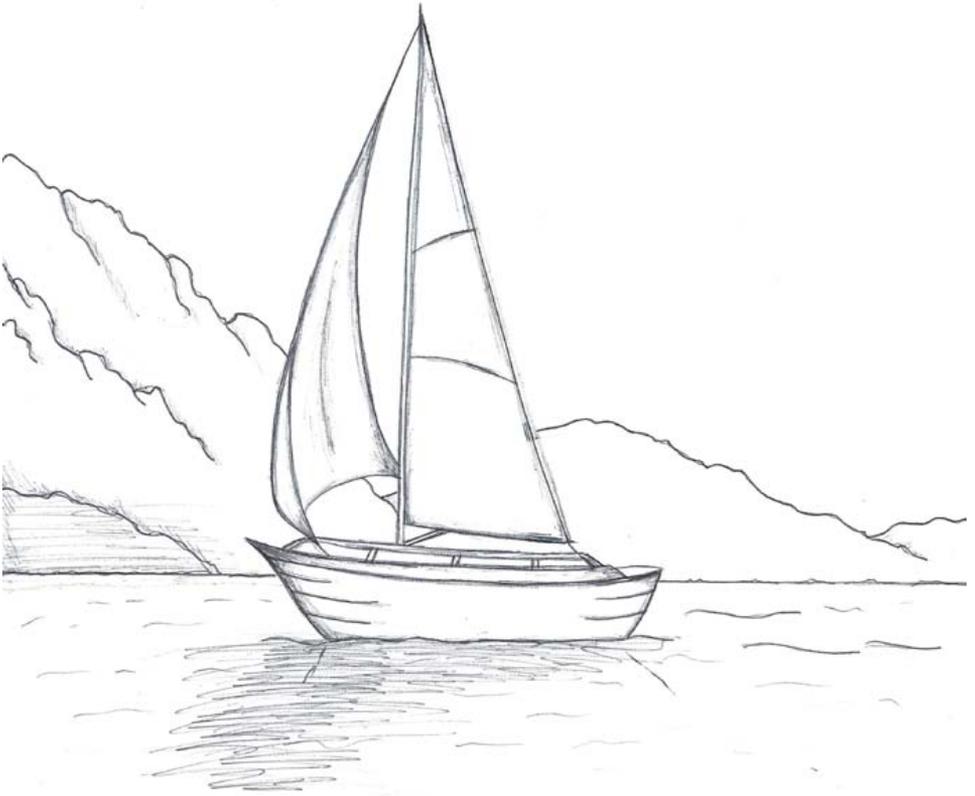


Great Salt Lake State Marina Junior Ranger Activity Booklet



This Book Belongs to: _____

Age: _____

Date: _____

Welcome to Great Salt Lake State Marina!

There are four steps that you must complete in order to earn your Junior Ranger badge.

Step One:

Attend a ranger program (check out our website at www.glsmarina.com for the schedule of our programs)

Name of program I attended:

My favorite thing I learned at the program:

Ranger signature: _____

Or

Watch the video at the Visitor Center

My favorite thing I learned from the video:

Step Two:

- For ages 4-6: Complete at least 4 activities.
- For ages 7-9: Complete at least 6 activities.
- For ages 10 and up: Complete at least 8 activities.

Check off your age group under Step Two and then check off the activities you have completed below:

- Treasure Hunt Bingo
- Exploring Great Salt Lake
- Red Flags
- What's With all the Spiders??
- Connect-the-Dots
- The Life Cycle of a Brine Fly Word Search
- Navigating the Docks
- Birding in Great Salt Lake
- Shipshape
- Who Am I?
- Observation Deck
- Junior Ranger Quest –Brine Shrimp

Step Three:

Pick up some litter in the Marina. Have a parent initial that you completed this: _____

Step Four:

Hand in your booklet to the Ranger for review, recite the Great Salt Lake Marina Junior Ranger Pledge, and get your badge! Good luck and have fun!

The Great Salt Lake Marina Junior Ranger Pledge:

I pledge to respect and protect all the plants and animals that I see at Great Salt Lake Marina, to continue learning throughout Utah's State Parks, and to share what I've learned with others.

Remember:

Never swim alone: Make sure an adult is present and can see you at all times.

Wear a life jacket: Life jackets save lives!

Keep the park clean: Find a trash can if you need to throw something away. If you see litter on the ground, throw it away.

If it belongs in the park, make sure it stays in the park: Everything in a state park is protected by law, including flowers, insects, birds and brine shrimp.

