



TRAILS . ONLINE .

Ecology on the Trail

OBSERVATION POINT TRAIL

COTTONWOOD
CANYONS
FOUNDATION

Ecology On The Trails

Observation Point Trail, Snowbird, Utah



Stop 1: Observation Point Trailhead Sign

Stop 2: Animal Sign

Stop 3: Trees and Shrubs Sign

Stop 4: Watershed Sign

Stop 5: Observation Point Deck

Additional Trails: If you are looking for a longer hike, try the Mid-Way Trail to Miner's Road or take the Mid-Way Trail to the Mid-Way unloading zone.





ECOSYSTEMS





BEFORE YOU HEAD OUT

LEAVE NO TRACE - 7 PRINCIPLES

1. Plan ahead and prepare - Consider what you might need for this outing. Make a check list to ensure you're prepared to head out the door!

2. Travel and camp on durable surfaces - Stay on designated trails and only camp in established areas.

3. Dispose of waste Properly - Pack out all waste or trash. Additionally, these location should have restrooms. Please utilize these before starting your trail to help keep our watershed clean!

4. Leave what you find - As pretty as the flowers, trees and rocks are, we need to leave them where we find them . If something inspires you, take a picture or take a second to sketch it.

5. Minimize campfire impact - Similar to camping on durable surfaces, if you are camping in the area, camp in a location where there is an established fire ring. Check on danger level before starting a fire. And if you have one, make sure the fire is out and coals are cool.

6. Respect wildlife - Give wildlife some space. Use the rule of thumb! If you can close one eye, and with an outstretched arm you can cover the animal with your thumb, you're at a safe distance. If you can still see the animal, then you should give it some more space.

7. Be considerate of other visitors - People go into nature for many reasons. Some go to listen, some for exercise, or many other reasons! Be courteous of others on the trails so everyone can enjoy the outdoors.

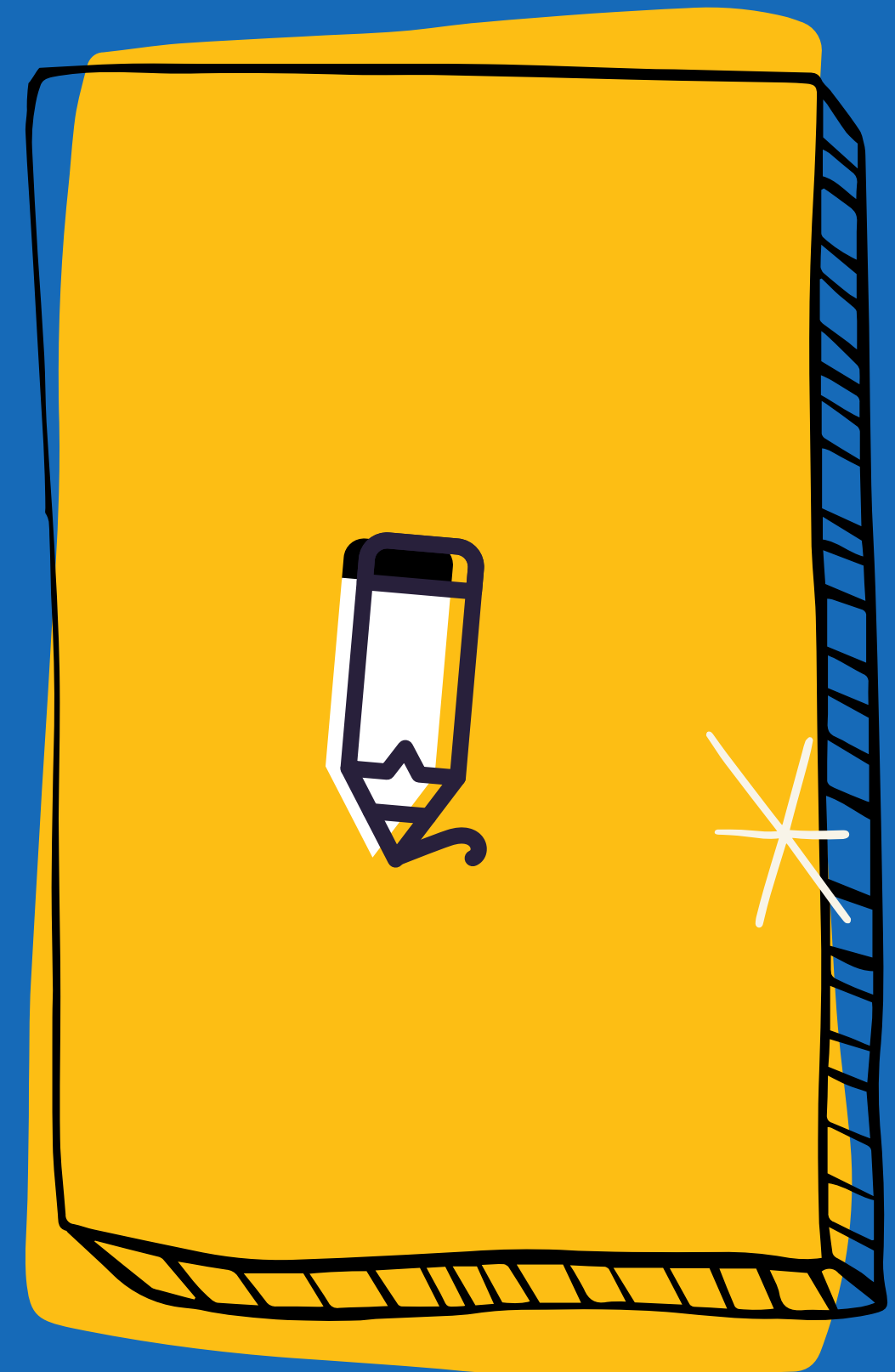
Follow this link and learn the hand signals to help remember the 7 Principles !

