

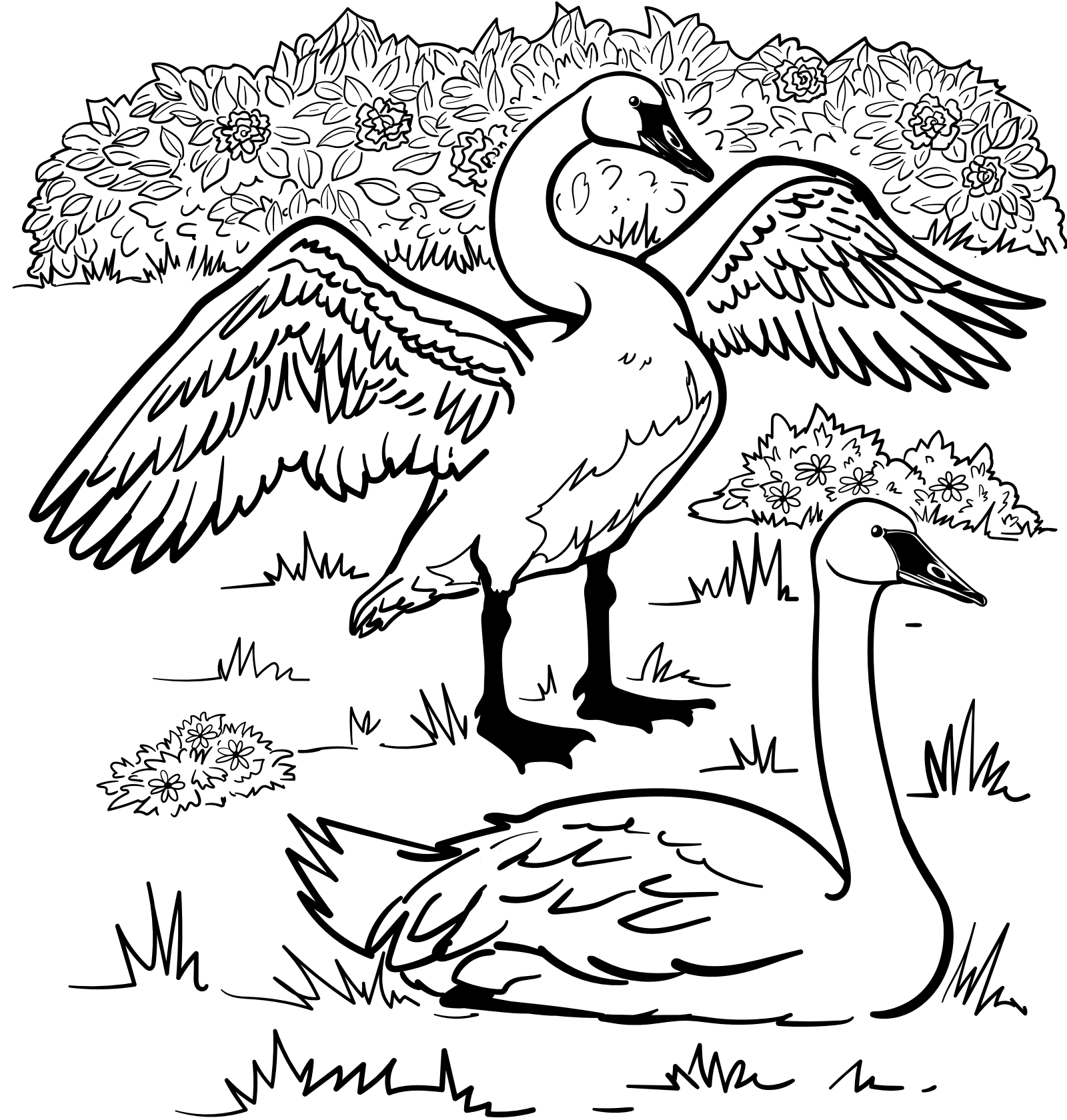
# **Trumpeter Swans**

## **How Can I Help?**



**An Educational Coloring & Activity Book — 3<sup>rd</sup>-5<sup>th</sup>**

## Trumpeter Swans: How Can I Help?



QR codes and websites should be explored with an adult.

# Friends Of Trumpeter Swans

Look for these STEM (Science, Technology, Engineering, Math) professionals throughout the book to find out more about careers associated with trumpeter swans, wetlands and their conservation.

**VETERINARIAN**



**HYDROLOGIST**



**ELECTRICAL ENGINEER**



**WILDLIFE BIOLOGIST**



**WETLAND ECOLOGIST**



**ORNITHOLOGIST**



**ZOO EDUCATOR**



**CIVIL ENGINEER**



**ZOOKEEPER**



**WILDLIFE REHABILITATOR**





# Which Bird Is A Trumpeter Swan?


Birds come in many different shapes and sizes. Let's see if we can find the trumpeter swan among these birds. When you find the trumpeter swan, circle it!

