



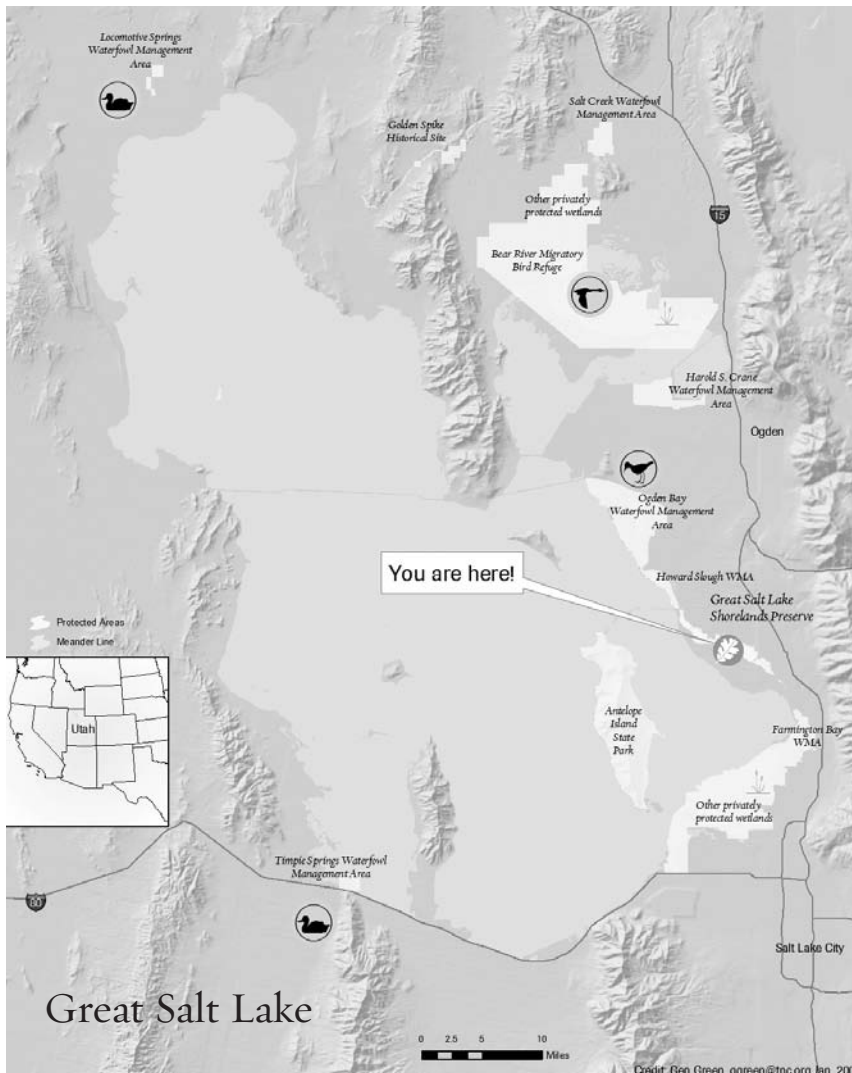
SAVING THE LAST GREAT PLACES ON EARTH

Wings & Water Student Discovery Guide

at the Great Salt Lake Shorelands Preserve

Name _____

Tour Date _____ Assigned Group _____

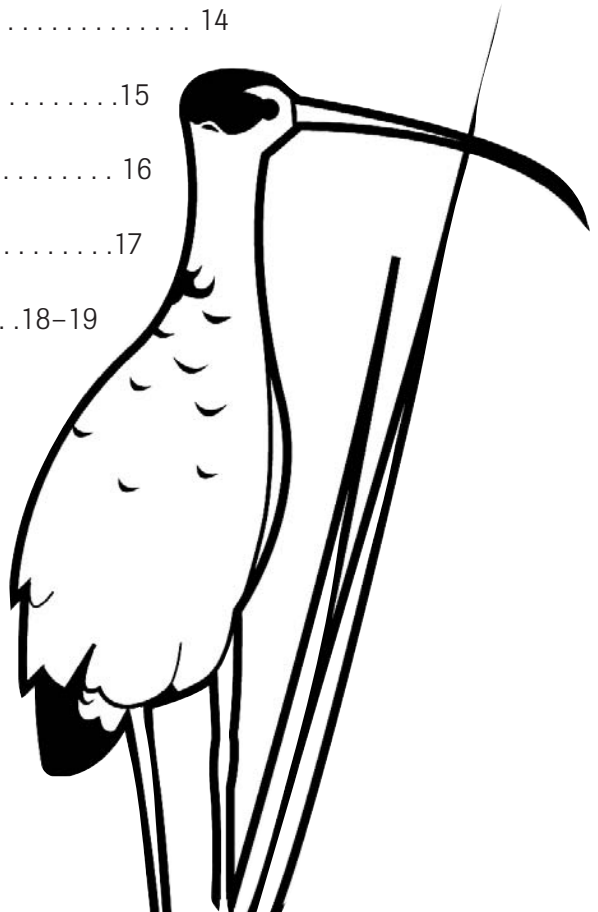


About The Nature Conservancy's Great Salt Lake Shorelands Preserve

The Great Salt Lake Shorelands Preserve and Visitor Center is about 4,000 acres of land that is protected by The Nature Conservancy. Millions of birds who visit the Great Salt Lake every year will always be able to find food and shelter here. The Nature Conservancy is an organization that works all over the world to protect lands and waters that plants and animals need to survive. To learn more about The Nature Conservancy, visit our website: www.nature.org/utah or contact us at (801) 531-0999.

table of contents

Our Visit to the GSL Shorelands Preserve	2
Thinking Ahead	3
Worlds Within Wetlands	4-7
Words for the Wetlands	8-9
Reflections	10-13
Careful Conservation	14
Wetlands Species List	15
Visitor Center Map	16
Composite Poetry	17
I Was There	18-19



Our *visit* to the Great Salt Lake Shorelands Preserve

My Field Trip Checklist

Check off the things listed below that your teacher says you **need to bring** with you for your field trip to the Great Salt Lake Shorelands Preserve.

- | | | |
|------------------------------------------------------|------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> this Discovery Guide | <input type="checkbox"/> a hat for shade | <input type="checkbox"/> warm jacket or sweater |
| <input type="checkbox"/> 2 sharp pencils | <input type="checkbox"/> sunscreen | <input type="checkbox"/> lunch |
