

Nature Detectives

Donner Lake State Park



Nature Detectives of Donner Lake State Park Project Information

This introduction to field journaling is aimed at kids 7-12, with the intention of introducing them to the habitat of Donner Lake State Park, building an interest in the world that surrounds them, and introducing them to studying and learning about the natural world. The included 'Nature Detective Journal' template can be used for a variety of locations.

The presentation is intended as a quick introduction to the concept of field journaling, immediately followed by time exploring in the field to record their findings in the included template. Recommend approximately an hour spent outside exploring & journaling.

Naturalist should explore the area prior to the outing to familiarize oneself with the flora & fauna off the area. Find & identify some species you may see to introduce to children.

Supplies Needed:

Printed Nature Detective's Journal template - 1 for each child participating, as well as a few additional pages in case a replacement page is needed.

Pencils, sharpeners, erasers

Colored Pencils

Field Guide Book - such as The Laws Field Guide to the Sierra Nevada.

Optional: binoculars, magnifying glass

We are Nature Detectives



Nature detectives, lets see what we can discover as we explore Donner Lake State Park!

What do nature detectives do?

- Look carefully for clues
- Record observations

Let's check out some plants & animals we may spot on our journey!

Welcome nature detectives, lets see what we can discover as we explore Donner Lake State Park today! As detectives, we will look carefully for clues in our surroundings to discover who we are sharing this space with. We will record the discoveries we make in our nature detective journals.

Let's check out some plants & animals we may spot on our journey!

Animals of Donner Lake



California Sister Butterfly

California Sister Butterfly feeds on rotting fruit, sap, mud, and occasionally on the nectar from flowers.



Western Fence Lizard

Western Fence Lizards can often be seen sunning on surfaces such as rocks. Lizards are cold blooded, so need to warm up their muscles in preparation to hunt for food.



Golden-Mantled Ground Squirrel

Commonly mistaken for chipmunks, this squirrel can be distinguished by the lack of stripes on its face.

There are many animals that reside or pass through Donner Lake State Park. Some animals are elusive, they may be hard to spot because they avoid humans, or because they come out at night. These animals we may not see, but we can look for evidence that they have been in the area. However, some animals that we see more often, including species of birds, insects & butterflies, lizards, and squirrels. These are a few we may encounter.

As nature detectives it is very important that we study our subject in secret. Sit as still & quiet as possible. Can you watch an animal without it noticing you? Remember to never get too close to an animal, or to make it feel scared or cornered. No sharing our detective snacks with animals!

Birds of Donner Lake



Steller's Jay

Steller's Jays are good mimics, and will imitate the calls of birds of prey to scare other birds away from a feeding area.



Osprey

Look for Osprey soaring over the water hunting for fish. Osprey can spot their prey from 30-130' above, and dive feet first into the water to catch fish with incredible accuracy.



Mountain Chickadee

Listen for their call 'cheeseburger'! Mountain Chickadees primarily eat insects and seeds.

Some birds we may see, and some birds may be hard to see, but we may hear their call. The mountain chickadee is a small bird that often blends into its surroundings. However, they can easily be identified by their call which sounds like they are saying 'cheeeeeseburger'. Steller's Jay has beautiful blue feathers, which makes it easier to spot and identify by sight.

Plants of Donner Lake



Thimbleberry

Thimbleberries have large green leaves, white flowers in the spring & early summer, and produce small berries that look similar to raspberries. They are enjoyed by the local wildlife!



Sticky Cinquefoil

Cinque means five in Italian, these small yellow flowers have 5 petals. The sticky cinquefoil had many hairs on the long stems supporting the flowers.



Greenleaf Manzanita

Greenleaf manzanita has red-brown branches, and bright green leaves. In the spring it has light pink lantern shaped blossoms, then small berries. Native Americans made cider from the berries of greenleaf manzanita.

There are many different plants in Donner Lake State Park, from small groundcover, showy wildflowers, bushes, and trees. Plants can look different at different times of year - they may blossom, fruit, or lose their leaves. Even if you do not know what plant you are looking at, record the interesting things you observe about the plant. I will have my plant guidebook along, we can use this to identify plants we see.

