



Uintah Wasatch Cache National Forest

COTTONWOOD CANYONS FOUNDATION

SILVER LAKE

OFFICIAL JUNIOR RANGER CERTIFICATE

I, _____ promise to help protect, preserve, and respect the plants, animals, and lands of Silver Lake. While at home, I will learn from the natural world and I will share what I learn with my friends and family to and to be a friend to all natural places I explore.

Junior Ranger Signature

Naturalist Signature

Date

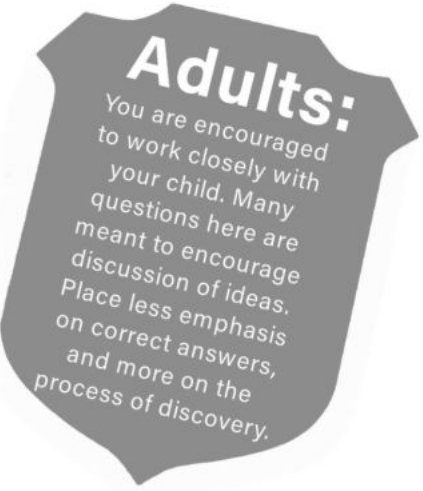
Draw something you saw during your visit that you can help protect

This booklet was designed by Abby Laskey, and is produced by the Cottonwood Canyons Foundation in collaboration with the US Forest Service, Salt Lake Ranger District. The mission of the Cottonwood Canyons Foundation is supporting the environment of the Cottonwood Canyons through stewardship and education (more information at cottonwoodcanyons.org). More information on the Salt Lake Ranger District can be found at fs.usda.gov/r04/uinta-wasatch-cache.

Welcome to Silver Lake!

Silver Lake is part of what is today known as the Uintah - Wasatch - Cache National Forest. That means that this land is public land and you can help!

Junior Rangers help the Forest Service by exploring and learning about the land to best support and protect it.



How to Become a Junior Ranger

Talk to a naturalist in the visitors center. What's one thing you learned?

Choose your level and complete additional activities
Tadpoles: Choose 4 activities
Moose: Choose 8 activities
Beaver: Complete all activities

Bring your booklet to the visitors center for review to earn your sticker!

Where are we now?



Fill in the blanks in the story with words from the word bank

Silver Lake has a storied past going back _____ of millions of years. The _____ that you see now were formed underwater and in the _____ of the earth. The process of uplift brought them to this elevation and erosion from _____ and rivers made them visible from the surface. As the glaciers melted, Indigenous peoples of the Soonkahni (Shoshoni meaning the Salt Lake Valley) began to manage the _____ for food. When _____ arrived, they began to cut the trees in the canyons to build homes and they also began to _____ livestock there for food. This allowed them to live, but it had an impact on the land. In the early 1900s, they began to plant trees to restore the _____. What steps can you take to be a friend to this land while you visit?

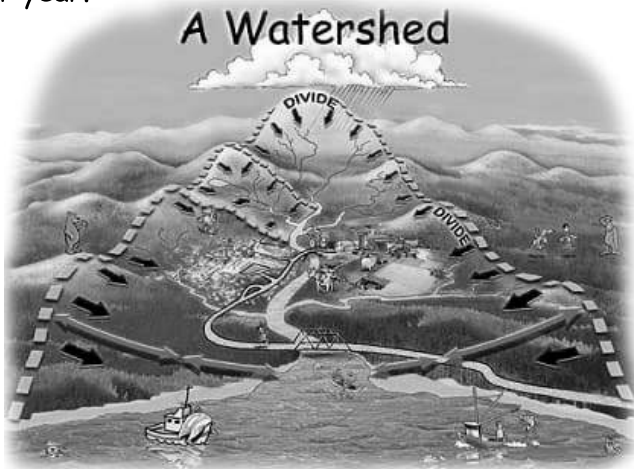
WORD BANK: ROCKS MANTLE
GLACIERS GRAZE ECOSYSTEMS
CANYON HUNDREDS SETTLERS

Where does your drinking water come from?

What is a Watershed?

A watershed is an area of land that collects water, stores water, and releases water into a single stream.

In many watersheds, drinking water comes from several sources, like rain, snow, and groundwater. In our watershed, almost all the water comes from snow. Silver Lake gets an average of 500 inches of snow per year.



As the snow melts, the water runs down into Big Cottonwood Canyon Creek and through the treatment plant, providing drinking water for the Salt Lake City. Water goes from snow to your faucet in less than 24 hours.











Find some water to observe!