| <input type="checkbox"/> unbreakable bottle of water | <input type="checkbox"/> a raincoat | |
| <input type="checkbox"/> _____ | | |

Wills and Won'ts

Using the lists below, check off things you will and won't do while on your tour at the Preserve. The extra space is for you to add anything else you might think of.

During my time at the Preserve **I WILL:**

- | | |
|-----------------------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> be polite and pay attention to my tour guide | <input type="checkbox"/> keep my eyes and ears open |
| <input type="checkbox"/> be helpful to my tour group | <input type="checkbox"/> ask thoughtful questions |
| <input type="checkbox"/> _____ | |

During my time at the Preserve **I WILL NOT:**

- | | |
|------------------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> run on the boardwalk | <input type="checkbox"/> throw things |
| <input type="checkbox"/> speak louder than necessary | <input type="checkbox"/> climb on any exhibits |
| <input type="checkbox"/> move ahead of my tour guide | <input type="checkbox"/> pick wetlands plants |

Thinking Ahead



I think I know...

Something I know about the Great Salt Lake is:

My LFT's

An LFT is something you **Look Forward To** during your tour at the Great Salt Lake Shorelands Preserve. Fill in the spaces below to share a few of your own LFT's.

Things I expect to see or learn about during my visit to the Preserve are:

1.

2.

Questions about Great Salt Lake wetlands that I hope to have answered:

1.

2.

Worlds Within Wetlands

Wetlands: What Good Are They?