BEFORE YOU HEAD OUT

Have you ever heard the word ecosystem? What do you think it means? What does an ecosystem look like? If it helps, try breaking the word down into parts: "eco" and "system".

An ecosystem is a community of living and nonliving things that interact with one another. Find an outdoor place - your yard, your schoolyard, or a neighborhood park - and take a few minutes to observe the ecosystem around you. What are some of the living things you notice? What are some of the nonliving things you can see, hear, smell, or feel? If you have a notebook, it might be helpful to write or draw pictures of the living and nonliving things around you.

It might be more difficult to think of the nonliving things, but they are just as important to the ecosystem as the living things! Nonliving factors can include the sun, wind, water, and rocks. How are each of these important to living things? One example is that plants need the sun to make food, another example is that rocks can be used by animals for shelter. When you go for your hike, keep thinking about this idea of an ecosystem.



STOP 1 - OBSERVATION POINT TRAILHEAD SIGN

TOPIC: GEOLOGY

Geology is the study of the Earth, what it is made of, and how it changes over time. A scientist who studies geology is called a geologist. Look across the canyon and make some observations. What do you notice? Are there different colors? The white and black rock is called limestone, and the brown rock you see is either tillite or quartzite.



Rocks are made up of different minerals. Just like how you would use different ingredients to make a chocolate cake and a carrot cake, different types of rock have different mineral "ingredients".

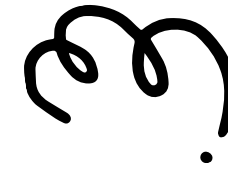
Today we are in the Wasatch Mountains, but can you imagine what this area would have looked like before there were mountains here? How long do you think it took for these mountains to form?

They didn't form overnight - it actually took about 20 million years to form the mountains we are standing in, and certain processes are still impacting this mountain range today. Though we cannot see Earth's tectonic plates, we can see and sometimes feel the results of their movement.

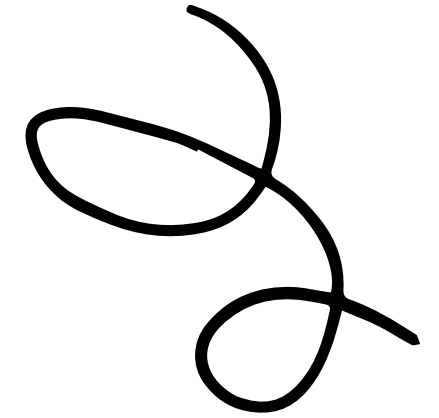


Have you ever experienced an earthquake? The movement you feel is caused by tectonic plates rubbing together. A tectonic plate is a huge slab of rock underneath the Earth's surface. The Wasatch mountains were formed as one plate slid underneath another, causing the land to uplift. Do you think the mountains impact the plants and animals that are able to live here?

