

Watershed Watch



Protect Our Creeks And Bay

WATERSHED ACTIVITY BOOKLET

GRADES 3-5

The Watershed Watch Campaign is a public education initiative of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), a coalition of local government agencies.

What is a Watershed?

A watershed is all of the land that drains water into the same waterway (e.g., creek, river, lake, bay, etc.). Any land, whether it be a park, farm, forest or even a school parking lot, is part of a watershed. Think of a watershed as a funnel, collecting all of the water within a land area and draining it into the nearest body of water. Everyone in the world lives in a watershed.

Many daily activities can pollute watersheds. For example, trash left on streets and sidewalks, toxic chemicals used in gardening, oil from leaking vehicles, and pet waste left on the ground are sources of water pollution.

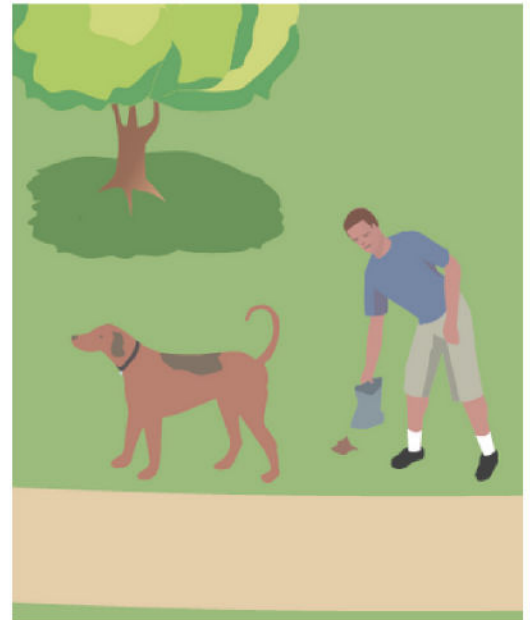
A healthy watershed is important to the people, wildlife, and plants within it. Do your part to keep your local watershed safe and clean. You are the solution to



Write one thing you can do to prevent the pollution of our watersheds:

Stormwater Pollution

Have you noticed the storm drains on your street labeled with “No Dumping Flows to Bay” or a similar message? Rainwater can wash trash and other pollutants off sidewalks, streets, and parking walks into storm drains. Pollutants that enter storm drains flow directly to local creeks and the San Francisco Bay, and can harm fish and other wildlife. This is called stormwater pollution.



Take a look at the pictures. Circle “thumbs up” if what is shown can prevent stormwater pollution or “thumbs down” if it can cause stormwater pollution.



Watershed Word Search

Using the Word Bank below, find the words in the puzzle. Words can go horizontal, vertical, and diagonal.

H A B I T A T N A F O P O N D B L B
Z S U O V M Y S W I L X B U F A R S
T E S T U A R Y B S G B W E L Y R Y
U T S H Y U N U L H H I R C A M A H
R V K R X H I C R E E K U O K K I Q
T Q A K O S T R E A M B N S E S N I
L J M V B L F O B Z Y Z O Y G N D M
E S V C E K A J T S D U F S A O R X
S T O R M D R A I N B J F T I Q O J
G F N S X L Y F B I R D Y E M A P O
V C W G K R N K P W V E C M M P B Z
P X S W A T E R S H E D J D L Z D S