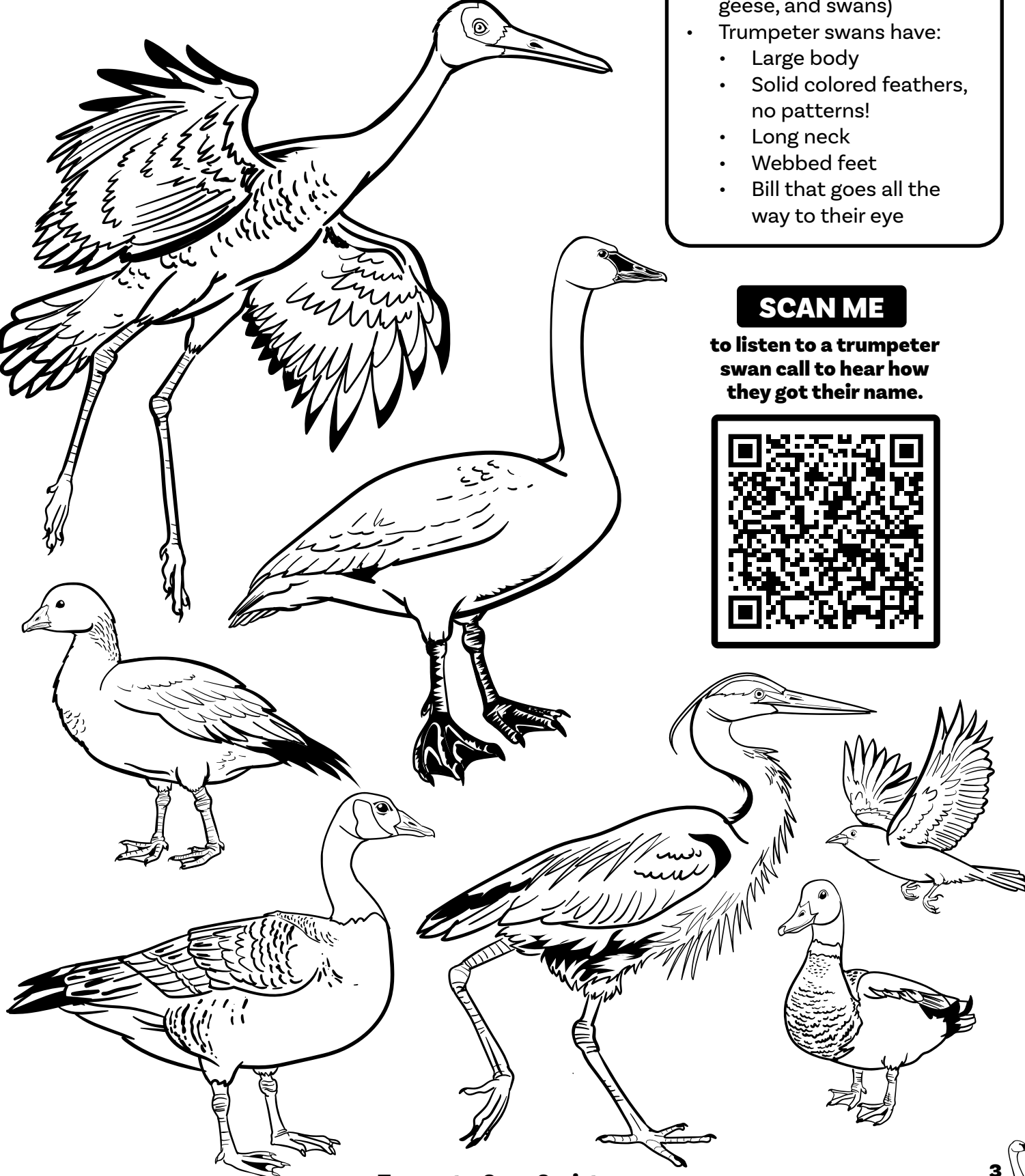
**CLUES:**

- Trumpeter swans are a type of waterfowl (a group of birds that include ducks, geese, and swans)
- Trumpeter swans have:
  - Large body
  - Solid colored feathers, no patterns!
  - Long neck
  - Webbed feet
  - Bill that goes all the way to their eye

**SCAN ME**

to listen to a trumpeter swan call to hear how they got their name.







# Do You Live Near Trumpeter Swans?

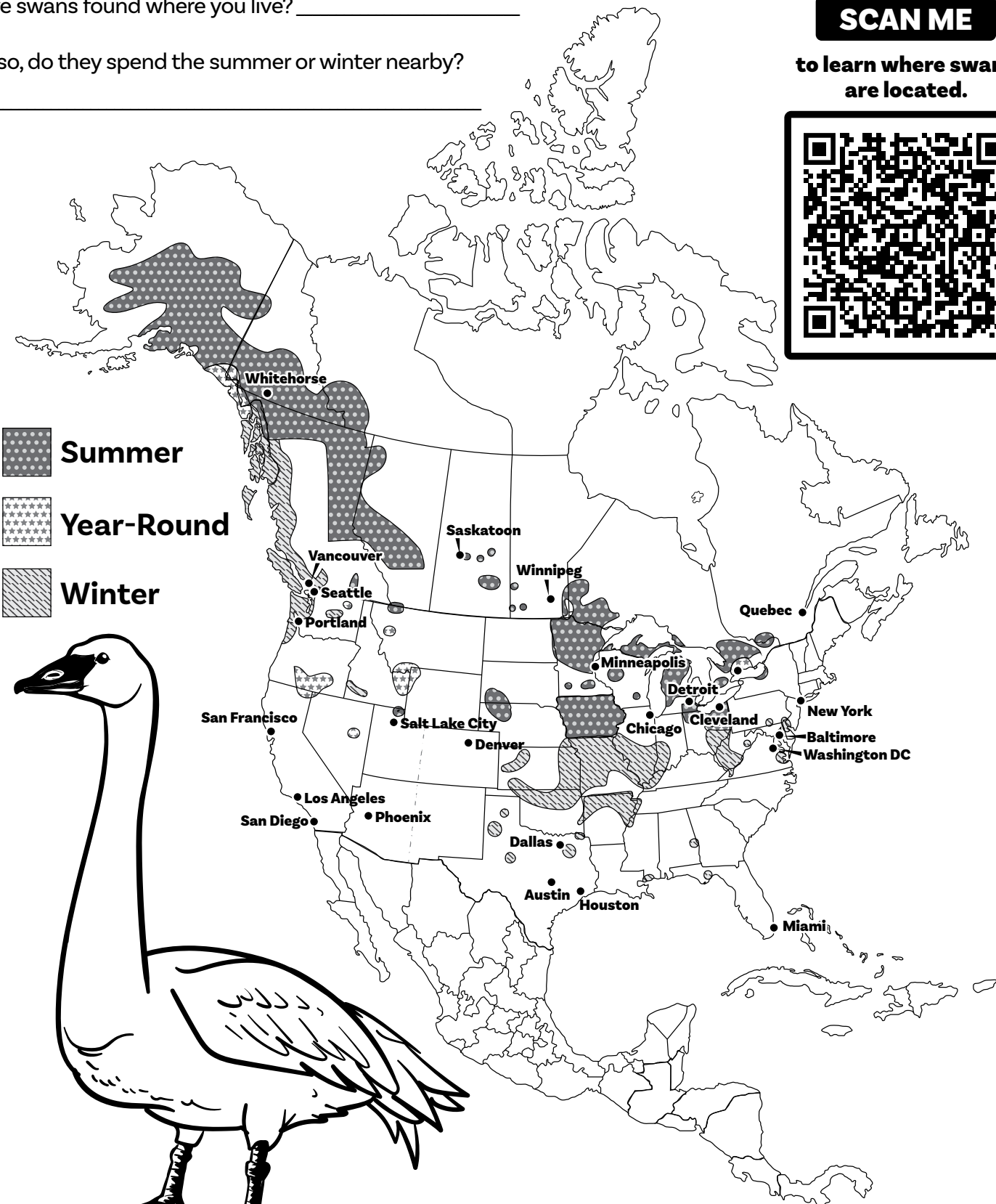
Trumpeter swans are found in North America. North America is made up of Canada, United States and Mexico. Find and mark where you are on the map.

Are swans found where you live? \_\_\_\_\_

If so, do they spend the summer or winter nearby?  
\_\_\_\_\_

SCAN ME

to learn where swans are located.



# Swan Adaptations

1  
NICTITATING  
MEMBRANE  
(3<sup>RD</sup> Eyelid)

2  
SERRATED  
BILL

3  
LONG  
NECK

4  
LAYERS OF  
THICK FEATHERS

5  
OIL  
GLAND

6  
LARGE  
WEBBED  
FEET

- Helps the swan swim and keep eggs warm
- Helps the swan eat
- Helps the swan see underwater
- Helps the swan's feathers stay waterproof
- Helps reach deep underwater
- Helps the swan stay warm and dry

SCAN ME

to watch a trumpeter swan preen its feathers. Watch closely as it rubs its bill on the oil gland and then rubs the oil on its feathers.