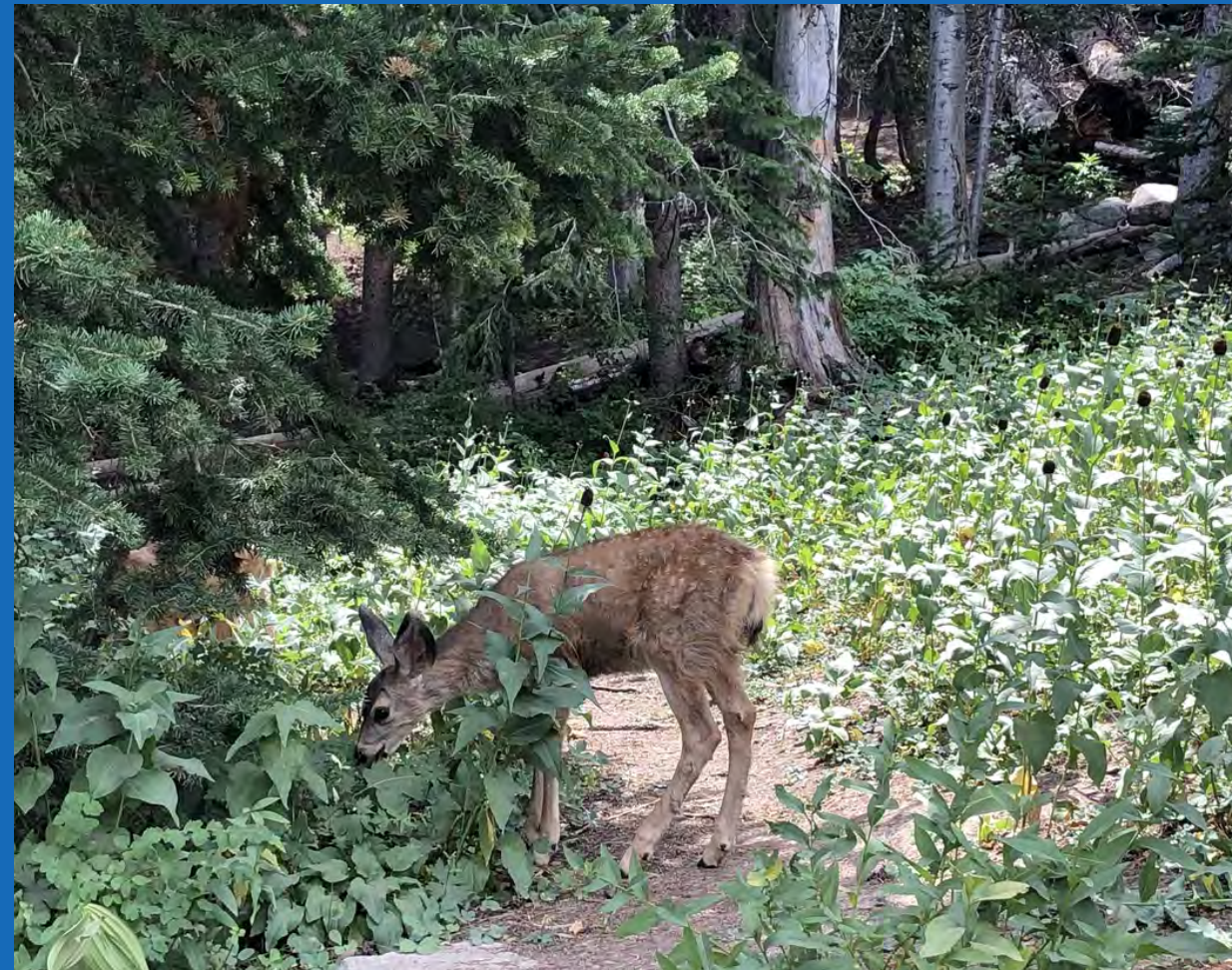
STOP 2 - WILDLIFE SIGN



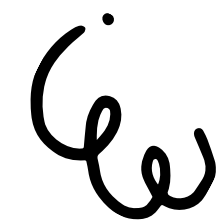
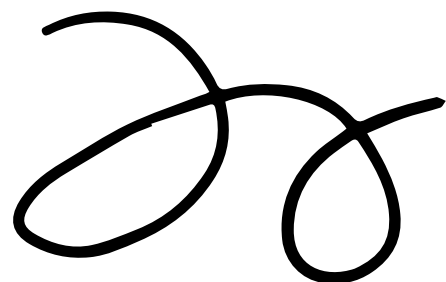
TOPIC: WILDLIFE



Recall our definition of an ecosystem - a community of living and nonliving things that interact. Wildlife is one of the most easily recognizable living (biotic) parts of an ecosystem. As a living part of the ecosystem they can help shape and change it through their presence. Look around, what wildlife do you see (bees, butterflies, birds, squirrels, deer, moose)? What role do you think they play in this ecosystem? How might they be shaping the environment you are in?