1. Use your own words to write a definition for wetlands here:

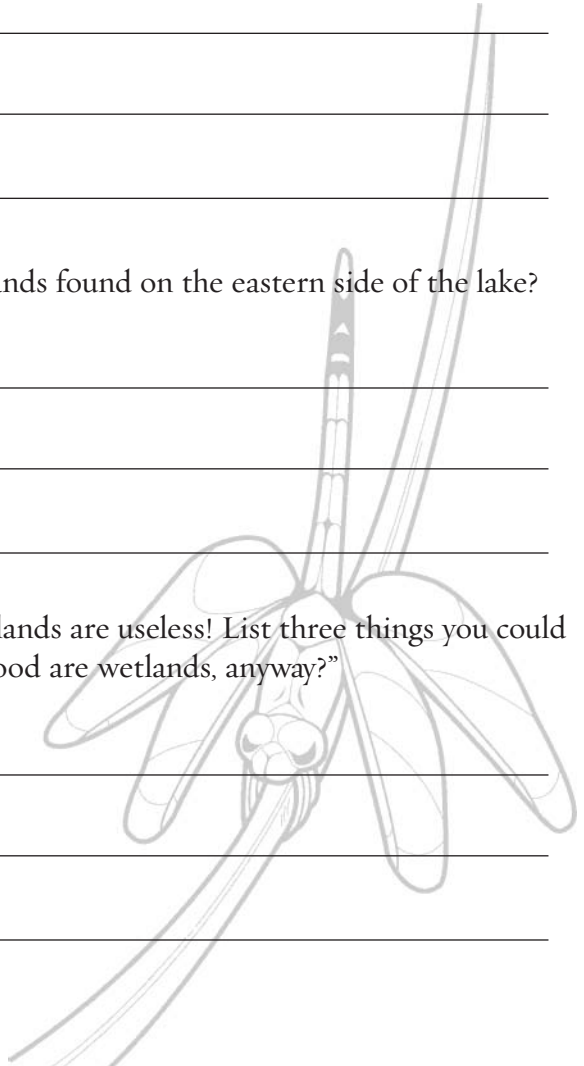
2. Why are most Great Salt Lake wetlands found on the eastern side of the lake?

3. Imagine someone thinking that wetlands are useless! List three things you could say to someone who asked, "What good are wetlands, anyway?"

- a.

- b.

- c.