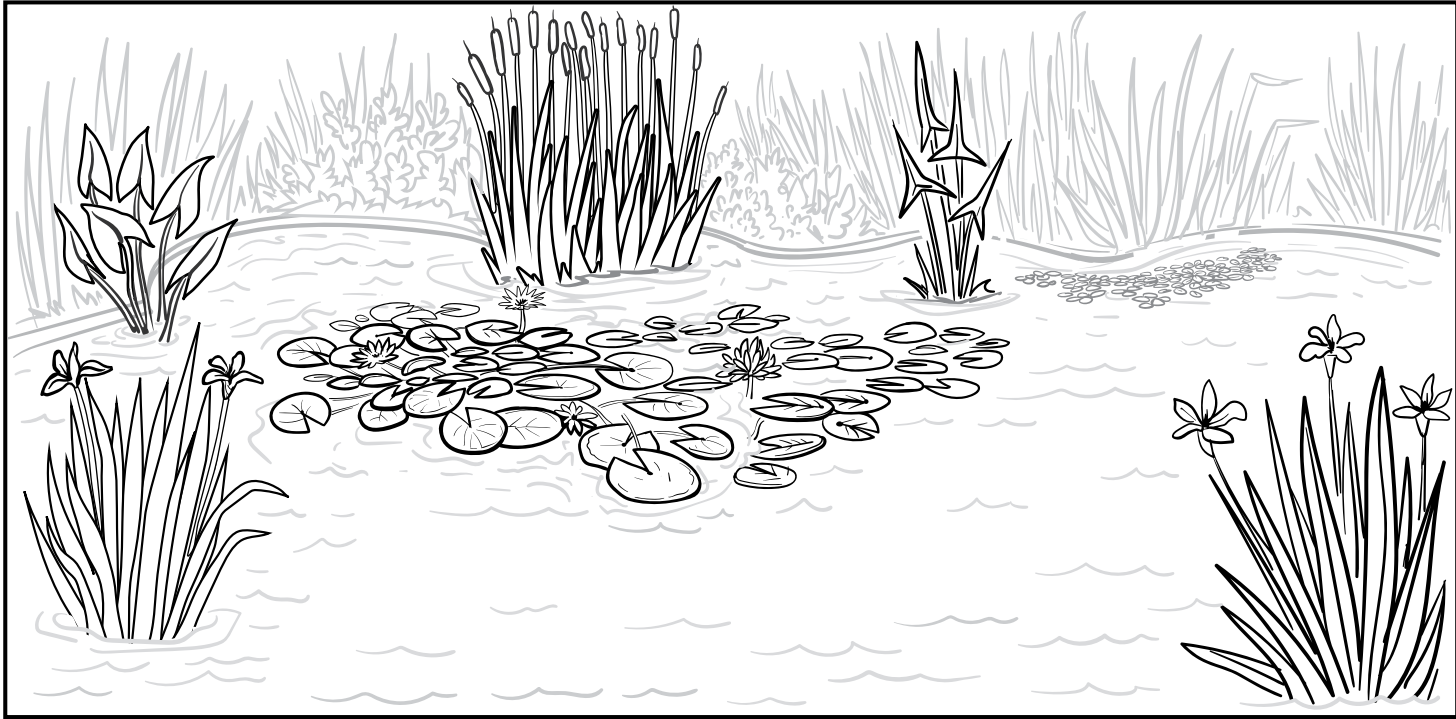
Hi, I am an Ornithology Professor and an expert on birds. Can you figure out how the swan adaptations help them survive? Write the adaptation number next to how they are used in my notebook.





# Swan Habitats

Habitat is the natural place that an animal lives. Which of these habitats is the right one for trumpeter swans? Color each of these habitats and draw a trumpeter swan in the correct habitat.



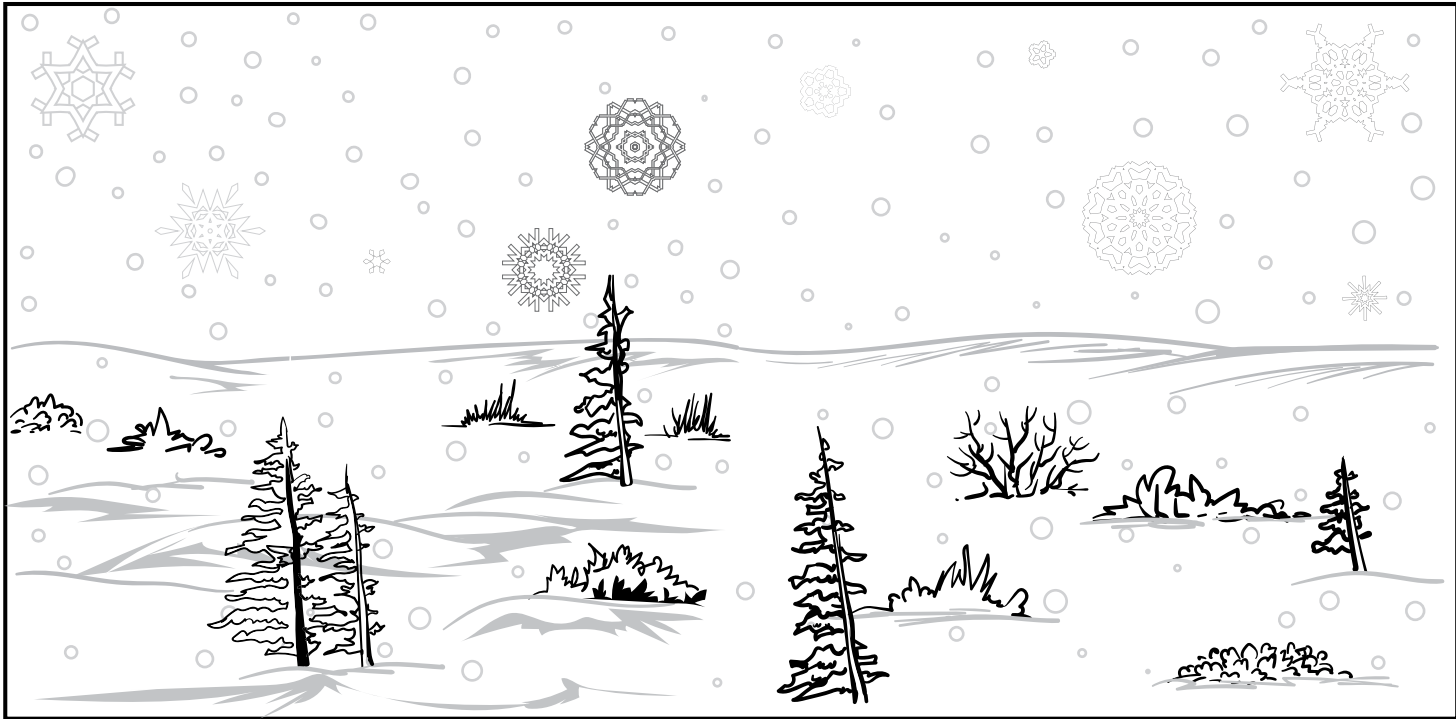
**WETLAND**

Land that has a wet and spongy soil, typically a transitional area between dry land and open water (like a pond, lake or river).



**DESERT**

Area of land that receives little or no rain and has sparse vegetation.



**TUNDRA**

Area of land in the Arctic that is flat and nearly treeless, where the ground is permanently frozen.



**RAINFOREST**

Land that receives large amounts of rain and is covered in dense forest vegetation.

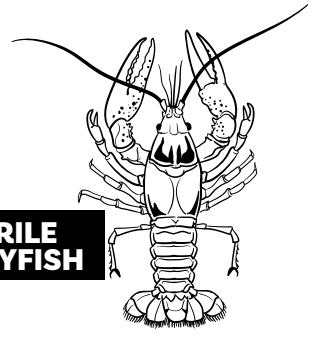
# Build A Wetland Food Web

The plants and animals found in a wetland are tied together through food chains. A plant or animal can be in more than one food chain. When this happens, you make a food web.

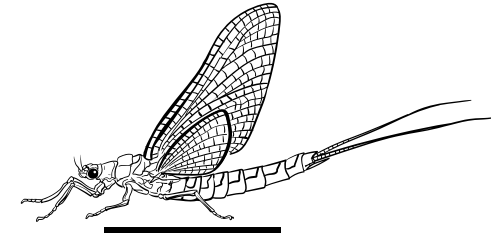
In the wetland below, make as many connections as you can between animals by drawing an arrow from a plant or animal to the animal that eats it. Make as many food chains as you can to make a food web.