For example, consider how plants may need wildlife. Flowers need the bees for pollination. While later in the plant's life, after the flower has turned to seed, they may need birds or the fur of a deer to help spread the seeds.



Ecosystems can also determine what kind of wildlife lives there. While wildlife can surely shape how the ecosystem functions, certain animals have specific requirements to survive. With the next animals you see ask yourself these questions: What does it eat? How does it survive in this environment?

As you walk down the trail you may notice some of the Coneflowers seem to be missing from their stems! During the summer and fall, before the snow becomes too deep, the deer love to snack on these flowers as they are full of nutrients. These flowers grow between the elevation of 7,000-10,400 ft, which also happens to be the perfect location for the deer during these seasons.



BONUS!

While you are hiking, keep an eye out for any animals or evidence of animals. Evidence of animals may include tracks, feathers, fur, scat, or remnants of a meal! And if you are lucky enough to see an animal, practice the rule of thumb Leave No Trace principle. If you can't cover it with your outstretched thumb you're too close!



STOP 3 - TREES & SHRUBS SIGN

TOPIC: PLANTS

First, let's think about the trees. What do all trees have in common? They have trunks, branches, and leaves. Trees can be either deciduous or coniferous. A deciduous tree is a tree that loses its leaves in the fall, while a coniferous tree has needle-like leaves that do not fall off. Look at the trees nearby, which do you think are deciduous? Which do you think are coniferous?



Answer: The aspen are deciduous and the spruces and firs are coniferous.



The other plants you see along the trail are called herbaceous plants. Herbaceous plants have a soft stem, not a woody stem or trunk like a tree. Wildflowers and grasses are both examples of herbaceous plants. How might a herbaceous plant have a different role in the ecosystem than a tree?



BONUS!

Look at the trees and shrubs around your home, school, or neighborhood. Can you identify if they are deciduous or coniferous? If you brought a notebook with you, draw and label the trees you have identified!

STOP 4 - WATERSHED SIGN

TOPIC: WATERSHED

A watershed is a geographic area where all of the water drains to a common point. A watershed also collects, stores, and releases water.

Imagine you are a raindrop that lands on the highest peak you can see. After landing, where would you go? You might soak into the ground, or you might trickle downhill. Where might you go after that?