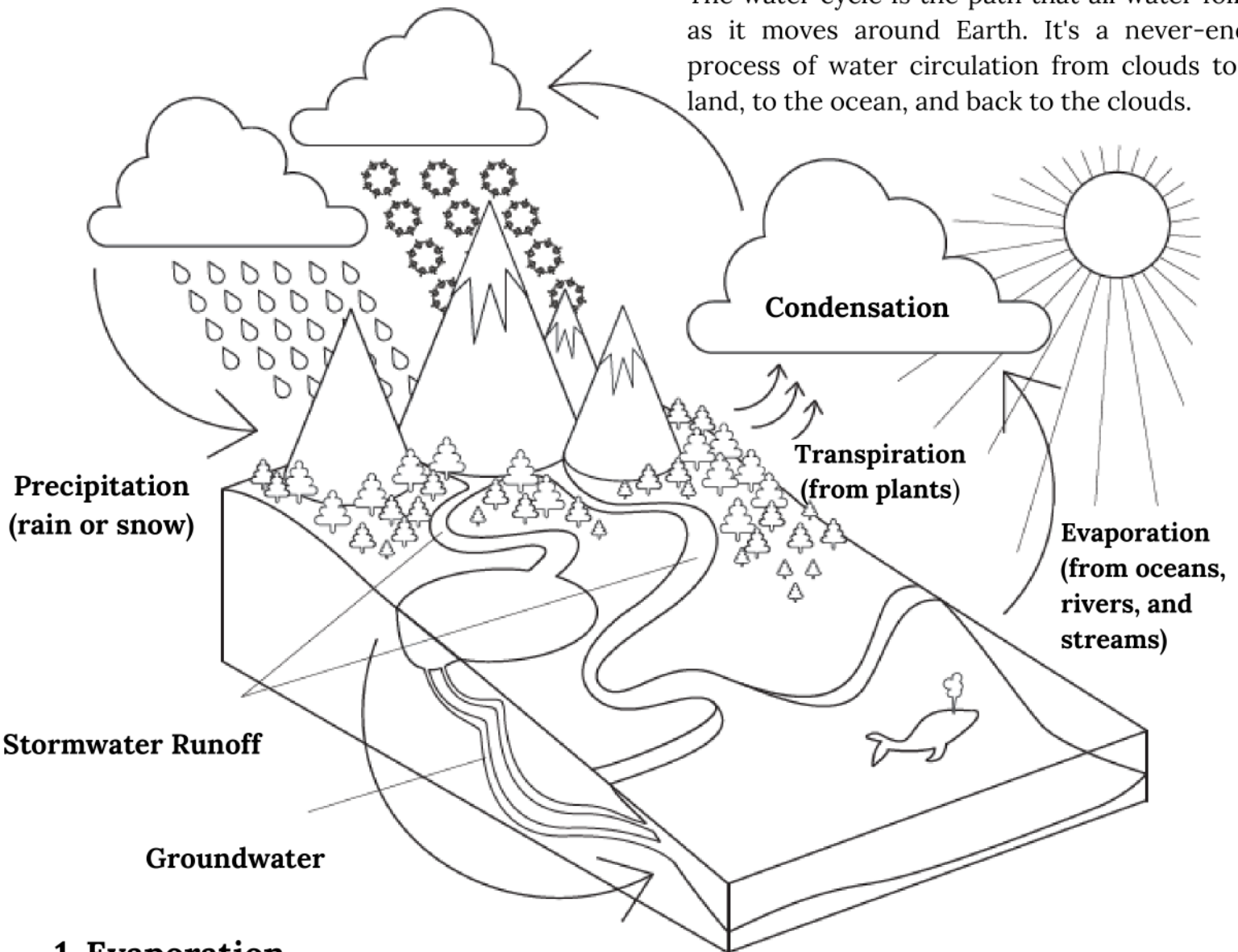
WORD BANK
BAY, BIRD, CREEK
ECOSYSTEM, ESTUARY, FISH
HABITAT, LAKE, POND,
RAINDROP, RUNOFF, STORMDRAIN
STREAM, TURTLE, WATERSHED

Circle and Label Items that Could End Up in the River



Color the Water Cycle!

The water cycle is the path that all water follows as it moves around Earth. It's a never-ending process of water circulation from clouds to the land, to the ocean, and back to the clouds.



1. Evaporation

Heat from the Sun causes water to evaporate from the ocean, lakes, and streams. Evaporation occurs when liquid water on Earth's surface turns into water vapor in our atmosphere.

2. Transpiration

Water from plants and trees also enters the atmosphere. This is called transpiration.

3. Condensation

Warm water vapor rises up through Earth's atmosphere. As the water vapor rises, the cool air of the atmosphere causes it to turn back into liquid water, creating clouds.