**NORTH AMERICAN RIVER OTTER**



**VIRILE CRAYFISH**



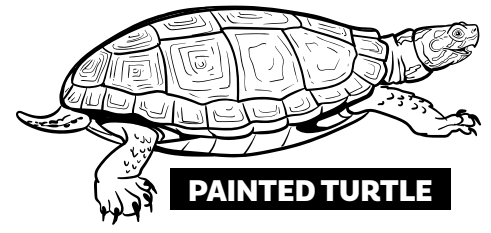
**MAYFLY**



**WATERWEED**



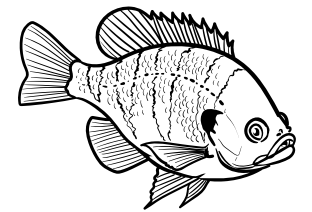
**COMMON GARTER SNAKE**



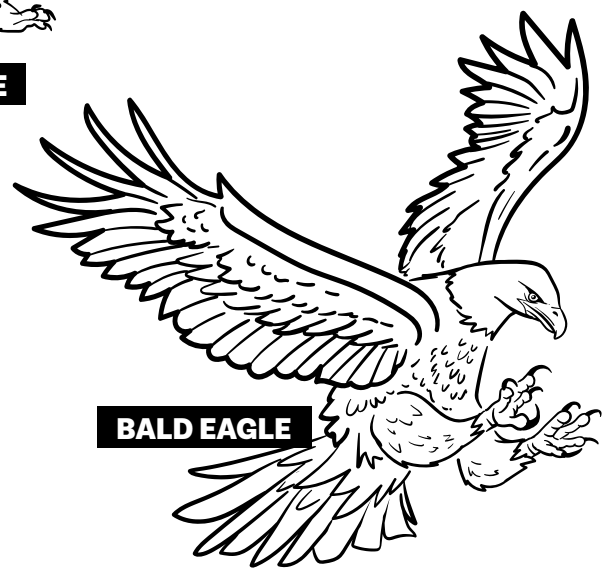
**PAINTED TURTLE**



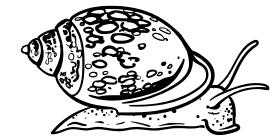
**WAPATO**



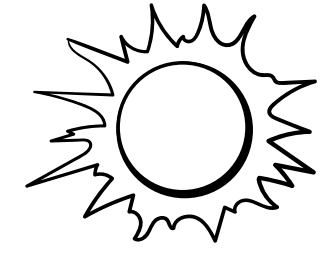
**BLUEGILL**



**BALD EAGLE**



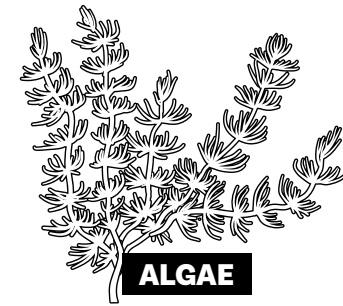
**ACUTE BLADDER SNAIL**



**SUN**



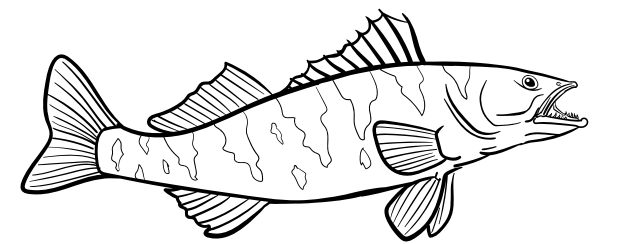
**TRUMPETER SWAN**



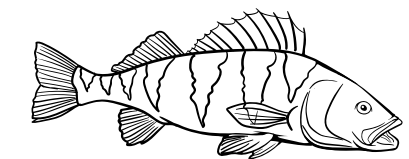
**ALGAE**



**BLUE HERON**



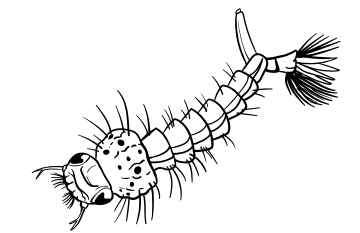
**WALLEYE**



**YELLOW PERCH**



**FATHEAD MINNOW**



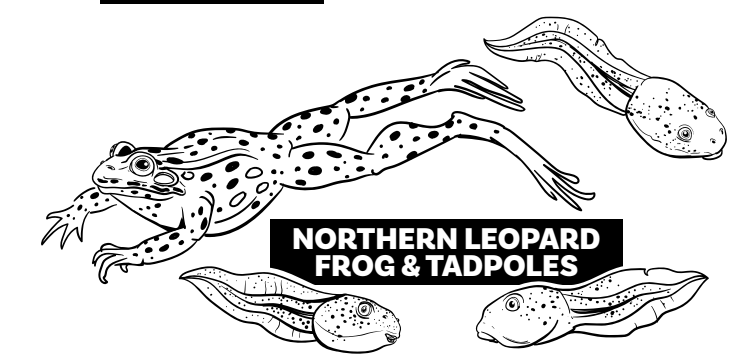
**MOSQUITO LARVAE**



**NORTHERN RACCOON**



**DUCKWEED**



**NORTHERN LEOPARD FROG & TADPOLES**

## SCAN ME

to find out how swans forage for food. What parts of their bodies help them? What are the baby swans or cygnets eating?

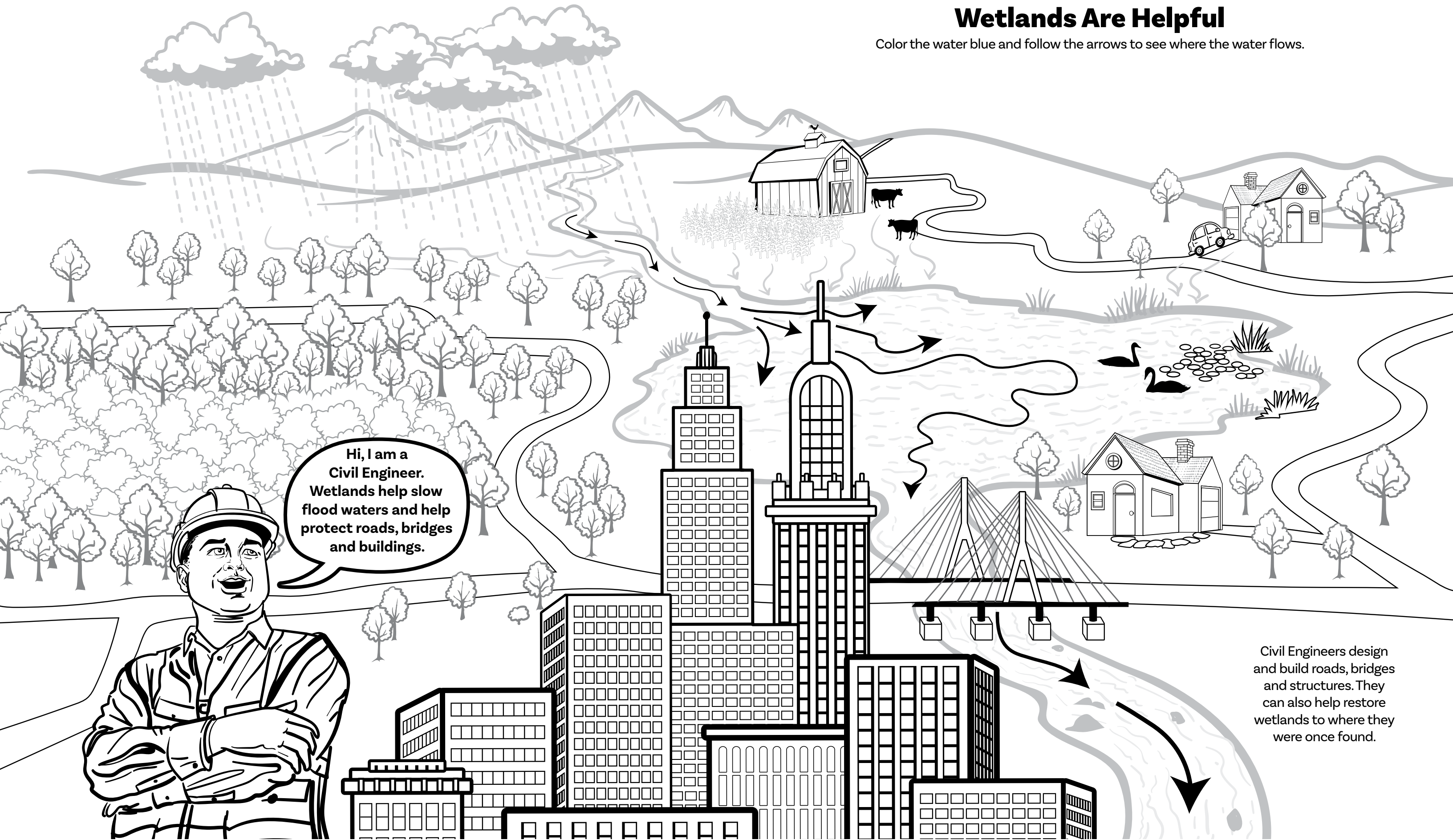


NOTE: animals not actual size



# Wetlands Are Helpful

Color the water blue and follow the arrows to see where the water flows.