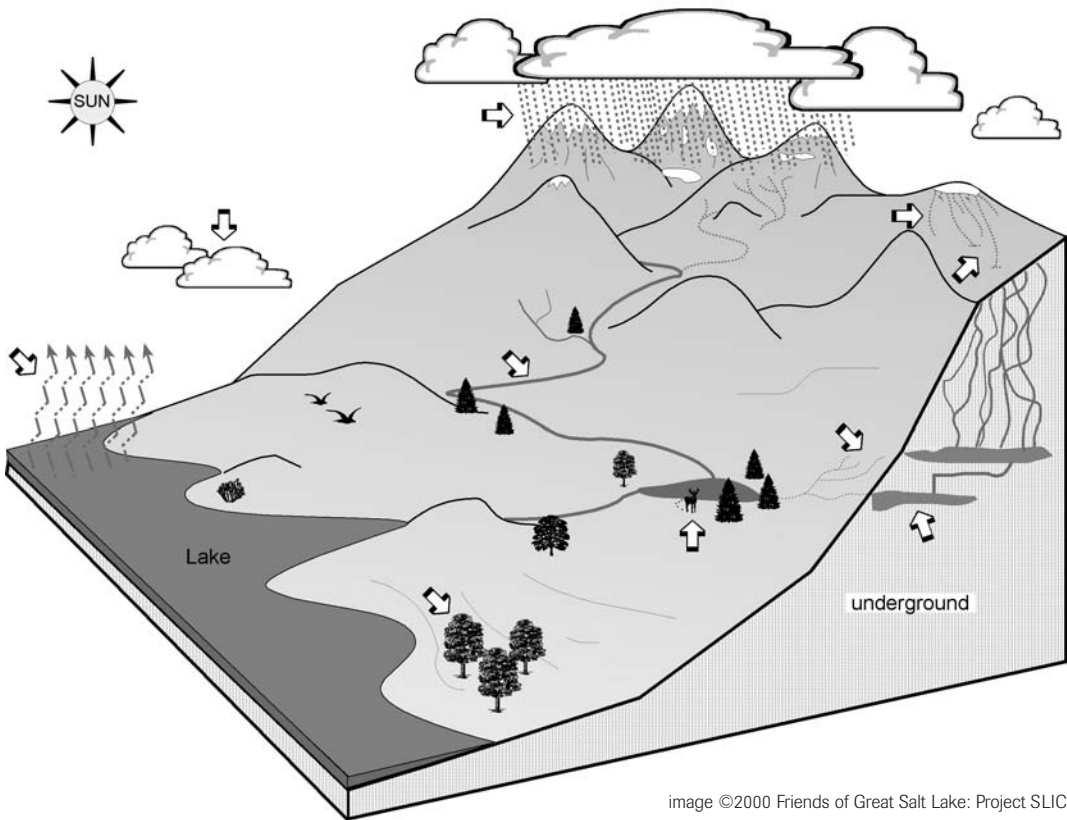


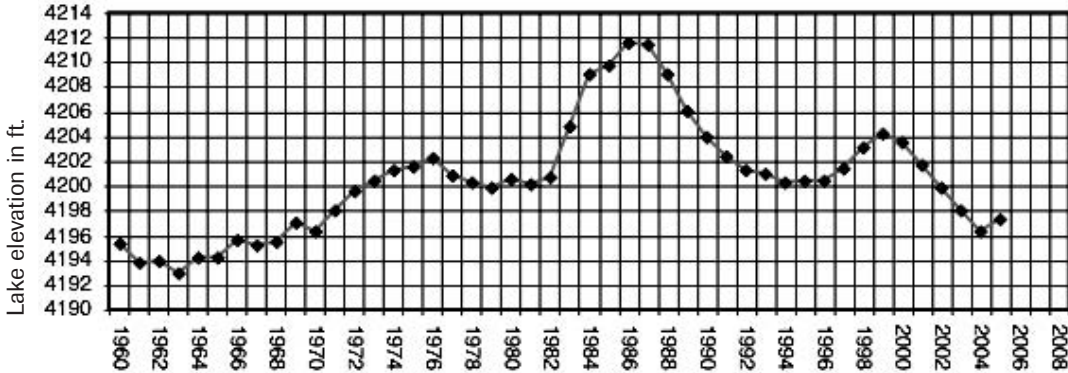
image ©2000 Friends of Great Salt Lake: Project SLICE

The Water Cycle: A Never-Ending Tour

1. This drawing shows some important parts of our Great Salt Lake Watershed. Use the following list to label and color the matching parts in the picture: **Solar Energy (yellow)**/**Great Salt Lake (blue)**/**Wetlands (green)**/**Wasatch Mountains (brown or dark green)**
2. Each arrow in the drawing points to something involved in a different part of the water cycle. Label each arrow using the following list: **Condensation**/**Precipitation**/**Evaporation**/**Runoff**/**Transpiration**/**Respiration**/**Infiltration**/**A Spring**/**Groundwater**/**A River**
3. Every second, there are different water molecules in a different place in the water cycle. Imagine you are one of those molecules. Beginning in a raindrop from a cloud, use your pencil to draw a line that connects four or more different places you might go after you leave that cloud in your journey through part of the water cycle. Number each place (1, 2, 3...) in your journey, with the number "1" being in the cloud you started from.

Weather & Climate: Patterns of Change

Use this graph of Great Salt Lake levels to answer the first two questions.