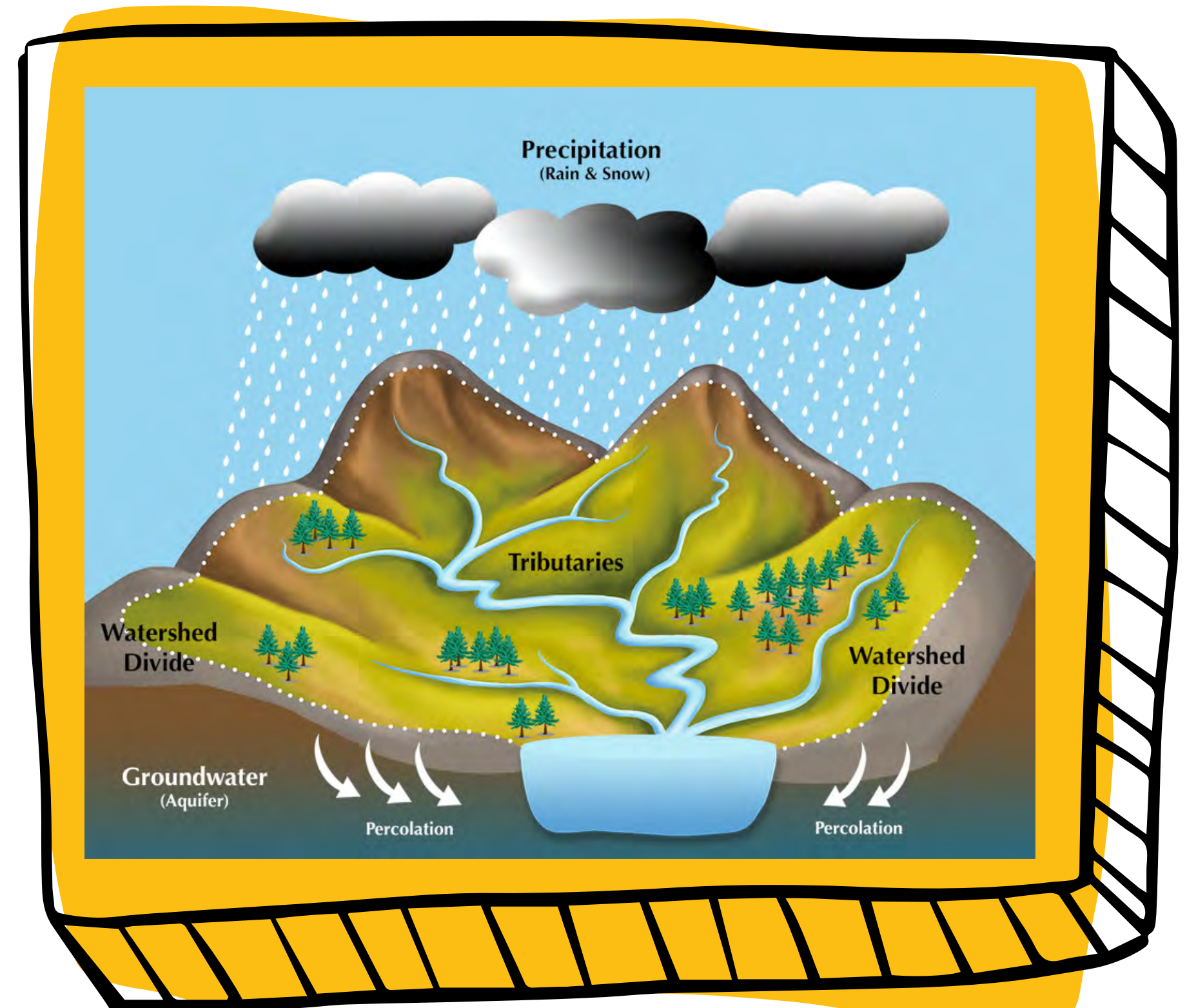
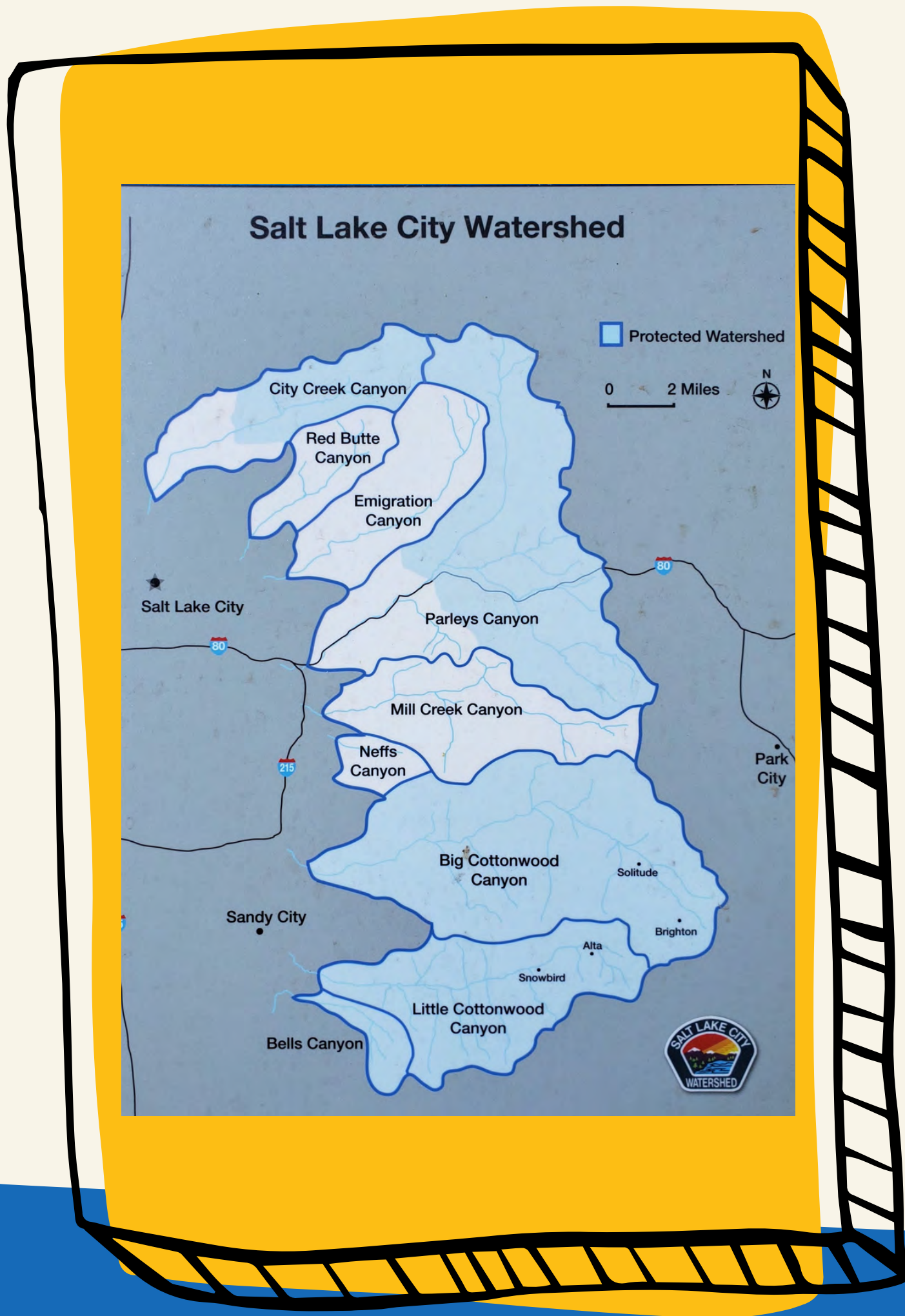
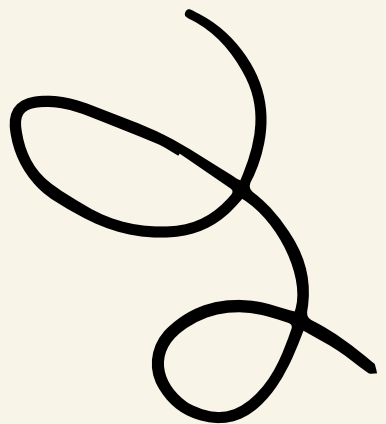