Hi, I am a Civil Engineer. Wetlands help slow flood waters and help protect roads, bridges and buildings.

Civil Engineers design and build roads, bridges and structures. They can also help restore wetlands to where they were once found.



# How Wetlands Work

Color the water blue and follow the arrows to see where the water flows.

Hi, I am a Wetland Ecologist. The plants in a wetland slow down flood water. This allows sediments, dirt and debris in the water to settle to the bottom. Plants also clean the water by absorbing chemicals, like fertilizers.

Wetland Ecologists study plants and animals in the wetlands.

Hi, I am a Hydrologist. I take samples of water before and after it goes through a wetland. The water flowing out of a wetland has fewer chemicals and sediments than water flowing into a wetland.

Hydrologists study how water moves.

# Maze of Dangers

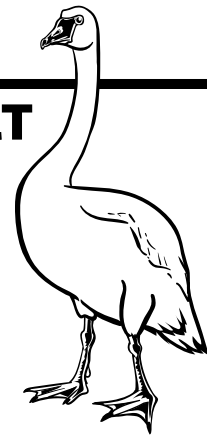
Help the Trumpeter Swan find its way to a safe habitat while avoiding threats along the way.

Hello, I am a Wildlife Rehabilitator, and my friend is a Veterinarian, or animal doctor. We work together to help sick or injured wildlife, like trumpeter swans. Hurt or sick animals can be brought to us so we can help.

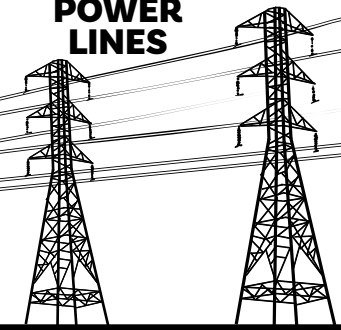


We love it when an animal gets well enough to go back into the wild. Sometimes a veterinarian cannot fix all an animal's issues. When this happens, we find it a place to live where humans can help care for it, like a nature center, zoo, or sanctuary.

START



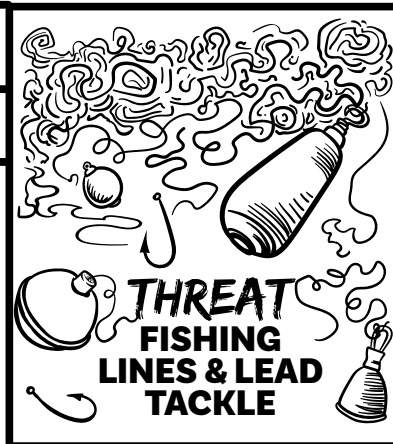
THREAT  
POWER  
LINES



THREAT  
TRASH & PLASTIC  
POLLUTION



THREAT BREAD



THREAT  
FISHING  
LINES & LEAD  
TACKLE



THREAT  
HABITAT  
DESTRUCTION

END  
SAFE HABITAT



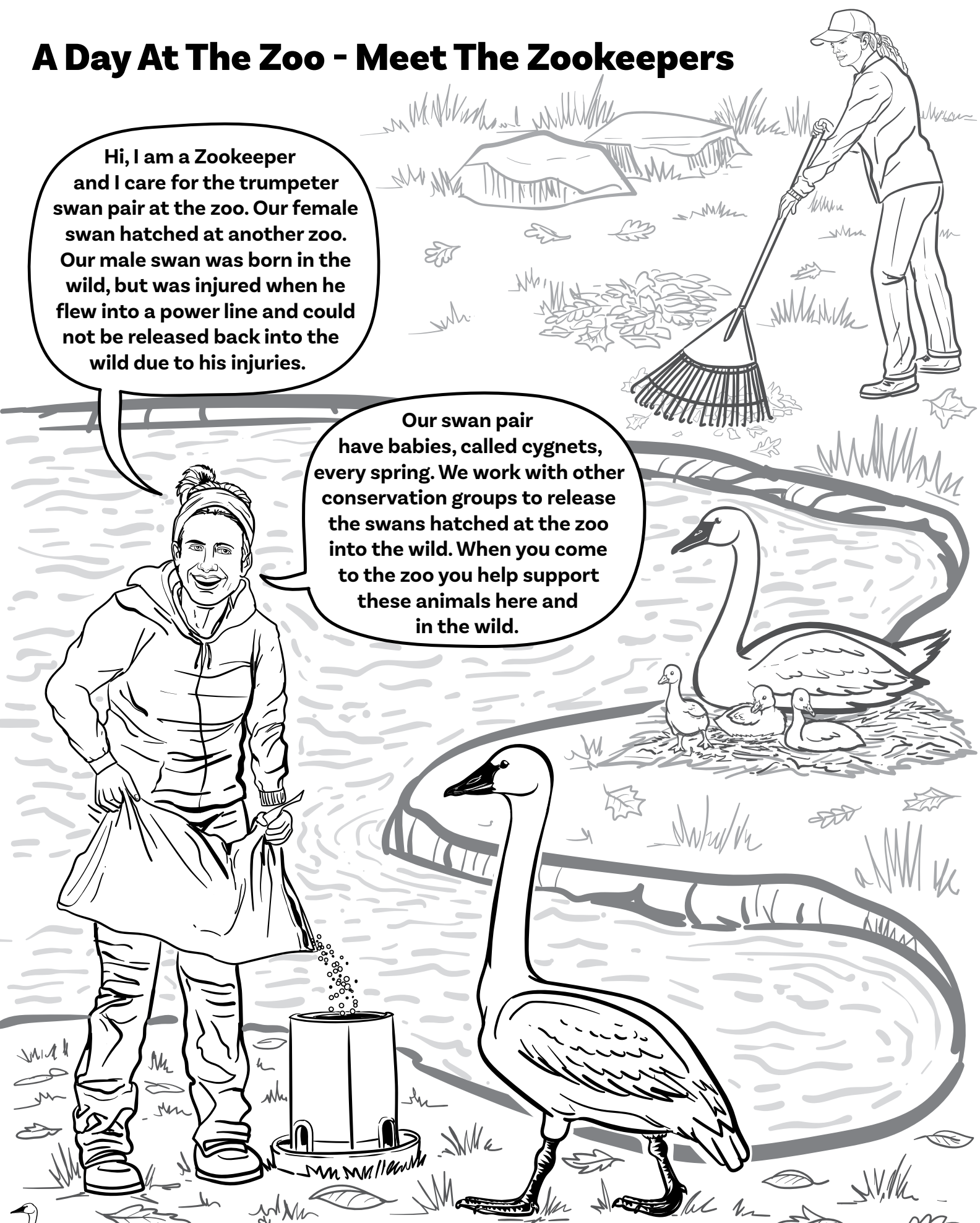
What can you do to help swans and their home?  
(See page 26 for some ideas!)



