

# WATER ACTIVITY BOOK

## PRESERVING WATER FOR ALL



This book is intended for grades 1 through 3.



# LEARN HOW YOU CAN BE A WATER PRESERVER

The first step to becoming a Water Preserver is understanding facts about the water that flows from the faucet, also known as the tap, and where it comes from.

Did you know the water that comes out of the tap every time you turn it on is delivered by SJWTX?

Water is one of the most important resources on the planet. SJWTX is committed to providing safe, healthy water to you and your family every year.

As you work on the activities in this book, keep in mind how important water is to you. We use water in so many different ways throughout the day, and life wouldn't be possible without it.



**Did you  
know that  
SJWTX is your  
water provider?**

## **SJWTX Systems Overview**

11 Owns and operates Public Drinking Water Systems

35 Active Groundwater Well Sites

5 Wastewater Treatment Facilities

3 Surface Water Treatment Plants

16 Pump Stations

250 Sq Ft Miles of Service Area

634 Miles of Main

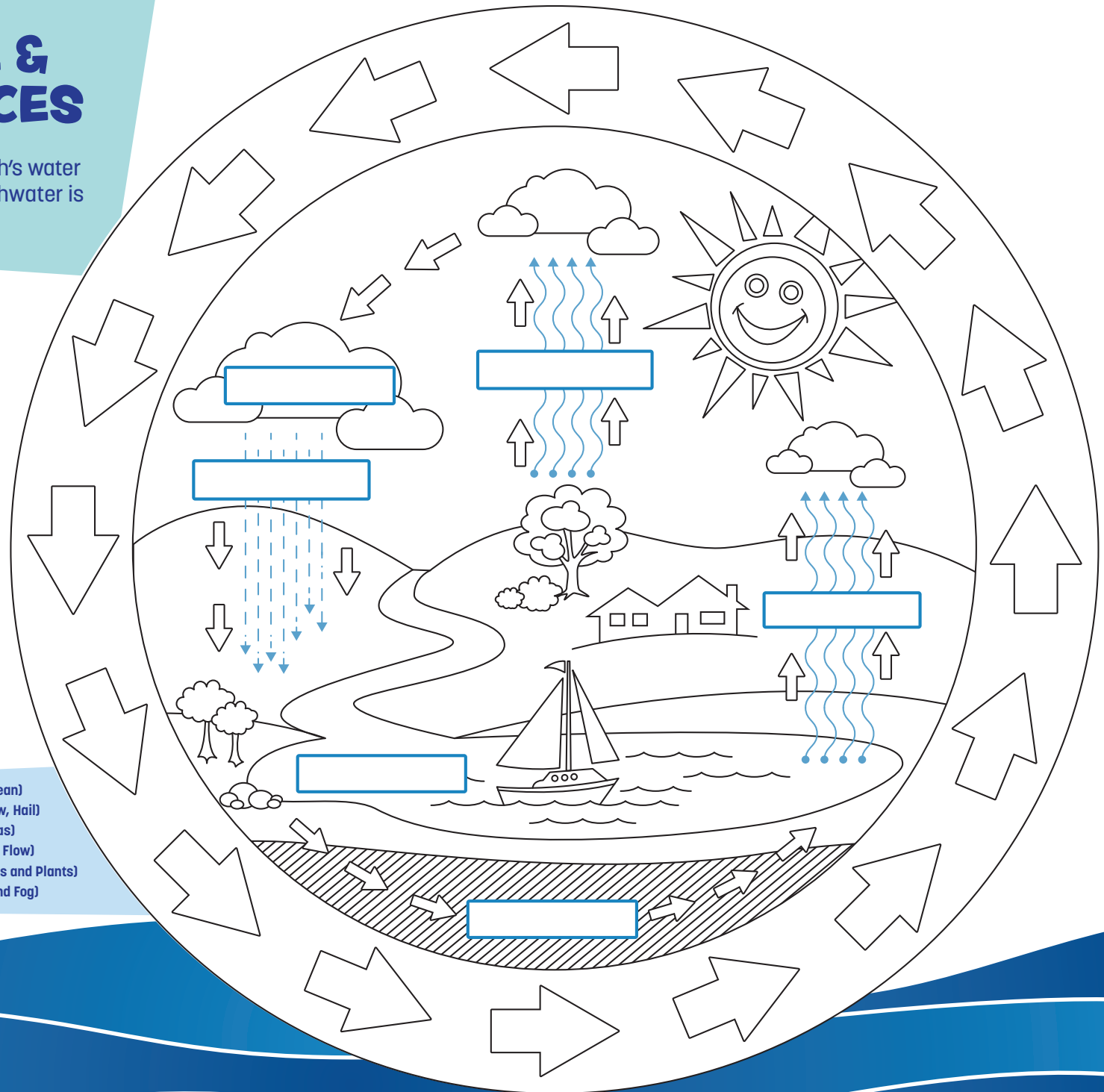


# WATER CYCLE & WATER SOURCES

Did you know that only 3% of the Earth's water is freshwater, but only 1% of that freshwater is accessible to use for drinking water?

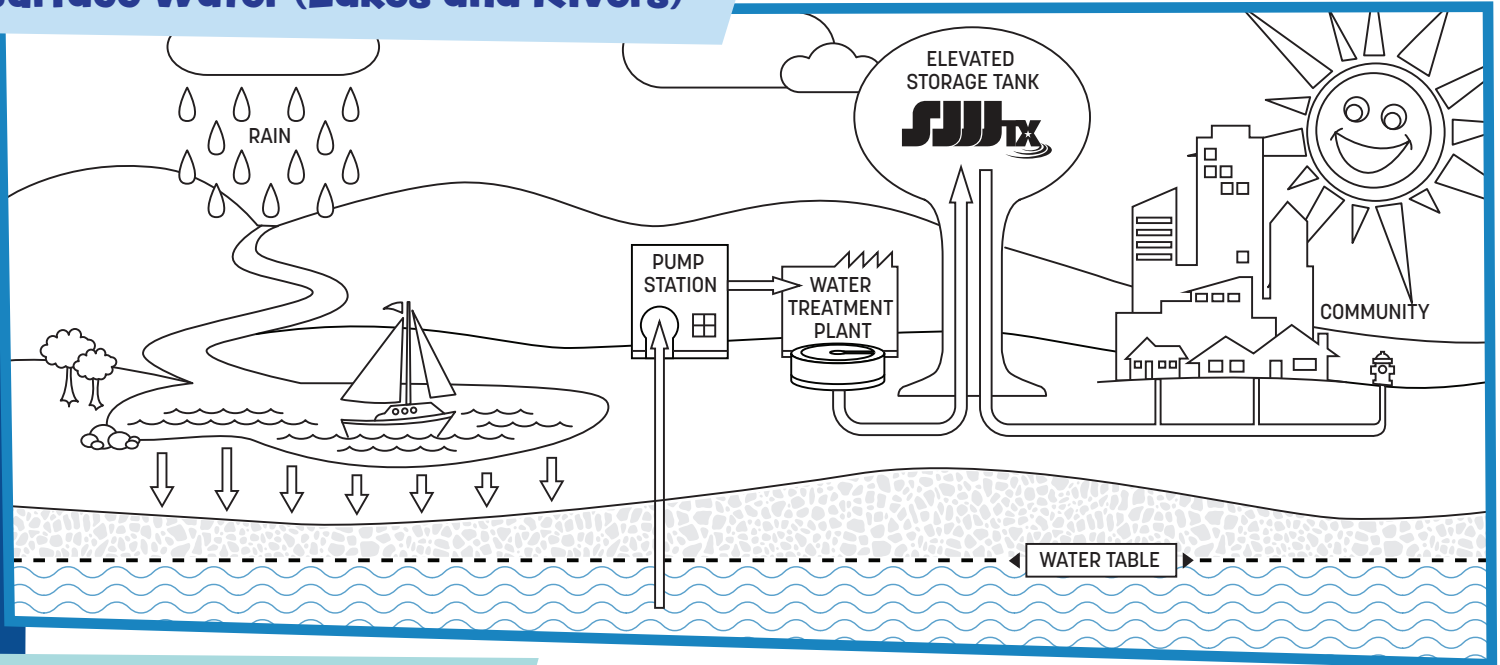
- Canyon Lake is one example of a large body of fresh water known as surface water. About 64% of the water we supply comes from Canyon Lake.
- The remaining 36% of your water comes from groundwater wells. These wells pull water from the Trinity Aquifer.
- Most animals depend on water-abundant places, like oceans and lakes, for their habitat. A habitat is where an animal can find everything it needs to live – food, shelter, space, and water. Freshwater habitats are home to about 12% of all animal species in the world.