1. During which year would Great Salt Lake wetlands have been most filled with water? _____
2. During which year would Great Salt Lake wetlands have been driest? _____
3. What two factors cause the Great Salt Lake to change from year to year?

4. What is a relationship between the level of the Great Salt Lake and its wetlands?

5. Imagine you are a bird who came to the Great Salt Lake last year and found a perfect place for food and shelter. But this year, you return to find that there is too much or not enough water in that same place. What can you do?

Adaptations: Nature's Problem-Solvers

1. Write your definition for "Adaptation."

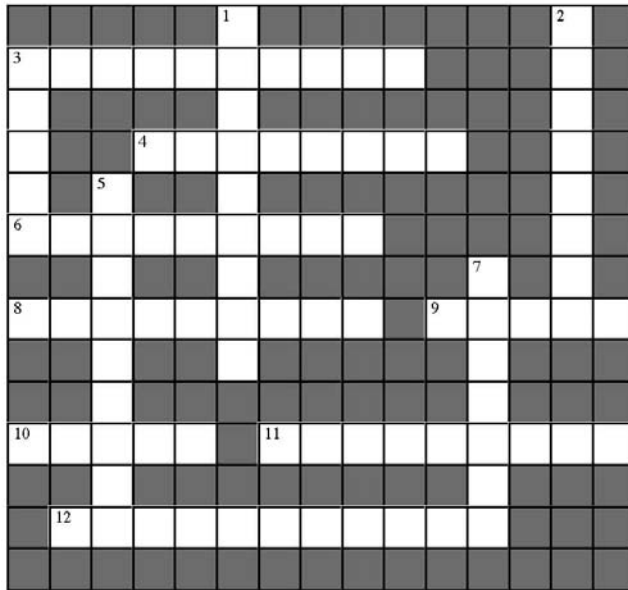
2. Use the following chart to name a plant and an animal that you know about, and then give an example of a physical and a behavior adaptation for each.

Species	Physical adaptation	Behavior adaptation
_____ Plant		
_____ Animal		

3. How would you explain to a friend why different species of plants or animals have different adaptations?

4. Circle the things in the following list that are not really biological adaptations: a seed / a feather / migration / water / waterproof boots / webbed feet / teeth / green leaves.

Words for the Wetlands



Across Clues

3. Features that a plant or animal is born with that help it survive.
4. A place where people try to protect a community of living things from outside damage or interference.
6. A community of plants, animals and microorganisms interacting in an environment that supplies them with everything they need to survive.
8. Soil, sand and minerals that have been transported by wind and water to a new area.
9. A type of wetland near ponds and lakes, with mostly nonwoody plants that grow with their roots in water and their tops in the air.
10. A flat, usually salty lake bed that becomes a lake from time to time.
11. Seasonal movement of animals from one region to another.
12. The combination of all living and nonliving things where something lives. It includes climate, soil, topography, and all the other plants and animals.

Down Clues

1. All land and water connected by the flow of a river that drains into a body of water, such as a larger river, a lake or an ocean.
2. Places with water at or near the surface that creates a unique environment with special (hydric) soils and specially adapted plants and animals.
3. Producers without true stems, roots and leaves, that grow in water. They are food for fish and small aquatic animals.
5. A group of plants, animals and microorganisms, in which each member is eaten in turn by another member. (2 words)
7. The natural home of a plant, animal or microorganism.

Clue Jumble

Unjumble each of the words using the clues to help and then use the boxed letters to form the final Jumbleword.