4. Precipitation

When a cloud becomes full of liquid water, it falls from the sky mainly as rain or snow - also known as precipitation. Rain and snow then fill lakes and streams, and the process starts all over again.

5. Stormwater Runoff

Stormwater runoff is nothing more than rainwater "running off" the land surface. Rain runs off land surfaces downhill due to gravity.

6. Ground Water

Some water seeps into the ground as soil moisture or groundwater.



Food Chain Links



Calling all biologists! The Watershed Watch Campaign is trying to understand the connection between animals and plants, and we need your help. A biologist is a scientist who studies living things. There are many types of biologists—some study small living things like bacteria and viruses, while others study animals and plants. For this activity, you will study how animals and plants in your neighborhood are connected. To understand this connection, you will create a food chain!

Intro to Food Chains

What is a food chain?

A food chain shows the order in which plants and animals feed on each other.

What are producers?

All food chains begin with producers, usually plants. Plants make their own food (energy) by using sunlight.

What are consumers?

Animals are consumers, they cannot produce food on their own.

What are first level consumers?

Animals that eat plants are known as herbivores and they are first level consumers on a food chain.

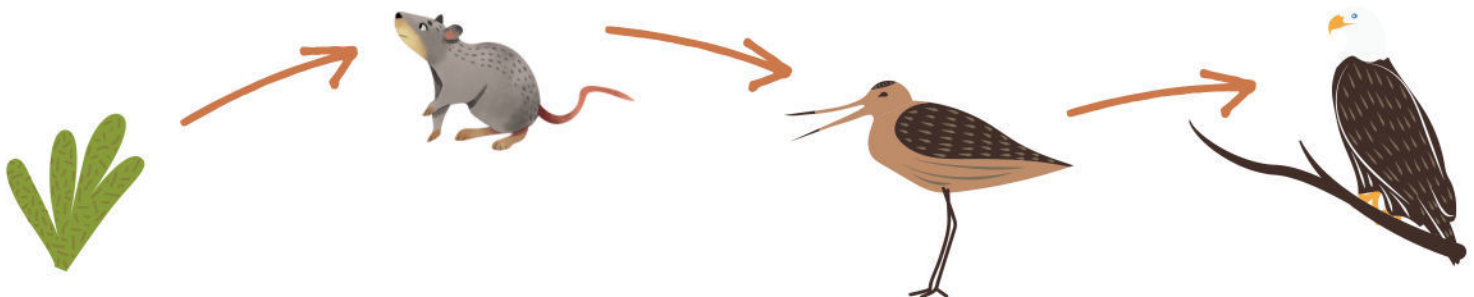
What are second, third, and fourth level consumers?

Animals that are second, third, and fourth level consumers in a food chain are insectivores (insect-eating), carnivorous (flesh-eating), or omnivorous (flesh-and plant-eating).



Food Chain Example

Pickleweed is eaten by salt marsh harvest mice, which are eaten by Ridgway's rails, which are eaten by birds of prey.



Food Chain Links, continued

Instructions

You are going to make your own food chains! First, choose which food chain you would like to make. Remember—your food chain must start with a producer. Follow the instructions below to complete the chain.

Materials

- Construction paper
- Scissors
- Glue
- Pencil
- Colored markers



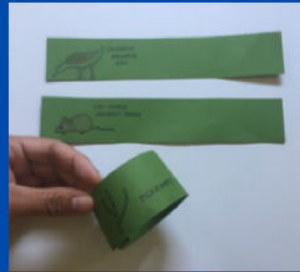
Cut the construction paper into strips that are about 1.5 inches wide and 8 inches long.



Draw or write down one member (plant or animal) on each strip of paper



Loop and glue the strips into a chain that shows the order of the food chain you chose.



Once all of your strips have been linked together, your food chain is done!



Reflection: A pollutant, like trash, threatens the health of plants, animals, and/or the natural environment. How would your food chain be affected by pollution? How would your food chain change if one of the species was impacted? Write your answer below.

