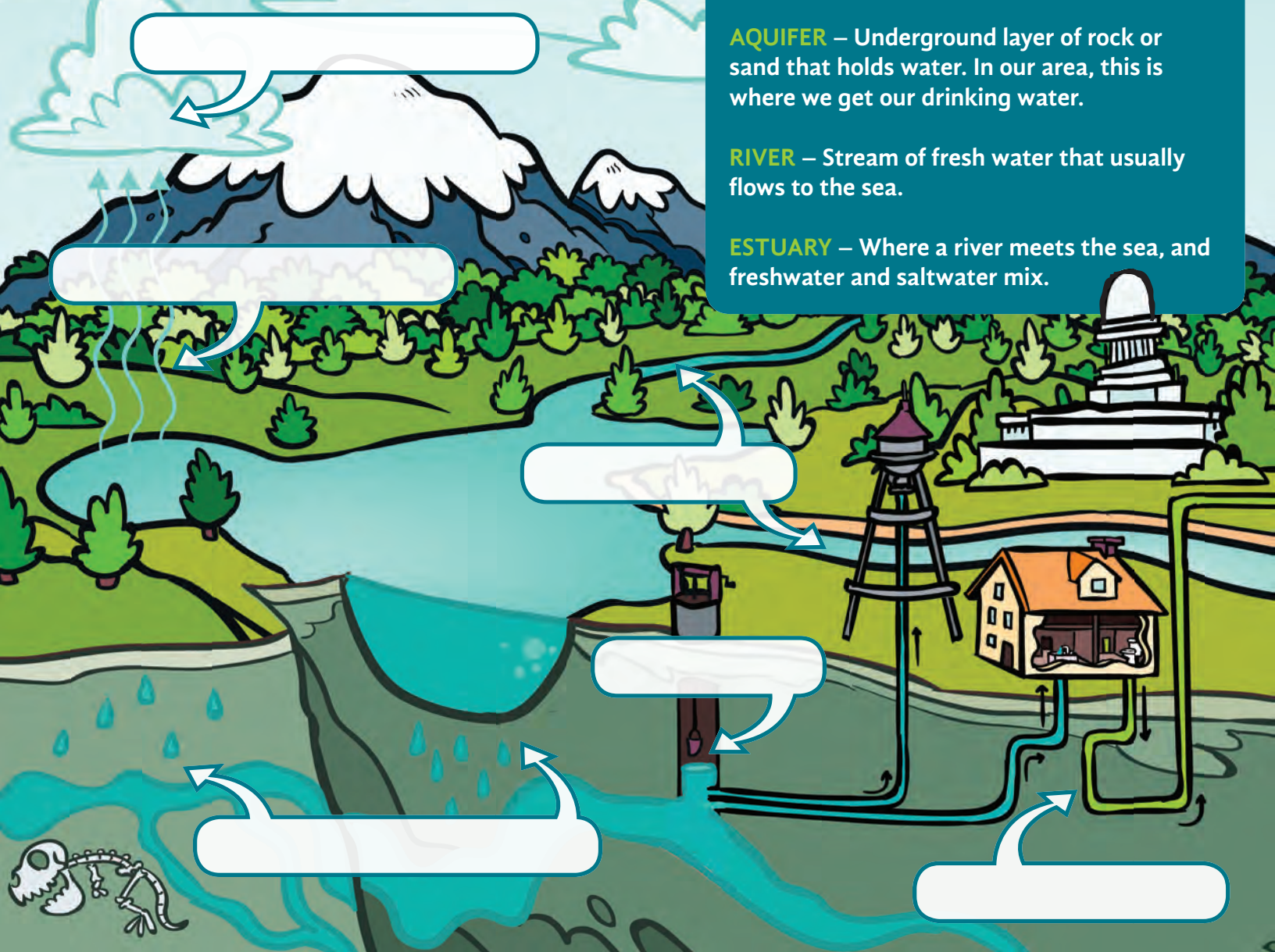
WATER!

LIQUID AWESOME ACTIVITY BOOK

WET™ Science Center

ONE WATER CYCLE

The amount of water on Earth doesn't change. Water is constantly moving and being recycled – in nature and in our cities. Learn more by matching the words to their places.



