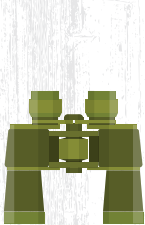


ACTIVITY BOOK #1

STORM DRAINS CONNECT STREETS TO CREEKS



AS YOU GET OUT AND EXPLORE MAKE SURE YOU HAVE EVERYTHING YOU'LL NEED FOR YOUR ADVENTURE! HERE ARE SOME IDEAS OF THINGS TO BRING WITH YOU:



Binoculars Compass Water Backpack Sunscreen

And, don't forget to grab a buddy for extra fun and always tell an adult where you are going!

WHY CARE ABOUT STORM DRAINS AND CREEKS?

Storm drains carry away storm water and prevent flooding

Creek trails allow us to exercise and explore
Provides homes for many plants and animals

Allows water to soak underground and be cleaned

Creeks are beautiful!

CREEK PROTECTOR SCAVENGER HUNT

What symbols, signs, or clues
can you spot that remind us to protect
our storm drains, creeks, and rivers?

Circle the signs you find:



(Write name of creek)



STORM DRAINS CONNECT
STREETS
T
CREEKS
OURS TO PROTECT

WATER=LIFE

Our Planet should have been named Planet Water instead of Planet Earth, since water covers 71% of the surface.

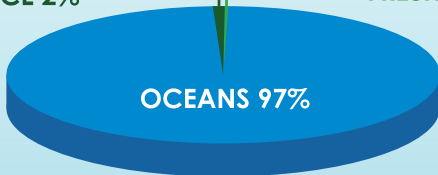


Only 1% of the Earth's water is available for use. The rest is either frozen, too deep in the ground, or salty ocean water that is unable to be used for drinking, manufacturing, or watering plants. That's a very small piece of the pie!

**GLACIERS &
POLAR ICE 2%**

FRESH WATER 1%

OCEANS 97%



DID YOU KNOW?

There is the same amount of water on Earth right now as there was when the Earth was formed. That means the water you drink could contain molecules that dinosaurs drank!

Water regulates the Earth's temperature. It also regulates the temperature of the human body, carries nutrients and oxygen to cells, cushions joints, protects organs and tissues, and removes wastes.

Water makes up 75% of the human brain and 75% of a living tree.

Water is part of a deeply interconnected system. The pollution we pour onto the ground or release into the sky ends up in our water.

Water expands when it freezes. Frozen water (ice) is lighter than liquid water, which is why ice floats on water.

SOLVE THIS ANAGRAM TO REVEAL A SECRET MESSAGE ABOUT WATER

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
26			22			18			14					10			6						3	2	1

12 6 9 8 7 12 11 9 12 7 22 24 7

FOCUS ON MAMMALS

Mammals are animals covered with hair or fur. They keep a constant internal temperature even when it's hot or cold out. Mammals live on land, water and even in the air (like bats!). People are mammals!

WHO LIVES IN OUR CREEKS?

SPOTLIGHT: RIVER OTTER

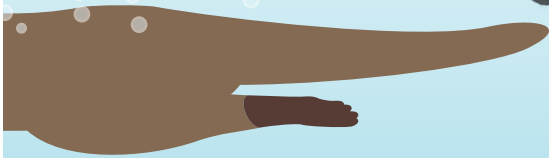
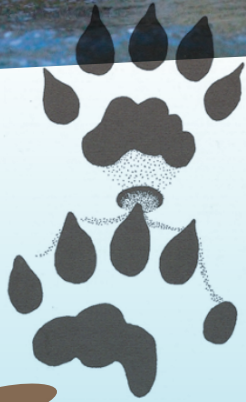
Fun Facts:

- 🐾 A member of the weasel family
- 🐾 Eats fish and crayfish
- 🐾 Has long whiskers like a cat to “feel” their way through murky water





Look for tunnels going in
and out of the water and
otter scat at the creek bank



CALLING ALL CREEK PROTECTORS!

What are simple ways you can protect creeks?



Leaves, in excess, introduced into the storm drain system can impact local waterways. Leaf debris left, swept, raked, or placed on the ground or pavement can be carried by rain, residential water, or wind into our local creeks. Leaves deposited into creeks will begin to decay, using up the oxygen needed by fish and aquatic life, releasing nutrients that encourage weed and algae growth. Overly fertile water becomes cloudy and green – impairing swimming, boating and fishing, and makes water unsafe for swimming or drinking.