Pay close attention to the weather: The Marina gets very strong gusts of wind, and many storms. Don't get stuck out on the water in bad weather.

Have fun, and share what you've learned with others!

Words that May be New to You

Algae—An organism, or living thing, that has no roots, stems or leaves and is often found in water.

Evaporate—When a liquid changes into vapor, or air.

Knot—A measurement of distance used when traveling over water.

Pioneer—A person who is one of the first to explore or live in a new country or area.

Slip—A place where a sailor docks his or her ship

Treasure Hunt Bingo

While you're exploring GSL Marina today, take a look around and see if you can spot any of these treasures. Spot five in a row and you've got BINGO! Try to find as many as you can, even if they aren't in a row.

B	I	N	G	O
A flag	An island	Something colorful	A compass	Something prickly
A bird	Something that buzzes	A spider web	A fluffy brown dog	Someone taking a picture
A buoy	Saltair	Visitor Center	A bicycle	brine shrimp
A sailboat	Something that hops	Something an animal lives in	A bus	A dragonfly
A life preserver	Black Rock*	An anchor	A feather	Something you can climb

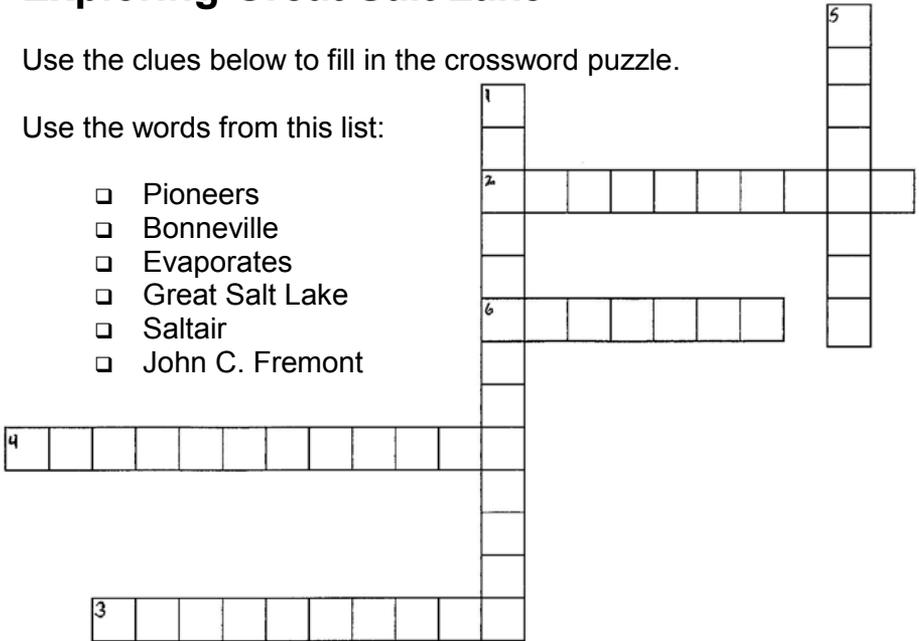
*Black Rock is a large, dark rock formation to the west of the marina.

Exploring Great Salt Lake

Use the clues below to fill in the crossword puzzle.

Use the words from this list:

- Pioneers
- Bonneville
- Evaporates
- Great Salt Lake
- Saltair
- John C. Fremont

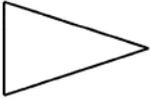


1. _____ is the largest salt lake in all of North and South America.
2. Many rivers flow into Great Salt Lake, but none flow out of it. Water _____ off of the lake, leaving salt and minerals behind. This is why the lake is so salty.
3. Great Salt Lake is what is left of a giant prehistoric lake named Lake _____.
4. _____ led the first expedition all the way around Great Salt Lake in 1843.
5. In 1847 Mormon _____ arrived in Great Salt Lake Valley, and a few months later they started taking salt from the lake and selling it to settlers.
6. The historic _____ was the most famous resort on Great Salt Lake. It burned down twice and was rebuilt both times.

Red Flags

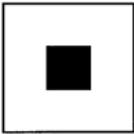
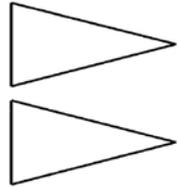
The **Harbormaster** is the person in charge of the marina and all of Great Salt Lake. The **Harbormaster** uses different red flags to warn sailors of bad weather:

1 knot = 1.15078mph



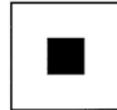
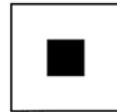
Small Craft Advisory—Winds up to 30 knots are possible and/or sea conditions dangerous to small boats.