Surface Water (Lake/Ocean)  
Precipitation (Rain, Snow, Hail)  
Evaporation (Liquid to Gas)  
Percolation (Subsurface Flow)  
Transpiration (From Trees and Plants)  
Condensation (Clouds and Fog)

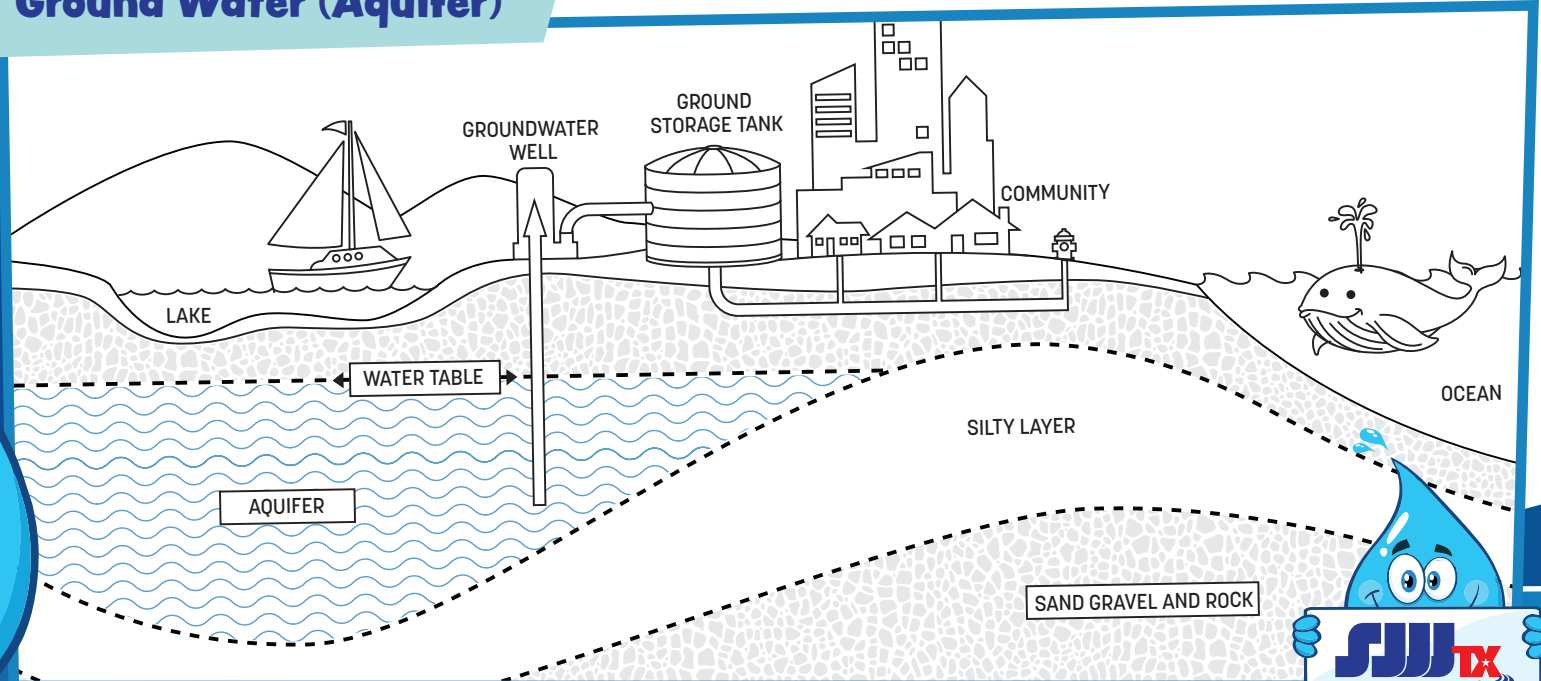


# FROM THE WATER SOURCE TO THE TAP.

## Surface Water (Lakes and Rivers)



## Ground Water (Aquifer)





# WATER QUALITY

## Find the best path for the kitchen and bathroom drains.

Start at the kitchen sink and trace a continuous line down the pipes until you reach the end of the pipe. Repeat for bathroom sink and toilet.

Do you know where the water goes after you use it? It goes down a drain, through the plumbing in your house, to a