The gutters along our city streets lead to storm drains that flow directly to local creeks. People can unknowingly impact local waterways. Hose water, also known as potable water, has the potential to transport materials such as trash, dirt, oils, soaps, chalk, vehicle fluids (engine oil, antifreeze, transmission fluid), and road contaminants to the storm drain. These can be harmful to water quality and creek habitats.

ANSWERS

SOUNDS OF THE CREEK

CLOSE YOUR EYES.
DO YOU HEAR MORE WHEN THEY ARE CLOSED?

YES or **NO**

CIRCLE EACH OF THE SOUNDS YOU HEAR

WIND

LEAVES RUSTLING

WATER FLOWING

BIRD SONG

INSECT

DOG BARKING

DUCK QUACKING

WHAT OTHER SOUNDS DID YOU HEAR?

NATURALIST CORNER



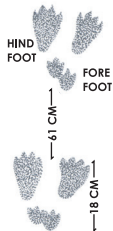
Jack Rabbits



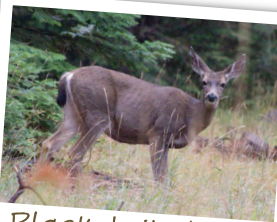
Those big ears help concentrate sound. Try cupping your hands behind your ears and listen.

FUN FACTS:

Jackrabbits are actually hares, not rabbits. Hares are larger than rabbits, and they typically have taller hind legs and longer ears.



They can run 40 miles per hour, and can leap more than ten feet!



Black-tailed Deer

FUN FACTS:

Deer are browsers, meaning they like to eat leaves (not grass like grazers)

The young fawns have spots which help hide them.

Only the males have antlers which they shed and grow new ones each year. A young two-point deer is typically referred to as a forked horn or forky. Bucks with antlers less than 3 inches are called spikes, and the really small bucks are called button bucks or nubbin bucks.



Western Gray Squirrel

Gray squirrels love acorns and pine seeds but they also eat insects.

FUN FACTS:

Gray squirrels are tree squirrels. Living in trees is called arboreal.

They like to travel by jumping from tree to tree instead of traveling on the ground.

They build nests called dreys with sticks and leaves. Look for them in the branches of big trees.



Raccoon



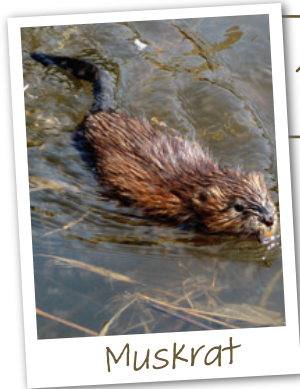
Raccoon leave hand-like prints in the soft mud along creeks.

FUN FACTS:

Raccoons are usually active at night. This is called nocturnal.

They are omnivores, meaning they eat just about anything (just like people!).

The most important sense for the raccoon is its sense of touch. They often wet their paws to heighten that sense. That's why it looks like they are washing their food.



Look for muskrats swimming at the surface with their long, rat-like tail trailing behind.

FUN FACTS:

Muskrats are rodents that live in creeks and wetlands. They can stay under water for up to 17 minutes! They eat cattails and other aquatic plant species. This makes them an herbivore.



Their white stripes are a color pattern that warns other animals to stay away.

FUN FACTS:

Skunks eat mostly insects but they also add plants to their diet so they are omnivores (an animal that eats both plants and meat).

Scent glands are used as a chemical defense against predators.

Their smelly defense means skunks have few predators. Great horned owls are one of the few predators that can eat them.



Coyote

Coyote, members of the canine family (dogs), are found throughout North America.

FUN FACTS:

They live in family groups and work together to raise young pups.

Coyotes can be heard "singing" at night to stay in touch with their families. Their

vocalizations are a series of yips, howls and barks.

They eat mainly meat but will add berries and seeds to their diet when available.



Bobcat

Bobcats look like overgrown house cats.

FUN FACTS:

Bobcats are carnivores, eating mostly rodents and rabbits.

They hunt at dusk. The word for that is crepuscular! In the winter they might be out during the day. That's called

diurnal. Do you know the word for being active at night?

Footprints left in the mud will not show a claw like a dog's prints does. Like all cats, bobcats retract their claws when not hunting or defending themselves.