Gale Force Warning—Winds from 31 to 45 knots and dangerous sea conditions are possible.



Storm Warning—Winds from 46 to 65 knots and dangerous sea conditions with lightening are possible.

Hurricane Force Warning—Winds higher than 65 knots with dangerous seas and weather are possible.



Are there any warning flags out today? They would be flying under the American flag by the bathrooms. If so, what is the warning?



If you had a sailboat, what would your flag look like? What shape would it be? Draw your flag for your sailboat below!

What's with all the spiders??

In the Spring and Summer, Great Salt Lake Marina is covered in spiders called orb weavers.

They might look big and scary, but orb weavers are harmless to humans, and they actually help keep the populations of harmful insects down.

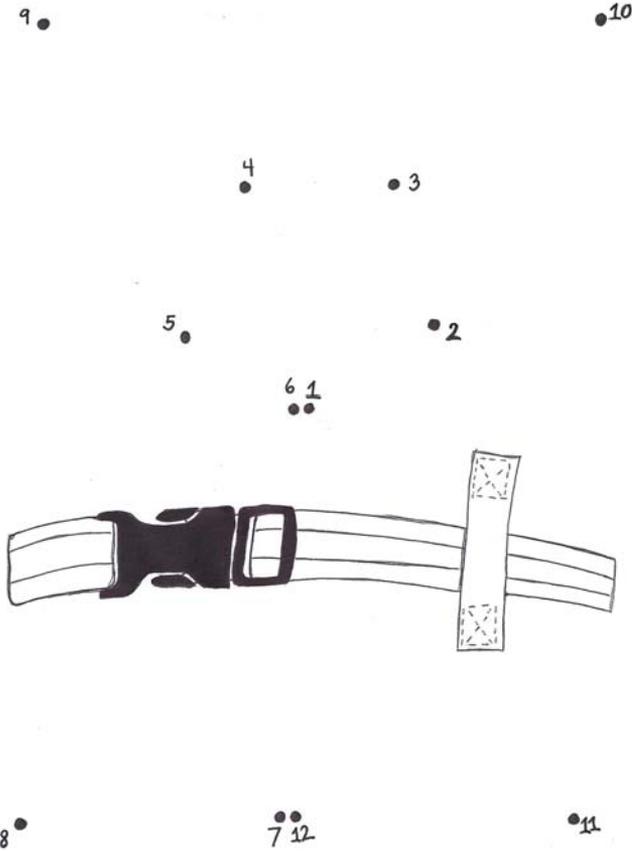
Have you seen any orb weavers today at the marina? How many have you spotted? _____

Draw one of the orb weavers that you see. Then draw him a great web to hang out in!



Connect-the-Dots

Connect the dots to see what every good sailor should have when they are out on the water!



Can you list some other important things you should take with you to stay safe while you are sailing?

The Life Cycle of a Brine Fly Word Search

Brine flies are an important part Great Salt Lake's **ecosystem**. They can often be found in the **marina**, flying along the shorelines in big swarms. But don't be afraid of them—they are harmless to humans! Brine flies go through several **phases** in their life:

1. First, brine flies lay their **eggs** on the surface of **Great Salt Lake**.



2. The eggs then hatch into **larvae**, which eat the **algae** in the lake as they grow.



3. The larvae then form a **pupal casing**, which is like a little cocoon where they change into an adult fly.



4. When the fly is ready to hatch, it floats to the surface of the water in an air **bubble** and flies away!



The adult **brine fly** only lives for 3-5 days! **California gulls** run along the **shorelines** with their bills open, scooping up the adult flies and eating them. **Orb weavers** also eat the brine flies when they get caught in their **webs**.