sewer main that carries it away for treatment where the water can be used again. It's important to know what is safe for the drain and what is not to make sure the water can be used over and over again. See if you can complete the drain maze below and follow wastewater from the house to the sewer main.

## Things that **CAN'T** go down drains in your home:

### Kitchen Drains:

- FAT OIL GREASE (FOG)
- Paper Towels
- Paint
- Cleaning Chemicals

### Bathroom Drains

- Kitten Litter
- Medicines
- Cotton balls/q-tips
- Chemicals (cleaners, paint, etc.)
- Gum wrappers/candy
- Floss
- Baby Wipes

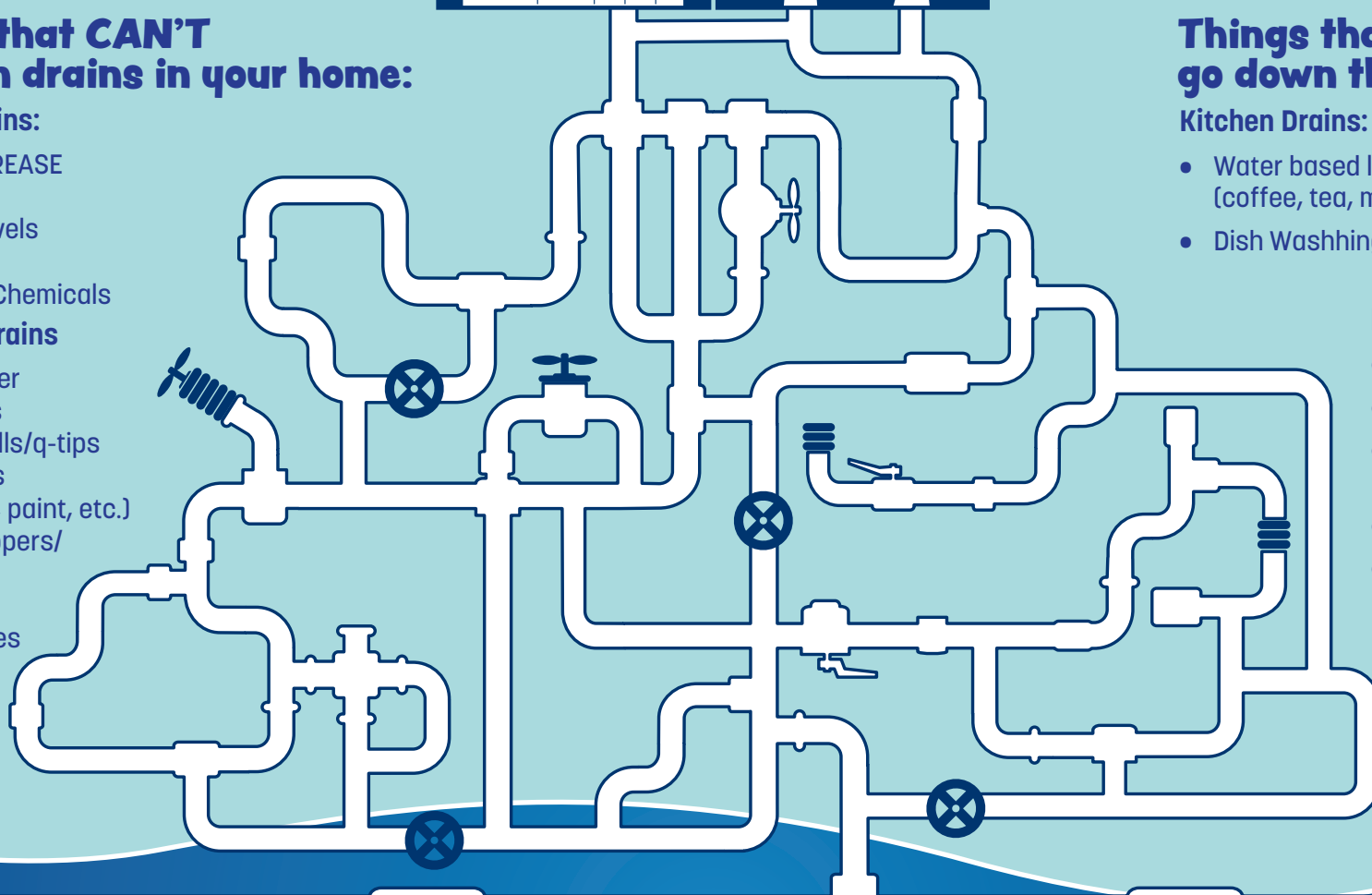
## Things that **CAN** go down the drains:

### Kitchen Drains:

- Water based liquids (coffee, tea, milk, etc.)
- Dish Washing Soap

### Bathroom Drains

- Human Waste
- Toilet Paper
- Hair and Body Wash
- Mouth Wash
- Toothpaste



# CONSERVE TO PRESERVE

Less than 1% of all water on Earth is freshwater and can be easily used by people. Thus, we must do our best to save water so there's clean water available for everyone, including future generations.

**You can help preserve water by following these Water Conservation Tips!**

## Water Conservation Tips:

Turn off the tap while brushing your teeth. You can save as much as 4 to 8 gallons of water daily!

Take a quick shower rather than a bath. Taking a shower uses about 10 to 25 gallons of water while taking a bath can use up to 70 gallons of water.

When washing your car, use a nozzle to stop the water flow from your hose when it is not in use.

Repair dripping faucets and leaky toilets indoors. Also, check for leaks in outdoor pipes, faucets, and hoses.

In the space below, draw one way you plan to conserve water. It can be an example from the list to the left, or think of your own!



# WORD SEARCH

We use water every day, sometimes without thinking much about it. Complete the word search below, and then think of five more activities you do each week that you need water for.

Share your words with friends, family, or teachers!

## Find the Water Words

### Word Bank:

Shower  
Water  
Plant  
Toothbrush  
Laundry  
Dishes  
Garden  
Drink  
Swim  
Flush



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



# SCIENCE PROJECTS

## Water Cycle in a Bag

With this activity, you can create a miniature water cycle in your own home!  
Instructions:

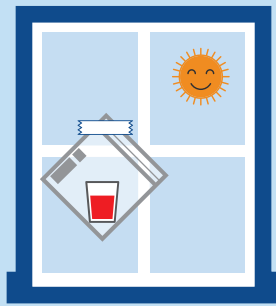
1

Fill the plastic cup about halfway with water and put a few drops of food coloring in it.



2

Place the cup in a corner of the plastic bag and tape the bag to a well-lit window for a week.



3

Notice the water that collects under the Dixie cup isn't red, even though the water in the Dixie cup is. That's because the water evaporates and "rains" back down, but the food coloring stays put.



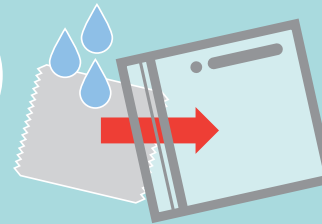
### What You'll Need:

- Gallon size resealable plastic bag
- 1 clear plastic Dixie cup
- Water
- Food coloring (any color)
- Duct tape

## Just Add Water

Just like you, plants need water to live. In this activity, you will use water to bring some bean sprouts to life!

1



Dampen the paper towel and place it in the plastic bag.

2



Put 3 to 5 dried beans on top of the paper.

3



Place the bag by a well-lit window for a couple of days.