**WHAT ACTIVITIES DID YOU OBSERVE PEOPLE DOING,
BOTH IN AND AROUND THE CREEK OR RIVER?**

Draw people doing the activities:

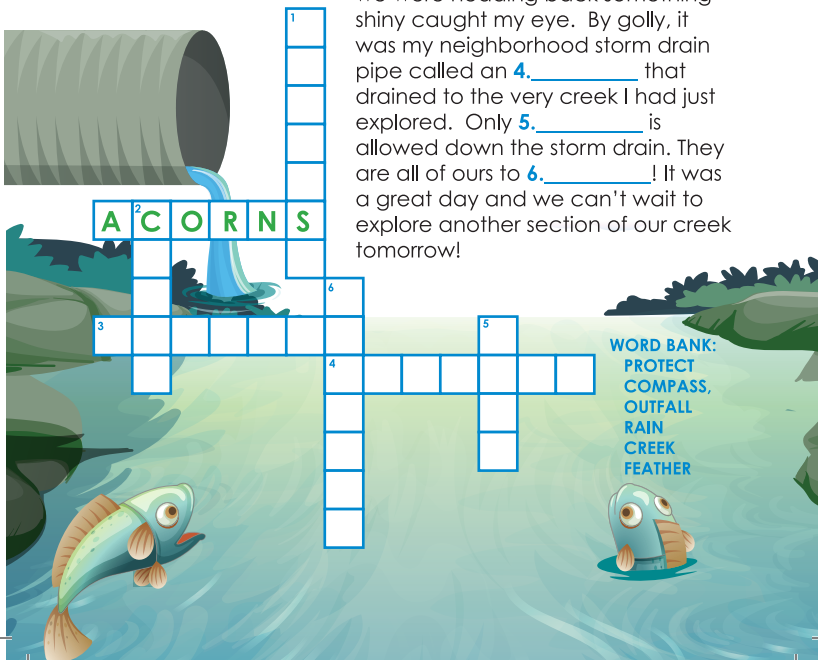


WHAT ARE YOUR FAVORITE THINGS ABOUT CREEKS?

We were so excited to head out for an adventure!

Before leaving we made sure to pack all the supplies needed for our expedition. This included water, sunscreen, a 1. _____ for direction, binoculars and a field journal to record all of the neat things we might find. Stepping out from our doorway, we marched towards our nearest 2. _____ trail only a few blocks away. As we reached the end of our neighborhood block we observed that there was a round decal on the storm drain that said "no dumping, drains to creek" and wondered if the storm drain went to the very same place we were headed. When we got to the trailhead we saw all sorts of things. Some of the things we noted in our journal were the abundance of acorns from the valley oak tree, otter prints in the creek bank, and a 3. _____ from a barn owl. There were whirligig beetles and dragonflies, frogs, and even a three spined stickleback fish in the creek. Just as

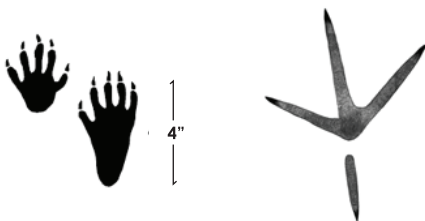
we were heading back something shiny caught my eye. By golly, it was my neighborhood storm drain pipe called an 4. _____ that drained to the very creek I had just explored. Only 5. _____ is allowed down the storm drain. They are all of ours to 6. _____! It was a great day and we can't wait to explore another section of our creek tomorrow!



BE A WILDLIFE DETECTIVE!

Animals are often hiding or sleeping when we visit a creek.
Look for the evidence they leave behind.

LOOK FOR FOOTPRINTS IN THE SOFT MUD.
MATCH EACH PRINT WITH WHO YOU THINK MADE IT.



ANSWERS:
TOP LEFT - RACCOON
TOP RIGHT - SNOWY EGRET
BOTTOM LEFT - DEER
BOTTOM RIGHT - DUCK



Deer Skull
←

Deer Scat



Raccoon Skull

Fur



Coyote Scat



Opossum Skull

**WHAT EVIDENCE
HAVE YOU FOUND?**

LEAF RUBBING

Make a leaf rubbing by placing a leaf under a piece of paper and gently rubbing where the leaf is with your pencil.



Hint: You can use colored pencils to make a beautiful picture!

CREEK PROTECTOR

FIELD GUIDE #1 STORM DRAINS CONNECT STREETS TO CREEKS

CERTIFICATE OF ACHIEVEMENT

I _____
promise to help protect storm drains,
creeks, and rivers to help preserve nature
and fun activities we enjoy on the water.
I will show others how small changes can
make a big impact and will keep having
fun exploring the outdoors.
Creeks and rivers are ours to protect!