# A Day At The Zoo - Meet The Zookeepers

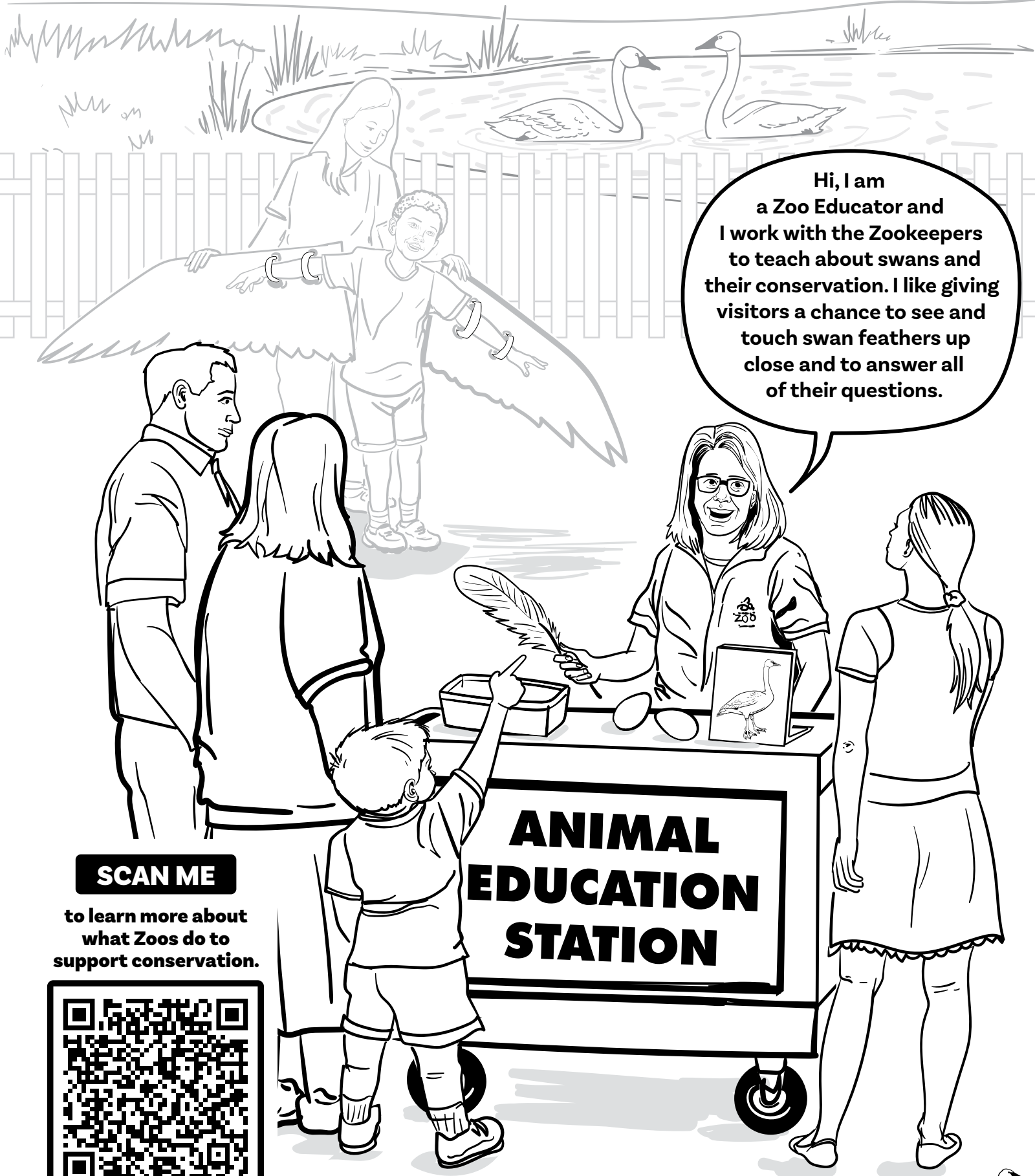
Hi, I am a Zookeeper and I care for the trumpeter swan pair at the zoo. Our female swan hatched at another zoo. Our male swan was born in the wild, but was injured when he flew into a power line and could not be released back into the wild due to his injuries.

Our swan pair have babies, called cygnets, every spring. We work with other conservation groups to release the swans hatched at the zoo into the wild. When you come to the zoo you help support these animals here and in the wild.



# A Day At The Zoo - Meet The Educators

Hi, I am a Zoo Educator and I work with the Zookeepers to teach about swans and their conservation. I like giving visitors a chance to see and touch swan feathers up close and to answer all of their questions.



**SCAN ME**  
to learn more about  
what Zoos do to  
support conservation.





# Swan Release

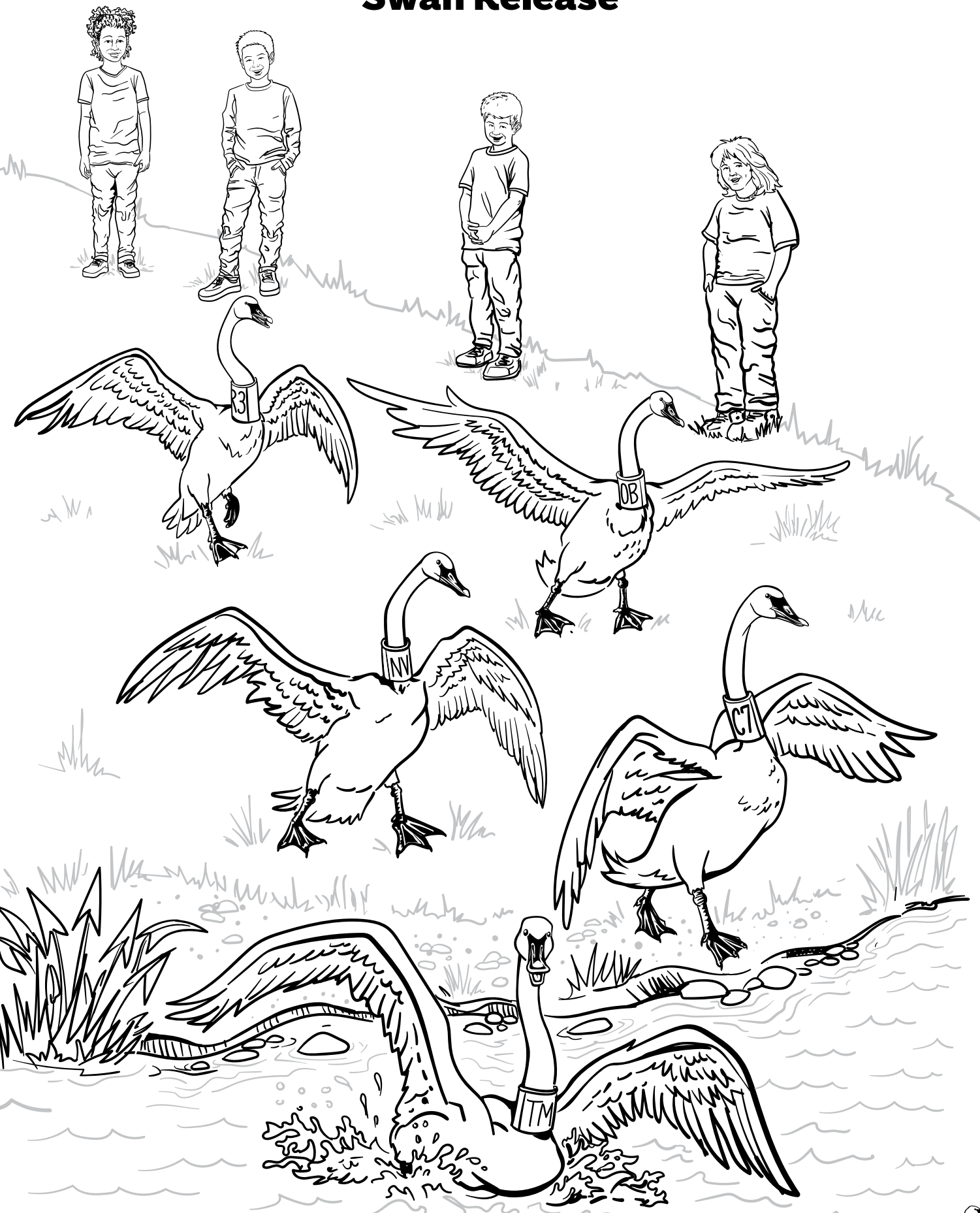
Hi, I am a Wildlife Biologist. Trumpeter swans were once very common, but by the early 1900's they were almost gone. Laws were written to protect them and programs were started to help save them. Many people and organizations came together to help. Releasing young swans into the wild has helped and now there are over 60,000 trumpeter swans in North America!