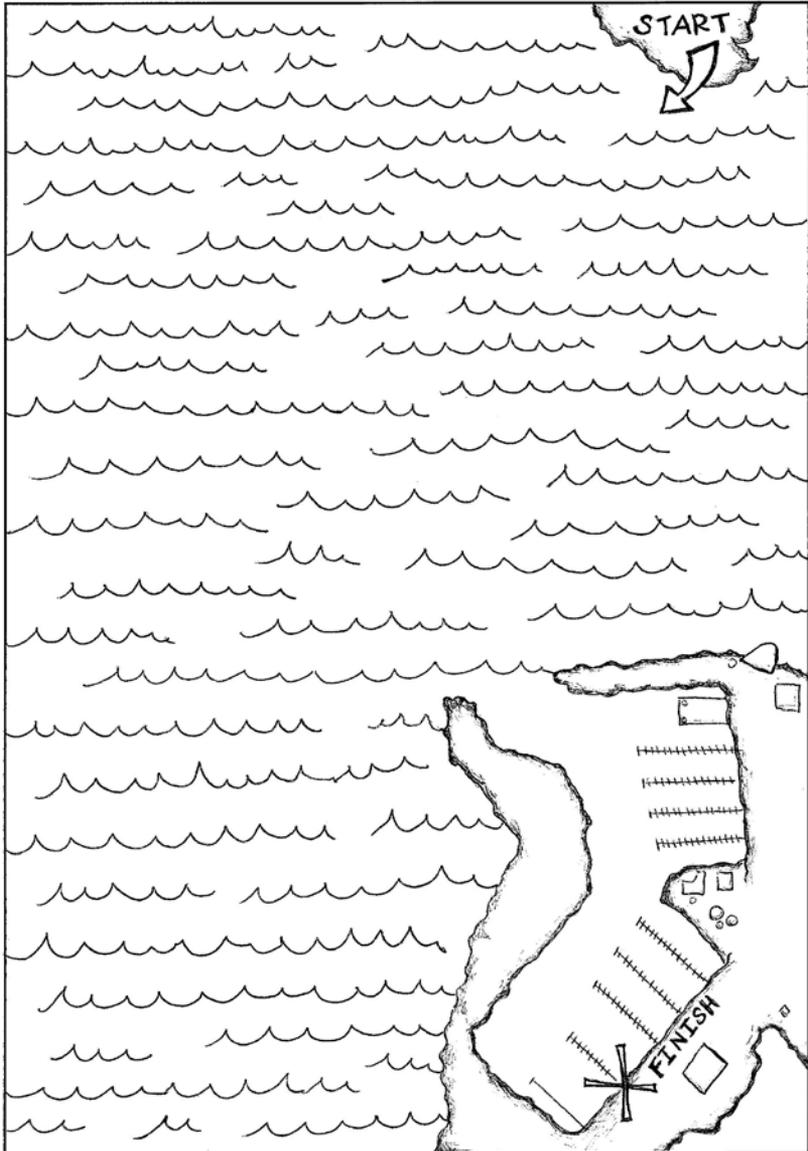
Find the bolded words above in the word search on the next page! (Hint: some are diagonal!)

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



Navigating the Docks

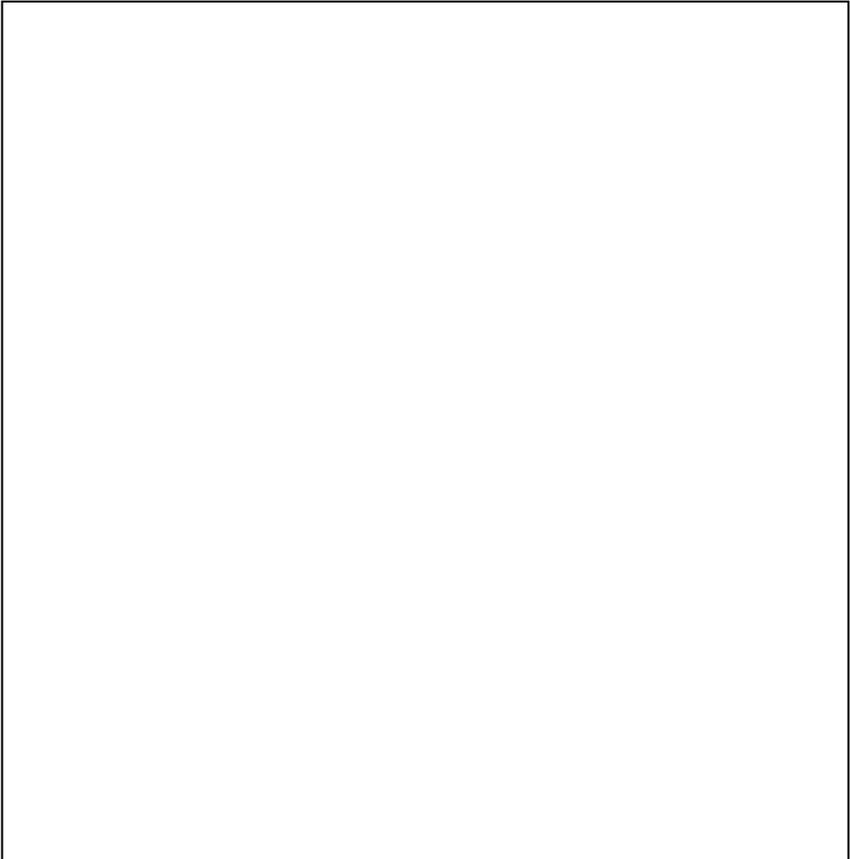
Help the Harbormaster get his boat back safely from Antelope Island to his slip in the Marina!