- | | YES | NO |
|---|--------------------------|--------------------------|
| Is the water clear? | <input type="checkbox"/> | <input type="checkbox"/> |
| Can you see any plants? | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you see any insects on top of the water? | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you see any insects in the water? | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you think this is clean water? | <input type="checkbox"/> | <input type="checkbox"/> |
| Would you drink it? | <input type="checkbox"/> | <input type="checkbox"/> |

Five Senses Bingo



Animals use their five senses much like us: to survive. As you visit today, try to complete as many of the below activities as you can. Consider how other creatures would participate in these as well! Can you get four in a row for BINGO?

 Feel the bark of a tree.	Smell a wildflower. Draw it!	 See animal scat. Who left that?	 Hear the water.												
Find an animal's home and sketch it.	 Who lives here? Hear footsteps.	Hide under a bush or small tree like a mountain lion.  What would you hunt for dinner?	Feel something smooth. Draw it!												
 Talk to a naturalist.	Feel something rough. Draw it!	 Hear a bird.	Look for lichen growing on the rocks. Circle the colors that you find. <table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td>Red</td> <td></td> <td>Green</td> </tr> <tr> <td>Orange</td> <td></td> <td>Blue</td> </tr> <tr> <td>Purple</td> <td></td> <td>Black</td> </tr> <tr> <td>White</td> <td></td> <td>Yellow</td> </tr> </table>	Red		Green	Orange		Blue	Purple		Black	White		Yellow
Red		Green													
Orange		Blue													
Purple		Black													
White		Yellow													
Hear something noisy. Draw it!	 See a beaver.	 Go for a hike.	 Smell the earth.												

Word Search

Directions: Find and circle the ten underlined words in the word search. For an additional challenge, circle evidence of animals in the picture and draw a line to what animal may have left it.



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

Silver Lake formed during the ice age over 10,000 years ago from a glacier that extended 5 miles down Big Cottonwood Canyon. Today, the canyon is home to a very biodiverse forest and riparian ecosystem. This means that many plants and animals live here! You may see beaver, moose, coyotes, and over 600 other species of fish, mammals, birds, reptiles, and amphibians! If you don't see the animals themselves, they may leave signs indicating their presence. Can you find any in the drawing above?

Field Journal

Month _____ Day _____ Year _____



Weather (check all that apply)

rain snow hail fog thunder damaging winds clouds

Current temperature _____°F _____°C Time of day: _____

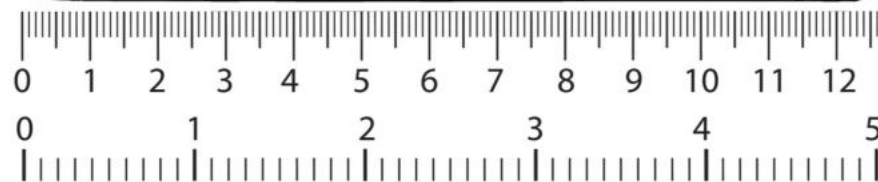
(Estimate if you do not have a thermometer)

All living things need food, water, and space to survive. Where they find these things is called their habitat. Some animals and plants need river edges, some need deep water, and some need dry soil. Small animals may find everything they need within a few feet. Larger ones may need hundreds of miles. Find a place where you can observe quietly. Sit, stand, or lay on your belly to observe a different scale of habitat. Draw or list possible sources of food, water, and shelter for wildlife. If you see any wildlife, be sure and name or sketch it in the space provided.

Sit with your eyes closed and listen for three minutes. Use a timer if you have one.

List all of the sounds you heard. _____

How could these sounds affect the habitats you observed? _____



Leave No Trace

Stay on the trail

As you navigate the maze below, choose options that fit best with the seven principles of Leave No Trace to find the finish!