Figure 1. cwp_watershed_09.30.19 [Digital Image]. Center for Watershed Protection, 2019, retrieved from <https://www.cwp.org/watershed101/>.



Using the Salt Lake City Watershed map on the Watershed sign (or pictured to the left), find Snowbird. Which canyon are you in? Is this canyon considered a protected watershed?



The answer is yes! We have special rules in place to help keep our watershed clean and safe, which is why you can't swim in the water or bring your pets into the canyon.





BONUS!

The geology of the canyons helps shape the watershed, but can the watershed help to shape the canyon's geology? Why or why not? Think about this question, as we will come back to this in the coming weeks. How do you think the watershed helps the plants and animals (and even the people) that live in and use the canyons? Is the watershed an important part of the canyon ecosystem?

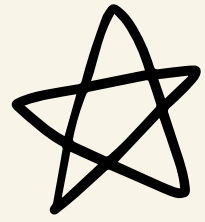
STOP 5 - OBSERVATION POINT DECK

TOPIC: HISTORY & HUMAN USE

Humans have been living in these canyons and using the abundant natural resources here for a long time! This land was first used by the Fremont, Shoshone, and Ute tribes. The forest was even named after the Ute word "Wasatch" which means "low place in high mountains".

Pioneers came into the area in the 1800s and used the canyons for timber, livestock grazing, mining, and water. Today, the canyons are popular for recreational activities like hiking, fishing, camping, and skiing.

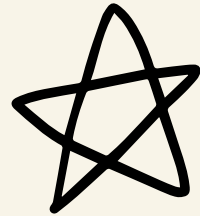




Humans can have significant impacts upon an ecosystem, sometimes these impacts can be good and sometimes they can be bad. Have you left an impact on the ecosystems you have seen today?



Think about all of the ways that people are using the canyons today, and brainstorm ways that we can help protect them. For example, many people like to picnic in the canyons and one way we can help is by making sure we pack out all of our trash.



BONUS!

On your walk back, find a quiet spot along the trail that feels inspiring to you. If you're at home, this can be done in your yard or a neighborhood park. Sit or stand still, close your eyes, and put your hand up in the air. Every time you hear a different nature sound, put a finger down. Do this until you have put all of your fingers down and you have a handful of nature sounds to take home with you!



POST-ACTIVITY

Now that you've observed the ecosystem of your yard, schoolyard, or neighborhood park and the ecosystem around the Observation Point Trail, let's compare them both. How are they different? How are they the same? Do you see the same living things in both places? What about the nonliving things? Draw a picture or write out your observations.