Which of the following is a producer, primary consumer, or second level consumer? Label the species below!



Salt Marsh Harvest Mouse



Grasses



California Poppy



Peregrine Falcon

Attract Birds In Your Own Backyard!



Create a hangout for birds in your backyard! Birds provide natural insect control and are good for the environment.

Bring some music to your yard!

Toilet Paper Roll Bird Feeder

What you'll need:

- Peanut butter
- Birdseed
- Empty toilet paper roll
- String or yarn



Spread a medium coat of peanut butter on the outside of an empty toilet paper roll. Then, pour birdseed onto a plate and roll the toilet paper roll over it until completely covered. Find a tree branch outside, slip it over, and you are all set! And if you would rather hang them up, just thread a piece of yarn through the middle.





Take a Different Trail!



The best way to learn more about our watersheds and see the many plants and animals that live in them is to head out and explore another trail! Need a suggestion? Visit the Don Edwards National Wildlife Refuge or Santa Clara County Parks (www.parkhere.org) to see birds and other wildlife. And finally, remember to leave no trace!

Where did you go to explore our local watersheds?

Draw or write about something you saw on the trail:

THE THREE 'R'S YOU SHOULD KNOW

Three great ways YOU can eliminate waste and protect your environment!

PLASTICS AND SEABIRDS

One of the largest threats to our local environment is plastic pollution. Scientists are finding more plastics than food in the stomachs many sea birds. One way we can help is by our plastic use by following the three 'R's - Reduce, Reuse, and Recycle!



REDUCE

To lessen -
Use natural resources wisely, use less than usual in order to avoid waste.

What is one way you reduce?



REUSE

To use again-
"Reuse" materials in their original form instead of throwing them away, or pass those materials on to others who could use them too!

What is one way you reuse?



RECYCLE

To make something new, fresh, or strong again - don't throw away anything that can be recycled.

What is one way you recycle?

Watershed Watch PLEDGE

Dear Watershed Watcher:

The Earth gives us all we need to live: from the air we breathe to the water we drink and the food we eat. By reducing our waste, recycling properly, and reusing items, we help the plants and animals in our local watersheds. Next time you see litter, pick it up, and have a conversation about why not littering is so important. By taking these actions, we are saying ‘thank you’ to the Earth. When we work together, we can make our watersheds safe and healthy places for all.



WHICH ACTIVITIES DID YOU COMPLETE?

- What is a Watershed?
- Stormwater Pollution
- Watershed Word Search
- Circling Items that Could Pollute
- The Water Cycle Coloring Page
- Food Chain Links
- Attracting Birds in your Backyard
- Take a different trail!
- The Three Rs You Should Know
- BONUS: Watershed Watcher Pledge

Watershed Watch PLEDGE

You are a Watershed Watcher; you have the power to make our local creeks, San Francisco Bay, and Pacific Ocean a happy and healthy place. By writing your name on the line below, you pledge to celebrate our local waterways every day, in the best way you can. Thank you for completing the Watershed Activity Booklet from the Watershed Watch Campaign!

Your Signature

Watershed Activity Booklet

Source Credits

**Earth Day Booklet,
Don Edwards National Wildlife Refuge**

**Be a Scientist Booklet,
Don Edwards National Wildlife Refuge**

**A Home for Salty,
Don Edwards National Wildlife Refuge**

Student Conservation Association Bird Feeder Photos

National Aeronautics and Space Administration, nasa.gov

**Watershed Activity Booklet,
Santa Clara County Watershed Protection Division**



Water from your neighborhood enters the storm drain system and flows directly to local creeks and the Bay **without any treatment**. It often contains pollutants that can be toxic to fish, wildlife, and people. Never put anything into the gutter, street or storm drain.

Watershed Watch



Protect Our Creeks And Bay

The Watershed Watch Campaign is dedicated to raising awareness about water pollution in our creeks and the Bay, and encouraging actions that prevent urban runoff pollution and protect our watershed. Visit the Watershed Watch website at www.myWatershedWatch.org for more information.