Birding in Great Salt Lake

More birds stop at Great Salt Lake for food and rest while they are migrating than any other place in North America. During your visit today, take a look around and see how many different types of birds you see.

Draw one of the birds you see here:



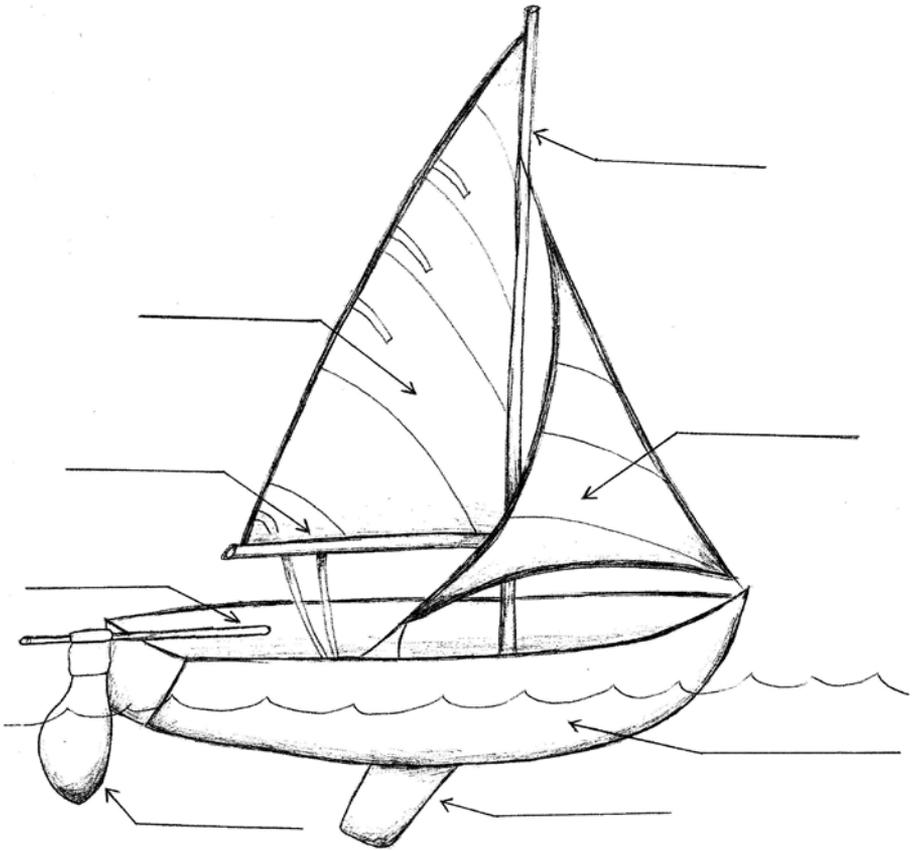
Do you know what kind of bird it is? If not, check out a bird book at the Visitor's Center or ask a ranger, and then write its name here:

Shipshape

Great Salt Lake is a great place to go sailing! Sailboats have eight important parts: hull, tiller, rudder, mainsail, mast, boom, jib and keel.

- The **hull** is the shell of the boat, which holds all of the other parts of the boat, as well as the passengers.
- The **tiller** is what you use to steer the boat. It is attached to the **rudder**, and when you turn the tiller with your hand, it moves the rudder underwater to turn the boat left or right.
- The **mainsail** is the larger sail that captures the wind and uses the power of that wind to move the boat.
- The mainsail is attached to the **mast**, which is a long vertical pole in the middle of the boat.
- Attached to the mast is the **boom**, which is a horizontal pole that is also attached to the mainsail. The boom is moved back and forth to help the mainsail catch the wind.
- The **jib** is a smaller triangular sail that helps add power for the mainsail.
- The **keel** is a long, skinny plank that sticks out of the bottom of the hull, and helps to balance and keep the boat from tipping over.

Can you name the eight important parts on the sailboat on the next page?