Jumble Words

1. SWELDTNA _____
2. AAIOTDPANT _____
3. OTESSMCEY _____ _____
4. NTNOIVERENM _____ _____
5. AMSHR _____ _____
6. AABHTTI _____
7. EPEVRSER _____ _____
8. ESDEIMTSN _____ _____

Jumble Clues

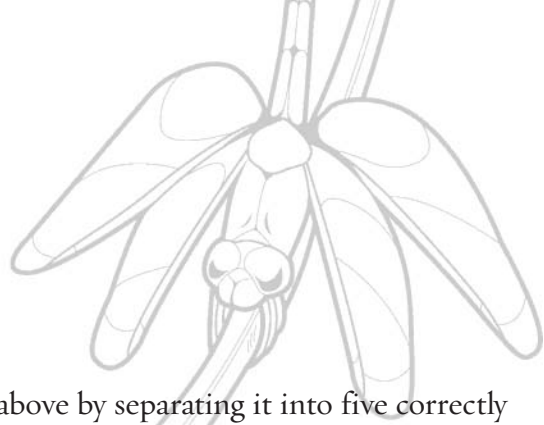
1. Places with water at or near the surface that creates a unique environment with special (hydric) soils and specially adapted plants and animals.
2. How a species looks or behaves that helps it survive in its environment.
3. A community of plants, animals and microorganisms interacting in an environment that supplies them with everything they need to survive.
4. The combination of all living and nonliving things where something lives, including climate, soil, topography, and other plants and animals.
5. A type of wetland near ponds and lakes, with mostly nonwoody plants growing with their roots in water and their tops in the air.
6. The natural home of a plant, animal or microorganism.
7. A place where people try to protect the workings of a community of living things from outside damage or interference.
8. Soil, sand, and minerals that have been transported by wind and water and accumulated in a new area.

Secret Jumble Clue

All land and water connected by the flow of a river that drains into a particular body of water.

Solution:

Reflections



Habitats: *Haftahavahabitat*

1. Make sense of the silly made-up title above by separating it into five correctly spelled and not-so-silly words that finish this sentence:

If you are going to survive, you _____ .

2. Write a sentence of your own that explains why habitat is so important to survival.

3. What words would you use to describe the kind of soil sample your group examined during the Preserve tour?

What plant seemed to grow best in that soil? _____

4. Why does it matter what kind of soil there is in a habitat?

5. Describe something you know about wetlands that you could teach someone else.

Adaptations: Secrets to Success

Use the spaces below on the left to write the names of a wetland plant and two animals you learned about. Then draw lines connecting each species to any adaptations it has from the list on the right. Use a different color for each species. How many connections can you make?

Species

Wetland Plant

Wetland Animal

Wetland Animal

Adaptations

Beak
Bright colors
Builds nest
Camouflage
Coughs up pellets
Eats insects
Eats plants
Feathers
Floats on water
Fur
Good eyesight
Green leaves
Grows in salty soil
Grows in soggy soil
Hibernation
Hunts other animals
Lays eggs
Lives in groups
Long legs
Metamorphosis
Migration
Seeds
Sharp teeth
Sings
Strong sense of hearing
Strong sense of smell
Strong stems
Toes that grip
Triangular shape
Webbed feet

Interrelationships: Nothing Stands Alone

1. _____ 2. _____ 3. _____

NON-LIVING THINGS

Plants use non-living things for...

plants use animals for...

Animals use non-living things for...

PLANTS

animals use plants for...