Draw yourself in the picture. Choose your spot to watch the swans go into the water.



## SCAN ME

to watch swans being released into the wild. The sites are carefully chosen to make sure it meets all of their needs. Swans have been released on private land, tribal land and public land.



# Trumpeter Swan Collaring

Hi, we are Wildlife Biologists. Part of our job is to research and learn about animals to better understand their needs. We put small GPS units on trumpeter swans to track where they are moving. Knowing where swans are at different times of the year helps us understand how to best protect their habitat.

Only scientists who have permission are allowed to catch and collar swans and other wild animals. You should always keep a safe distance from all wild animals.



Swans move south when their water freezes and return to the north when it starts to warm in the spring. This is called migration.

**SCAN ME**

to follow collared trumpeter swans and find out where they are moving throughout North America.



# Who Made The Trumpeter Swan Collar?



Hello, I am a Micro-Electrical Engineer. I work with biologists to make GPS units that can be worn by birds and record their movement. Since swans fly, their collars need to be lightweight. The collars I make weigh only 55 grams. (That's about the same weight as 10 quarters!) The collars are solar powered and collect data on a swan's location every 15 minutes!



**SCAN ME**

to check out the collar on a swan.



The biologists use this information to learn where the trumpeter swans go when they leave their nesting locations.





# Where Did The Trumpeter Swan Go?

Using the GPS Tracking Data coordinates from the journal on the right, plot the movements of trumpeter swan #23. Mark a dot on the grid for each recorded point and then draw a line connecting all your points to reveal the route that trumpeter swan #23 took.



## Trumpeter Swan GPS Tracking Data

DATE		COORDINATES
1.	Jun, 15	S5
2.	Oct. 24	P8
3.	Nov. 3	M12
4.	Nov. 8	K10
5.	Nov. 14	J14
6.	Nov. 17	I 17
7.	Dec. 7	H16
8.	Dec. 15	H18
9.	Jan. 6	D22
10.	Jan. 15	C24

**SCAN ME**  
to watch a trumpeter swan fly in and land with the group at a winter site.



**SCAN ME**  
to see actual migration routes that swans have taken.



U  
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E  
D  
C  
B  
A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



# Help Find The Tagged Trumpeter Swans!

Search the picture to find swans with neck collars, leg bands and wing tags.  
How many can you find of each type in this busy winter wetland scene?

Neck Collars: \_\_\_\_\_ Leg Bands: \_\_\_\_\_ Wing Tags: \_\_\_\_\_

I'm a volunteer, called a  
Citizen Scientist. I record  
the locations of banded  
swans. You can do it too!

**SCAN ME**

to become a  
citizen scientist  
and report a  
trumpeter swan  
sightings in  
your area.



# More Trumpeter Swan Information!

## GLOSSARY OF TERMS:

**Cob (kob)** – a male swan

**Cygnets (sig-nit)** – a young swan

**Endangered (en-dān-jerd)** – at a high risk of going extinct

**Habitat (hab-i-tat)** – the natural environment of a plant or animal

**Incubate (in-kyuh-bāt)** – to sit upon eggs for the purpose of hatching

**GPS (jee-pee-es)** – Short for Global Positioning System, an electronic system that uses satellites to determine the location of a vehicle, person, etc.

**Migrate [mī-grāt]** – to pass periodically from one region or climate to another

**Nictitating Membrane (nik-tuh-tay-ting mem-brān)** – a transparent or translucent third eyelid present in some animals that can be drawn across the eye for protection and to moisten it while maintaining vision.

**Overwinter (oh-ver-win-ter)** – to spend or survive the winter

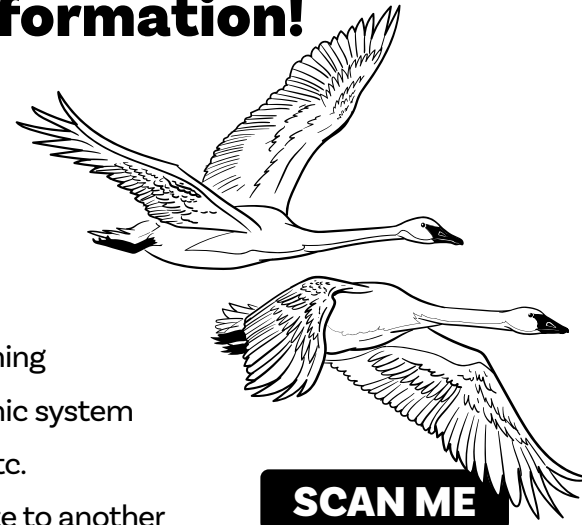
**Pen (pen)** – a female swan

**Serrated (ser-ey-tid)** – having a notched edge

**Vertebrae (vur-tuh-brey)** – the bones or segments that make up the spinal column

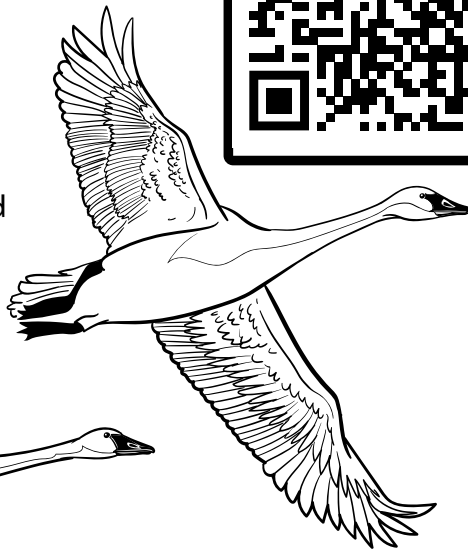
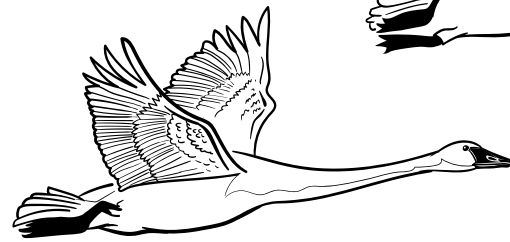
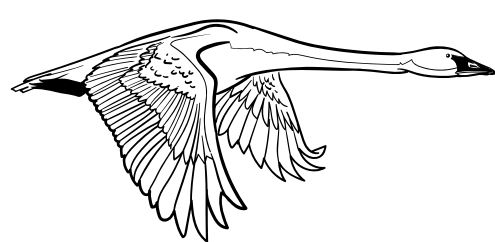
**Waterfowl (wot-er-fowl)** – a water bird, especially a swimming bird

**Wetland (wet-land)** – land that has a wet and spongy soil



**SCAN ME**

to learn more  
about wetlands



## WAYS TO HELP SWANS AND THEIR HOME:

- Share with someone what you know.
- Learn more about swans by reading a book about them.
- Visit swans and other wetland animals in the wild or at a nature center or zoo.
- Don't litter, make sure you put your trash in the right place!
- Pick up trash in your neighborhood.
- Keep a journal of your trumpeter swan (and other wildlife) sightings and photographs.
- Do not feed ducks, geese or swans bread! This can make them VERY sick! Wild animals are great at finding their own food but if you must feed the waterfowl, consider a thawed bag of frozen vegetables or tear up a head of lettuce. These are better for the health of the animals.
- With an adult, report marked or tagged swans to the proper authorities.
- Report injured swans to your local wildlife agency or wildlife rehab center.