Plants of Donner Lake



White Fir

Grey Bark

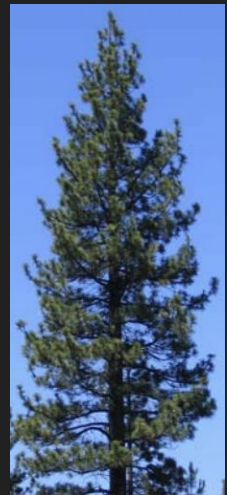
Flat needles which do not grow from the underside of twigs. Needles are 1.5-2.5" long.



Jeffrey Pine

Brown bark that smells like vanilla

Round needles in bundles of 3. Needles are 5-10" long.



There are a variety of trees in Donner Lake State Park. Two trees we can look out for are white fir and Jeffrey pine. Both these trees are evergreen, meaning they do not lose their leaves in winter. Under close investigation, we can learn to tell these two members of the pine family apart. White Fir trees have bark with a grey appearance. The white fir needles are flat, with ridge down the center of each needle. Each needle is approximately one and a half to two and a half inches long. The needles on low branches grow flat out from the twig to the sides, while on upper branches they grow from the sides and the tops of the twig, but not from the bottom of the twig. You can see this in the detail photo. Alternatively, the needles of the Jeffrey pine grow from all directions of the twig, in bundles of 3. The Jeffrey pine needles are five to ten inches long. Jeffrey pine bark is brown, and smells sweet, like vanilla.

****While in the field, find a Jeffrey pine to sniff. What do the kids think it smells like? Do they notice any other smells from other trees? Kids can try rolling white fir and Jeffrey pine needles between their fingers, white fir doesn't roll well compared to Jeffrey pine.**

Nature Detective Journal

In your detective journal today, you will record what you discover with both drawings & written descriptions.



DONNERLAKE - CHIMA COVE

JUNE 17, 2021 2:30-4:30 pm
90°F SUNNY BREEZE

IT IS A WARM, SUNNY DAY AT DONNER LAKE. THE WIND IS CARRYING SMALL WAVES ALONG THE BEACH. I NOTICE THAT AT THE FAR END OF THE BEACH THE WATER IS COVERED WITH BRIGHT GREEN PINE POLLEN. IT IS A SIMILAR COLOR TO THE BRIGHT GREEN WOLF LICHEN THAT GROW ON SOME TREES. I LOOK CLOSELY AT THE WOLF LICHEN ON A NEARBY TREE. IT HAS A RICHLY INTERMIXED BRANCHES THAT GROW IN THE SHADE OF THE TREE. THE LICHEN IS ON A JEFFERY PINE - IT SMELLS SWEET, LIKE VANILLA. AT THE BASE OF ANOTHER JEFFERY PINE I SEE A GOLDEN-MANTLED GROUND SQUIRREL. THE SQUIRREL HAS TAN FUR, WITH A WHITE STRIPE AND TWO BLACK STRIPES ON EACH SIDE. IT DOES NOT HAVE STRIPES ON ITS TAIL. IT HUNGERS BETWEEN TWO LOGS OF THE TREE, HUNTING FOR FOOD BETWEEN ITS TWO TAILS. IT DOESN'T BITE. IT LOOKS AROUND FOR DANGER. I WONDER - WHAT ANIMAL SEES A GOLDEN-MANTLED GROUND SQUIRREL AS PREY?



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Nature Detective Journal

What do you include in your detective's journal?

Where are you?

What day & time is it?

What do you notice?

What do you hear?

What do you wonder about?

The journal page template consists of several sections:

- Details:** A small rectangular box at the top left.
- Written Observations:** A larger box containing the prompts: "Where:", "When:", and "What do you notice:". Below these prompts is a large empty space for writing.
- Big Picture Landscape:** A large rectangular box on the right side of the page.
- Detective Journal Observations made by:** A small box at the bottom left.
- Plant:** A rectangular box at the bottom right, intended for drawing a plant.
- Animal:** A rectangular box at the bottom right, intended for drawing an animal.