ANIMALS

1. _____

1. _____

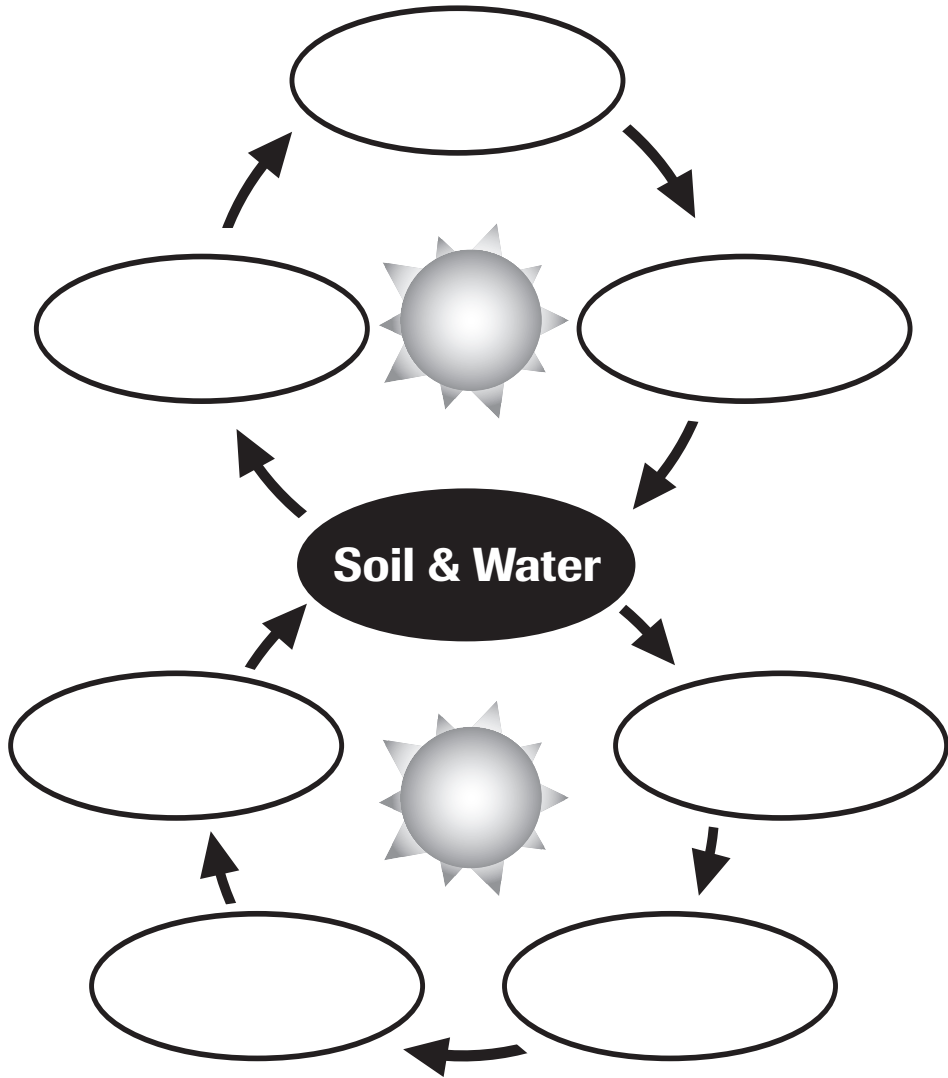
2. _____

2. _____

3. _____

3. _____

1. What plants, animals and non-living things can we find in a wetland? Write three examples for each in the numbered spaces provided in the diagram.
2. Finish the sentences started beneath each of the four arrows in the diagram by writing on the lines of each arrow.
3. Write a sentence that describes how a wetland plant, an animal and a non-living thing are all dependent on each other.



Life Links

Using the diagram above, write the name of a different species in each oval to correctly show the relationship between plants, animals and soil. For some ideas, look at the illustration in the centerfold of this guide or the species list on page 15.

Careful Conservation



1. Why do you think The Nature Conservancy created the Great Salt Lake Shorelands Preserve?

2. Why should people try to protect wetlands at the Great Salt Lake?

3. Describe two threats to our Great Salt Lake wetlands:

4. What can The Nature Conservancy do to keep our wetlands safe for wildlife?

5. What can you and your classmates do to help protect our Utah wetlands?

To learn more about how you can help, visit www.nature.org/utah

Wetlands Species List

Here is a list of some of the plants and animals living in our Great Salt Lake wetlands.