**VISIT: [www.trumpeterswansociety.org](http://www.trumpeterswansociety.org)**

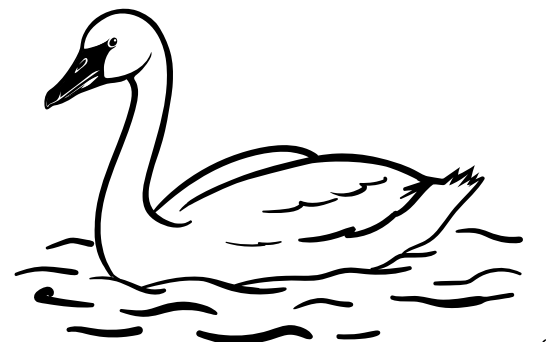
TrumpeterSwanSociety.org

# Wetland Word Search

OWIHEALNSPOLIDCPHBATLV  
FECOSYSTEMCUBAYEOENUFE  
ATRELFECTOINTDGARMA RSH  
ILRVOTAQUIKTWENKLASTIO  
LAOURGYXMPADARECYTDLMR  
SNOTMAONUIONFNETAOPWEON  
IDS LFP LQLDSNTGFLNOIKNW  
LKLOWREFIATGDJOLFTGFIO  
THABITATFENOAWHRANDTIR  
FRNKXSLLEBJCLSESIMOYNT  
BULLFROGHRSBITBEFRTDEV  
UWIPDEBVCASRAJGIDECOFM  
LEADRNMDOONWMTHKLSWFLU  
FGWVBDOURADGANFXYEOTAR  
ROAKEFLCJAOUHNI SONVILD  
ISTIFADKKOGPBLCHUSVAIL  
GPENHRPWMENOREFRHEKNOA  
UARROWHEADXLNABHGEIGFW  
LTLEASIEROHIKFECXUYILW  
PSIYLOUDWAVYSXLULYMPIK  
BULRUSHPRHNSPENYP A IOME  
FWYMANELGN YAMB ITOINRTS  
ALPHIBAINSBS EMOZIHREKL

Can you find the following words in the word search above?

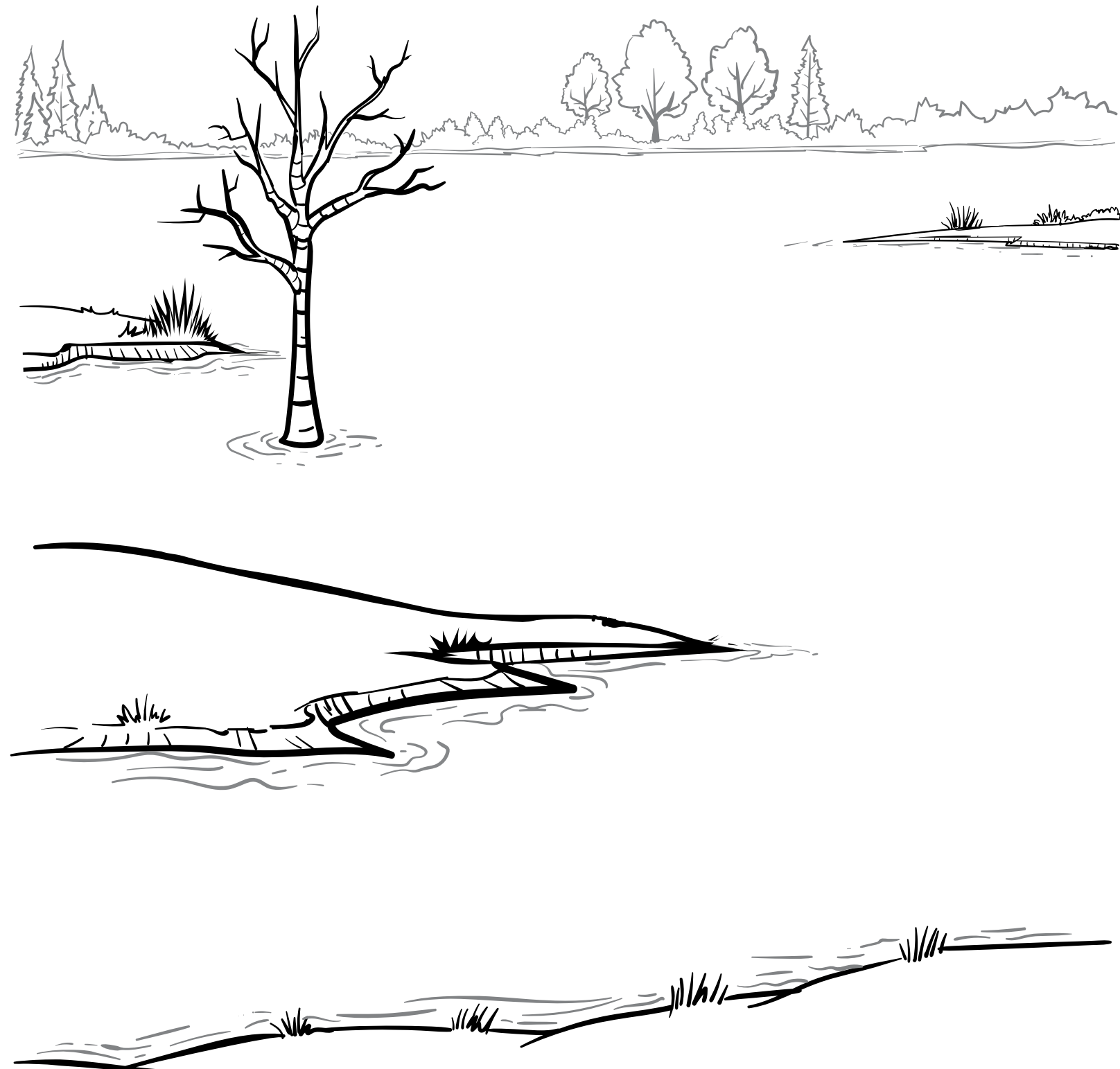
- |                  |            |              |
|------------------|------------|--------------|
| • Trumpeter Swan | • Rhizomes | • Pondweed   |
| • Waterfowl      | • Habitat  | • Duckweed   |
| • Wetland        | • Hornwort | • Turtle     |
| • Ecosystem      | • Cattail  | • Arrowhead  |
| • Cygnet         | • Bulrush  | • Water Lily |
| • Milfoil        | • Marsh    | • Dragonfly  |
| • Runoff         | • Bullfrog | • Lake       |



# Draw The Rest – Complete The Wetland

Complete this empty wetland by drawing plants and animals that live there. Don't forget to include yourself!  
How will you help the wetlands and the plants and animals that live in this habitat?

Have a parent or guardian scan or take a picture of this page and send it to [ttss@trumpeterswansociety.org](mailto:ttss@trumpeterswansociety.org)  
subject line: "Wetland Scene" for a chance to be showcased on The Trumpeter Swan Society website!







[TrumpeterSwanSociety.org](http://TrumpeterSwanSociety.org)

**SCAN ME**

to view the  
answers to the  
activities found  
in this book.