EVAPORATION – Water warms up and turns into a gas that floats up in the air.

CONDENSATION – Water in the air cools and forms clouds.

PRECIPITATION – Water gets too heavy to stay in the cloud and falls to earth as rain, snow, or hail.

AQUIFER – Underground layer of rock or sand that holds water. In our area, this is where we get our drinking water.

RIVER – Stream of fresh water that usually flows to the sea.

ESTUARY – Where a river meets the sea, and freshwater and saltwater mix.

WELL – Deep hole in the ground used to get water from the aquifer for people to use.

WASTEWATER – Used water that goes down the drain or toilet.

STORM DRAIN – Drain for rainwater or snowmelt, usually sending it to the nearest body of water.

WASTEWATER TREATMENT PLANT – Place where your used, dirty water gets cleaned.

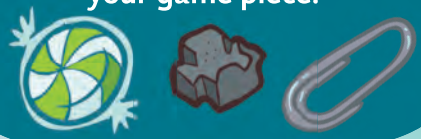
RECYCLED WATER – Wastewater that's been super cleaned so it can be used for everything but drinking. It is also called reclaimed water.

EVERY DROP COUNTS

Play the game to find out how you can save water throughout the day.

Saving water moves you forward. Wasting water moves you back.

Find something small to use as your game piece:



RAN WASHER HALF FULL

WASHED FULL LOADS

LEFT WATER RUNNING

FIXED DRIPPING FAUCET

BRUSHED WITH TAP ON

BRUSHED WITH TAP OFF

5-MINUTE SHOWER

START

Find a coin. First person to flip heads goes first.

On your turn flip the coin.

Heads: Move 2 spaces

Tails: Move 1 space

FLUSHED MEDICINES

USED A CAR WASH

PUT EAR SWAB IN TOILET

PUT TISSUE IN TRASH

RE-USED TOWEL

OVERFLOWED TUB

FINISH

Saving water is very important. Less than 1% of Earth's water is available for people to use. The rest is frozen or salty.

DOWN THE DRAIN AND THEN WHAT?

Used water goes down the drain or toilet and into underground sewer pipes. These pipes carry the dirty water to the wastewater treatment plant where it's cleaned.

FINISH

FIRST TREATMENT: Screening & Separating

SECOND TREATMENT: Bugs at Work

THIRD TREATMENT: Making Recycled Water

Screening & Separating
Wastewater flows through metal screens to remove trash. Fats, oils, and grease float to the top. Poop sinks to the bottom. The cleaner water in the middle goes to the next step.

Bugs at Work
Wastewater is full of tiny bacteria. These hungry bugs eat the icky stuff in the water. Then the water passes by special UV lights to kill the harmful bacteria that make people sick.

Making Recycled Water
Most of the cleaned water goes to Puget Sound, but some gets cleaned even more. This super clean recycled water (aka reclaimed water) is used for everything but drinking.

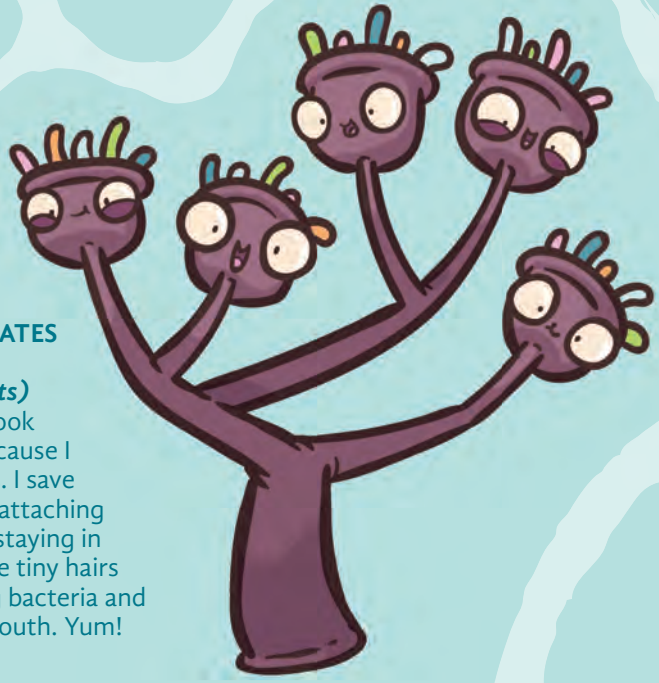
If you live too far from a treatment plant, your dirty water goes into a septic system. This is a special underground tank that cleans wastewater.