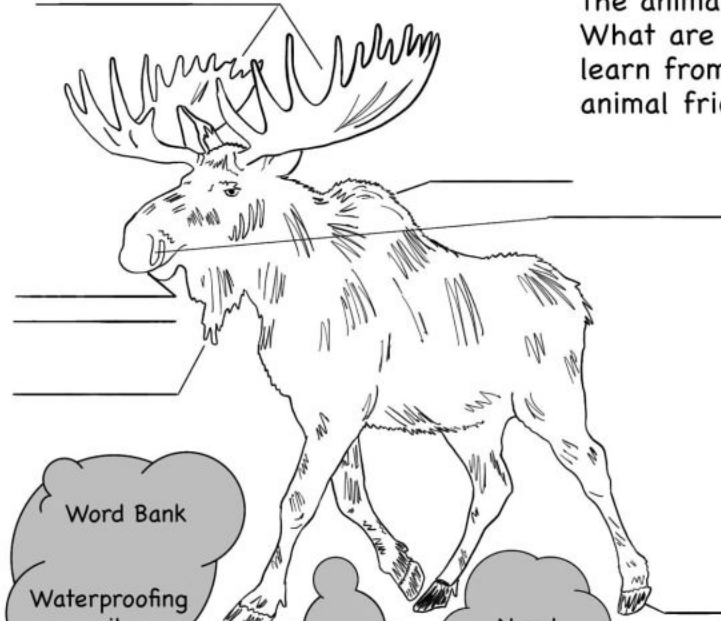
Start



Finish

Get to Know Our Animal Friends

Fill out the information about the animals on this page. What are some ways you can learn from and about our animal friends' safely?



I'm a moose. I stand over ____ feet tall. I eat ____ pounds of vegetation per day! We are not a very social species and spend a lot of time alone. What do the labeled body parts help me with?

Word Bank

Waterproofing oil

Dam

Broad tail

Nasal Flaps

Webbed feet

Prehensile lips

Antlers

Nose and Ear Flaps

Hump

Hooves

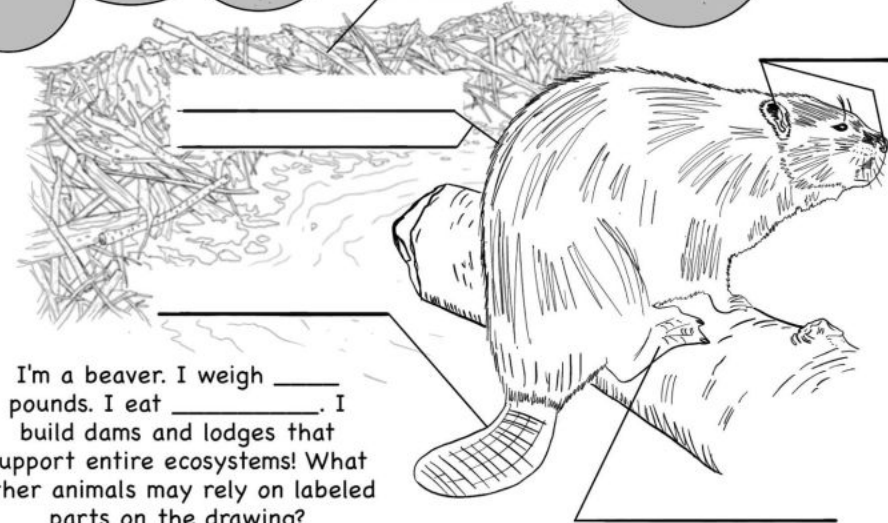
Plant Matter

Bell

40-50

5-6.5

35-65



I'm a beaver. I weigh ____ pounds. I eat _____. I build dams and lodges that support entire ecosystems! What other animals may rely on labeled parts on the drawing?

Amazing Adaptations



First label all animals

Draw a line between each adaption and who it belongs to. Write the name of each from the word bank! Do you see any similarities between plants and animals? How about ways their adaptions work together?



I will wait for other animals or birds like the osprey to hunt for me and drop prey for me to eat!

I have stripes on my petals to help pollinators land in the center to help me reproduce!



I have barbed quills that help me look larger and defend me from threats. I can't shoot my quills though!

I spread via both roots and seeds allowing me to pop back after fires very early!



I have lots of distinct calls and can recognize and respond to warning calls from other species!

I have sharp spines to protect me from being eaten! I still have a colorful flower to attract small pollinators through the spikes!



I hunt at night by sending out high-pitched sounds that bounce off my prey and come back to me!

My bright yellow color attracts pollinators to the seeps and moist areas that I prefer to grow in!



My very large hind legs help me stay on top of fresh powdery snow to run away from predators!

I contain toxic cardenolides that make monarchs who eat my nectar poisonous to predators. In return, they help me spread!



My fur changes color in the winter to help me hunt better and protect me from predators!

I am very flexible in wind and heavy snow which allows me to spring back in very extreme environments!



Animals and plants can work together in a relationship called symbiosis or mutualism. Some of the plants shown are only able to spread with one animal and that animal relies on the plants for food! The limber pine and Clark's Nutcracker are an example of this.

Word bank
 Ermine Showy Milkweed Porcupine Aspen
 Pika Yellow Monkeyflower Bald Eagle
 Limber Pine Brown Bat Eaton's Thistle
 Snowshoe Hare Richardson's Geranium

Many plants at Silver Lake were replanted and are able to thrive today due to stewardship projects that started in the 1900s right down canyon of us at what is now Spruces Campground!