Plants

common duckweed
hardstem bulrush
common cattail
common reed
threesquare bulrush
saltgrass
pickleweed
thistle
seepweed

Amphibians, Reptiles and Mammals

northern chorus frog
common garter snake
coyote
deer mouse
long-tailed weasel
meadow vole
muskrat
raccoon
red fox
striped skunk
shrew

Birds We Might Hear or See in the Distance

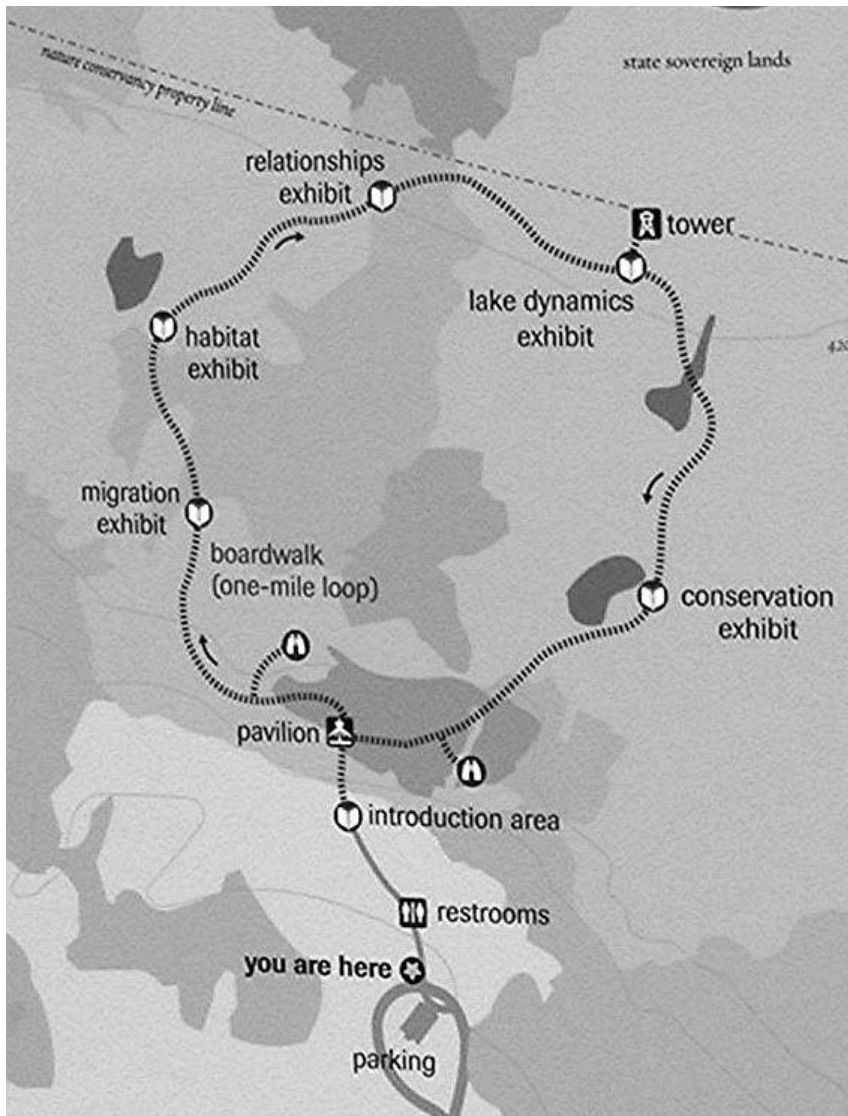
American avocet*
American white pelican
black-necked stilt*
long-billed curlew*
snowy plover*
white-faced ibis*
Wilson's phalarope*
Canada goose*
great blue heron
sandhill crane
snowy egret
American kestrel*
bald eagle
red-tailed hawk
rough-legged hawk
Swainson's hawk
California gull
Franklin's gull*
Black tern*
Caspian tern
Common tern
Forster's tern*

Birds We Might Hear or See from the Boardwalk

barn owl*
marsh wren*
red-winged blackbird*
sora*
cinnamon teal*
western meadowlark*
black-billed magpie*
American crow
common raven*
yellow-headed blackbird*
northern harrier*

* Birds known to nest at the Preserve.

The Great Salt Lake Shorelands Preserve Visitor Center



I Was There



Do you recognize this scene? Can you identify some plants and animals you recognize? Use this illustration to show what you now know about the Great Salt Lake wetlands. How? By labeling everything you can.