In your nature detective's journal include information such as where you are, and what day & time it is. Look around, what do you notice? What do you hear? What do your observations make you curious about? If you are watching a ground squirrel do you wonder where it sleeps? What animal it is scared of? It is great to record these questions as well, it is ok if you do not know the answer to them.

Let's look at some additional information we can include in our journals.

Nature Detective Journal



Big Picture Landscape

This space is used to draw the scene & to give the overall impression of where we are. This drawing may show mountains, lake, trees, bushes. It helps to hold up your hands to look through, as if your hands are a picture frame. This helps narrow down an area of the landscape to decide what to draw.

We don't need to draw everything we see!

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We don't need to draw everything we see!

Nature detective journal

Draw one animal you see.

Sit quietly, and see how long you can observe an animal without disturbing it. What is it doing? What noise does it make? Does it have fur, feathers, scales?

Don't see any animals? Do you hear one? What does it sound like? Do you see signs of animals such as spider webs, scat, nibbled pinecones or leaves?



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Nature Detective Journal



Draw one plant you see.

What can help you identify it? Does it have flowers, pine cones, berries? Notice the leaf placement. What is the texture and color of the leaf, stem, bark?

Are any animals on this plant? If so, what is that animal doing?

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What can help you identify it? Does it have flowers, pine cones, berries? Notice the leaf placement. What is the texture and color of the leaf, stem, bark?

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Nature Detective Journal



Investigate something very closely. Study all the secret details of a plant, a bug, a rock, whatever catches your interest and doesn't move too quickly!



Investigate something very closely. Study all the secret details of a plant, a bug, a rock, whatever catches your interest and doesn't move too quickly! By getting very close to an object, and watching it intently for a while, we may notice things other detectives may have missed. Are there bugs moving around on tree bark? What colors do you see when you get close? What does the texture feel like?

Nature Detective Journal

DONNERLAKE - CHINA COVE

JUNE 17, 2021 2:30-4:30 PM

90°F SUNNY, BREEZE

IT IS A WARM, SUNNY DAY AT DONNERLAKE. THE WIND IS CAUSING SMALL WAVES ALONG THE BEACH. I NOTICE THAT AT THE FAR END OF THE BEACH THE WATER IS COVERED WITH BRIGHT GREEN PINE POLLEN. IT IS A SIMILAR COLOR TO THE BRIGHT GREEN WOLF LICHEN THAT GROWS ON SOME TREES. I LOOK CLOSELY AT THE WOLF LICHEN ON A NEARBY TREE. IT HAS MANY INTERWIND "BRANCHES" THAT SPLIT IN TWO. ~~THE~~ THE TREE THE LICHEN IS ON IS A JEFFREY PINE - IT SMELLS SWEET, LIKE VANILLA. AT THE BASE OF ANOTHER JEFFREY PINE I SEE A GOLDEN-MANTLED GROUND SQUIRREL. THE SQUIRREL HAS TAN FUR, WITH A WHITE STRIPE AND TWO BLACK STRIPES ON EACH SIDE. IT DOES NOT HAVE STRIPES ON ITS FACE. IT HUNCHES BETWEEN TWO ROOTS OF THE TREE, HOLDING FOOD BETWEEN ITS TWO FRONT PAWNS, TO EAT. IT LOOKS AROUND BETWEEN BITES. PERHAPS IT IS LOOKING FOR DANGER! I WONDER - WHAT ANIMAL SEES A GOLDEN-MANTLED GROUND SQUIRREL AS PREY?

In the written observations area write what you notice about the area.

What do you hear?

What do you smell?

What animals do you see? What are they doing?

What plants do you notice?

In the written observations area write what you notice about the area.

What do you hear? What do you smell? What animals do you see? What are they doing? What plants do you notice?

Does anyone have any questions about how to be a nature detective?

Let's go Investigate Donner Lake!



DONNER LAKE - CHINA COVE

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Ok nature detectives, I am counting on you to study things closely & record your observations and any clues you find interesting, so that we can solve the mystery of who lives in Donner Lake State Park!