4



Watch the beans sprout!

### What You'll Need:

- Dried Beans (any kind)
- Sandwich or Quart Size Resealable plastic bag
- 1 paper towel
- Water





# ANIMAL PROFILES

## Blind Salamander

Hi, I am a Texas Blind Salamander! I am an endangered species that lives underground in the Edwards Aquifer system, located in central Texas. Texas is the only place I am found in the world, and I need your help to protect my habitat. My family and I live in total darkness and have adapted to having no eyes—because we do not need them. We are a very fragile species, so conserving water and keeping water clean are steps you can take to protect us.

**Texas Blind Salamander | National Wildlife Federation**  
(nwf.org)



## Great Blue Heron

Hi, I am the Great Blue Heron! I am a migratory bird that travels north during the summer months and south during the winter months, although I can live year round in Central Texas. I am the largest species of heron in North America and stand over three feet tall. I live around water and eat species of fish and amphibians. It is important to protect water so I have plenty of food to eat.

**Bird of Myth and Elegance**  
**National Wildlife Federation (nwf.org)(nwf.org)**



The Great Blue Herons migration takes place from March to May each year. During the migration, the birds fly at an altitude of about 7,000 feet above sea level.

This flight takes them from Alaska to Mexico. They usually start flying at night, so they can take advantage of tailwinds and arrive sooner.

During migration, many things might distract them, such as storms or other migrating birds, but with practice, they learn how to avoid these hazards. The journey for one bird is about 4000 miles long.



# ANIMAL PROFILES



## Golden-Cheeked Warbler

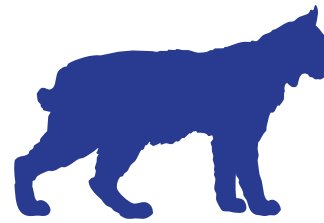
Hi, I am a Golden-Cheeked Warbler! The only place I am found in the world is in Central Texas. I am an endangered species and becoming rarer due to habitat loss. I eat insects such as caterpillars and beetles. Water is important for us to help keep our home, the juniper trees, alive. Maybe you could help make new habitat for me by planting a juniper tree at your house?

**Golden-cheeked Warbler - Balcones Canyonlands -  
U.S. Fish and Wildlife Service ([fws.gov](http://fws.gov))**

**Golden-cheeked Warbler | Audubon Field Guide**



## Bobcat



Hi, I am a Bobcat! My name comes from my short, bobbed tail. I am a reddish-brown cat, typically weighing up to 25 pounds. I like to eat small mammals and birds and mainly come out at night. I can live in a variety of habitats but prefer rocky areas. Water is vital for me and my food source to stay healthy during the hot Texas summers.

**Texas Cats — Texas Parks & Wildlife Department**

**TPWD: Bobcats – Introducing Mammals to Young Naturalists ([texas.gov](http://texas.gov))**



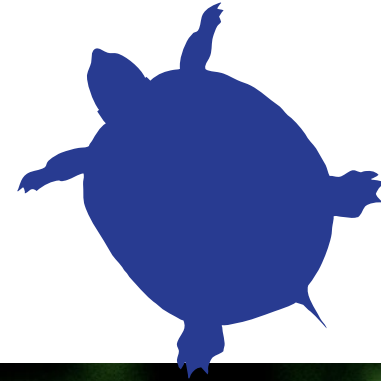


# ANIMAL PROFILES

## Red-eared Slider

Hi, I am a Red-eared Slider! My name comes from the red stripe behind my eye. My shell is made up of my ribs and a layer of skin on top. I live in slow moving bodies of water such as rivers, streams, and lakes. I eat aquatic plants, small fish, and decaying materials. Water is important because it is my habitat and provides me with food sources.

Red-eared Slider (*Trachemys scripta elegans*) (texas.gov)



**How many ways do  
your pets or other  
animals use water?**

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_
- 6 \_\_\_\_\_



# Certificate of Completion

CONGRATULATIONS ON BECOMING A WATER PRESERVER

*This Certifies That*

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has completed the requirements of the Water Preserver program and  
is awarded this certificate on behalf of SJWTX.