MIGHTY MICROBES

Microorganisms, or microbes, are tiny living things that are impossible to see without a microscope. There are lots of different kinds of microbes. They are everywhere, even inside our bodies. Some of these little bugs keep us healthy and others can make us sick. Microbes, especially bacteria, are a very important part of cleaning wastewater.

NEMATODE
(sounds like *nema-toad*)
I'm a round worm and can sometimes be seen without a microscope. I bite and tear my food. If bad chemicals are in the wastewater, I am the first microbe to die. This lets plant workers know there is a problem.

ROTIFER
(sounds like *row-ti-fur*)
I have a crown of hair-like cilia on my head. This brings my favorite food – bacteria – into my mouth. I have a special "foot" at the end of my body so I can attach to things. Nearly all of us are female and our babies are clones!

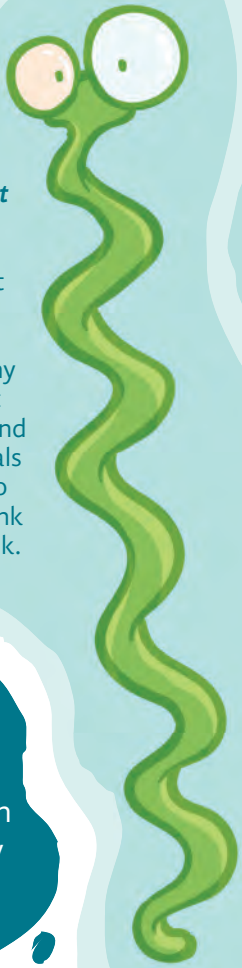


STALKED CILIATES
(sounds like *stocked-silly-its*)
Some think I look like a plant because I have branches. I save my energy by attaching to things and staying in one place. I use tiny hairs (cilia) to bring bacteria and algae to my mouth. Yum!

TARDIGRADE (sounds like *tarda-grade*)
Some call me a water bear or a moss piglet. I'm one of the toughest animals on Earth, even though I'm only the size of a pencil dot. I can survive extreme temperatures and come back to life after being frozen for years!

FLAGELLATED PROTOZOAN (sounds like *flaj-e-lated proto-zo-en*)
I have a whip-like tail called a "flagella" that I use to swim. I like to eat bacteria and food particles. I'm picky, so you'll only find me when there is a lot for me to eat in the water.

FILAMENT BACTERIA (sounds like *filla-ment back-teer-ia*)
I am a curly, wiggly bacteria. I am very fast and can escape other microbes that like to eat me. There are many different kinds of us at the treatment plant, and we can eat up chemicals in the water. We like to clump together and sink to the bottom of a tank.



CREATE YOUR OWN MICROBE!
Draw a picture and write down its name and one fun fact. Don't forget to show us how to pronounce it.

PARAMECIUM (sounds like *para-me-see-um*)
I'm hard to see under a microscope because I swim very quickly using the hair-like cilia on my body. I use cilia to sweep food (bacteria) into my mouth.

IT'S A TOILET NOT A TRASH CAN

Draw a line between each item and the correct place to throw it away (toilet or trash can).

Unfortunately, some people use the toilet like a trash can. This wastes water and can clog pipes, which causes a lot of messy problems. Only the three P's should go in the toilet – pee, poop, and toilet paper.