Common Sailing Words

Starboard – on the right side

Port – on the left side

Stern – the back of the boat

Bow – the front of the boat

Who am I?

Unscramble the name of each animal you can find at Great Salt Lake Marina and match them with their picture. Use the information from other activities in this book and at the Visitor Center to help you!

1. I might look big and scary hanging upside-down in my web, but I am very shy and harmless to humans.

BOR RVEEAW



2. I use my long, curved bill to scoop up brine shrimp out of Great Salt Lake.

NAMARCIE TCAOVE



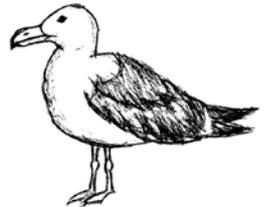
3. My pupal casings wash up on the shorelines of Great Salt Lake after I hatch and fly away.

NEIBR LYF



4. I live my whole life in Great Salt Lake's salty water.

RENIB IHMPRS



5. I love to run up and down the shorelines with my mouth open to catch brine flies.

AACFIRNIOL LGLU



The Observation Deck—Using your senses

A great way to enjoy nature to its fullest is to use as many of your senses as you can while you are exploring. Take a walk up to the observation deck and go stand at the bow.

Stand quietly for a moment and close your eyes. What do you hear?

How does the weather feel today? _____

What do you smell? _____

Use the compass rose on the observation deck for help:



Look **North**. What do you see?

Look **East**. What do you see?

Look **South**. What do you see?

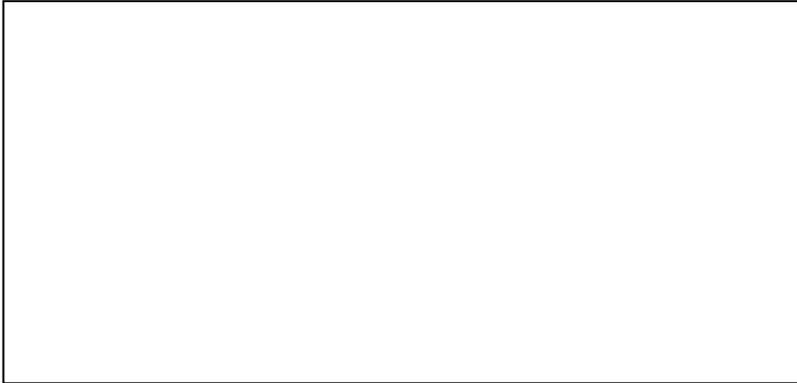
Draw your most favorite thing you've seen at the GSL Marina:

Junior Ranger Quest—Brine Shrimp

Great Salt Lake is saltier than the ocean! It is so salty that no fish can live in its waters. Many people think that *nothing* can survive in Great Salt Lake, but it is actually full of tiny living things:

- Algae and bacteria that grow in the lake provide food for brine shrimp and brine flies.
- The brine shrimp and brine flies provide food for all of the birds that stop at Great Salt Lake when they migrate.

QUEST: Find a container that can hold water, and take a walk down to the beach. Dip your container into the water of Great Salt Lake and collect a sample. Draw what you see in your sample:



Brine shrimp are small crustaceans with many little legs and a long tail. They are about $\frac{1}{4}$ of an inch long. Do you see a brine shrimp in your sample?

Make sure you pour your sample back into the lake so your brine shrimp can go back to their home!

A Junior Ranger appreciates nature, but does not take it home!

Congratulations!

You are now a Junior Ranger! Great Salt Lake State Marina welcomes you as a member of our team!

What is your role as a Junior Ranger?

Junior Rangers help park rangers to protect and preserve our State Parks. You can do this in many ways:

- Talk to your friends and family about the many important and interesting natural resources in the park.
- Help to clean up the park and other natural areas, and teach others about the importance of keeping our environment clean.
- Do your best to help protect the plants and animals that share the marina with us.
- Attend Junior Ranger Programs to update your skills and learn new ones.
- Challenge yourself to become a Junior Ranger at other parks!

We challenge you to take what you have learned at Great Salt Lake State Marina with you when you leave the park, and share it with others. We hope that you enjoyed your visit and that you come back and see us again soon!

Check out other state parks at www.stateparks.utah.gov

Great Salt Lake State Marina Junior Ranger Certificate

This certifies that

has completed the Great Salt Lake State Marina Junior Ranger Program, and is now a

JUNIOR RANGER

A Junior Ranger respects and protects our earth's natural resources, from the water and the soil to the plants and the animals.

Great Salt Lake State Marina

_____ Date