EAR SWAB

TOILET PAPER

DIAPER

BANDAGE

POOP

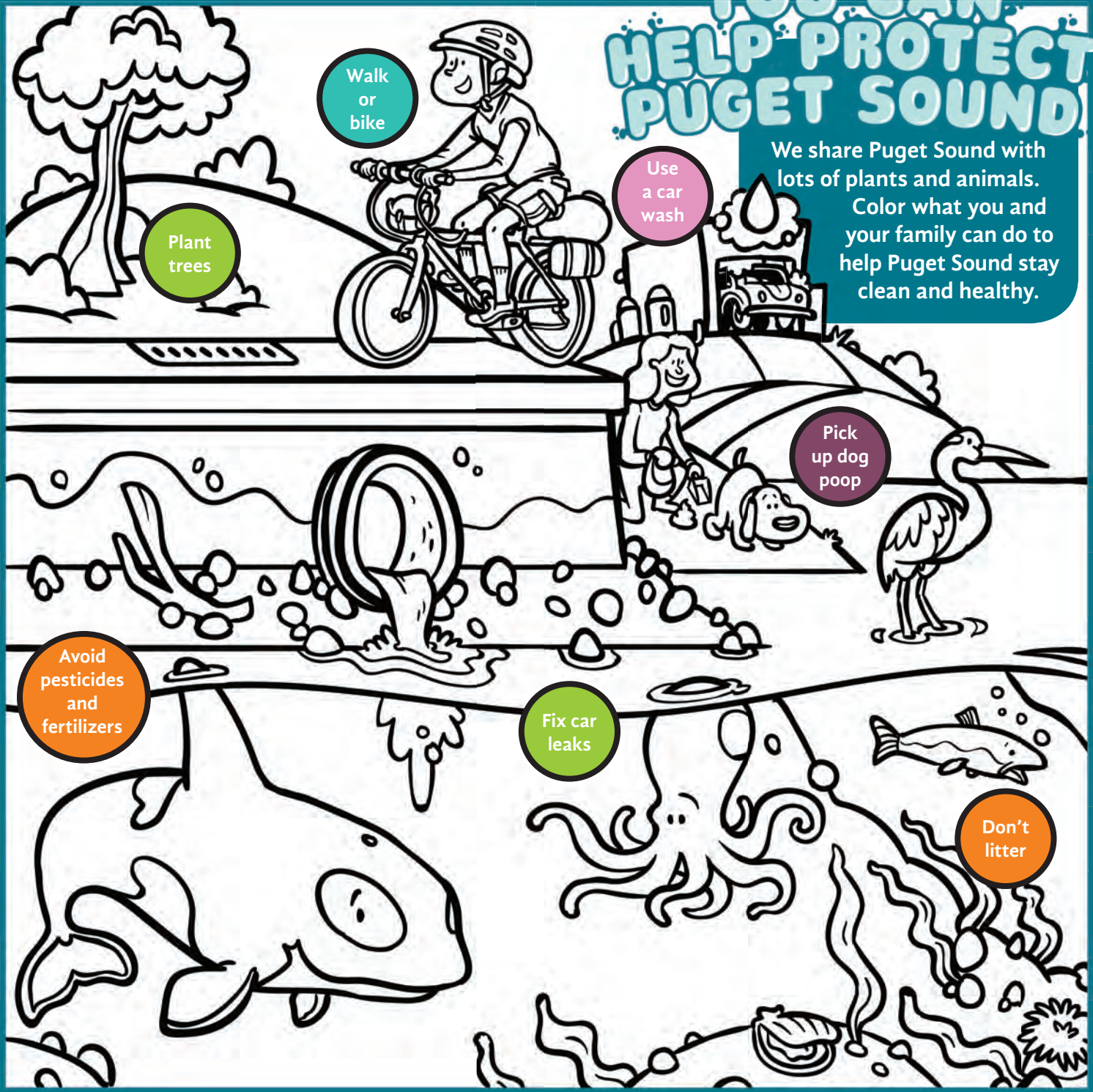
DENTAL FLOSS

"FLUSHABLE" WIPES

PEE

YOU CAN HELP PROTECT PUGET SOUND

We share Puget Sound with lots of plants and animals. Color what you and your family can do to help Puget Sound stay clean and healthy.



NOW, YOU'RE THE EXPERT

Quiz the people in your house and share what you've learned.

Kids all over the world are doing amazing things to protect and save water.

WHAT IDEAS DO YOU HAVE?