

Galena Creek Visitor Center  
At-Home Learning Activity Lesson Plan

## Nature Scavenger Hunt



### Summary of Activity (Lesson bio)

This activity is done outside. It can be done at the Galena Creek Regional Park or in other parks in the area with similar flora and fauna. This activity is a guide to help with identifying common plants and evidence of common animals in this area. It encourages observation when in the natural world. This can be fun for all age groups but for NGSS standards the age group is K-2nd grade. **2-LS4-1 Biological Evolution: Unity and Diversity. Make observations of plants and animals to compare the diversity of life in different habitats. Emphasis is on the diversity of living things in each of a variety of different habitats.**

#### Objective:

This activity is designed to get students outside and making observations about the natural world. It encourages respecting the natural space by only taking

notes and pictures. Students will answer discussing questions at the end of the activity as well as taking notes when doing the activity.

**Discipline or Subject Covered:**

2-LS4-1 Biological Evolution: Unity and Diversity. Make observations of plants and animals to compare the diversity of life in different habitats. Emphasis is on the diversity of living things in each of a variety of different habitats.

**Grade Level:**

K-2nd

**Materials:**

Scavenger Hunt Sheet, notebook, pencil, camera (optional)

**Procedure:**

Using the scavenger hunt identifying sheet try to find as many items as possible! Write down what you have found, draw pictures, or take pictures. Make observations about the plant and animal life to later compare to other regions you have been to or seen.

Galena Creek Regional Park- Scavenger Hunt
*Take only pictures, always leave what you find where you found it. Every little thing is an important part of the ecosystem!
Common Flora "Plants"



**Jeffrey Pine**  
*Pinus jeffreyi*

- Bark: thick and scaly, smells like butterscotch or vanilla
- Needles: come in bunches of three, skinny



**Pollen *P. jeffreyi* Cones** (right)

- Fall apart easily, may leave yellow dust of pollen on finger

**Woody *P. jeffreyi* Seed Cones** (left)

- Large cone prickles curve inward "Gentle Jeffrey"



**Sagebrush**  
*Artemisia tridentata*

- Lives in dry areas
- Has dense gray hairs
- 3-lobed aromatic leaves
- Silvery light green color



**Curl-leaf Mountain Mahogany**  
***Cercocarpus ledifolius***

- Evergreen shrub
- 3-35 ft tall
- Leaf curls under slightly
- Whitish peely rough bark



**Tobacco Brush**  
***Ceanothus velutinus***

- White flowers
- Glossy sticky ovate leaves may be curled downward
- Leaves may have sweet smell in warmer weather



**Green leaf Manzanita**  
***Arctostaphylos patula***

- Peeling red-brown bark
- Evergreen shrub
- Bright yellow-green leaves longer than 1 inch
- Pink flowers
- Edible red fruits





## Lichen “Algae + Fungus”

- There are many types of lichen and can be hard to identify exact species
- Browns, greens, yellows, oranges, blacks, grays, whites, etc
- Look for lichen around here on rocks with many different species crowded together
- Sensitive to air pollution (they die in polluted air) - helpful indicator of air quality



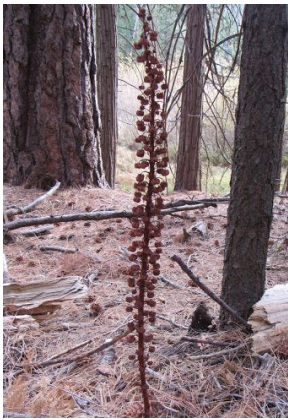
## Dwarf Mistletoe *Arceuthobium spp.*

- Yellow colored
- Lives on the branches of trees
- Sometimes you may find pieces on the ground that fell



**Mahala mat**  
***Ceanothus prostratus***

- Sharp, leathery, strongly toothed, holly-like leaves
- Clusters of small blue flowers
- Evergreen ground cover



**Pinedrops**  
***Pterospora andromedea***

- Red stems
- Found near/under Pine trees
- White flowers that develop into red-brown fruits
- No chlorophyll (does not photosynthesis lives off of roots of nearby tree)

Galena Creek Regional Park- Scavenger Hunt

\*Take only pictures, always leave what you find where you found it. Every little thing is an important part of the ecosystem!

Evidence of Fauna "Animals"



**Red-Breasted Sap Sucker Marks**

- Holes in tree from sap sucker bird
- Creates holes to eat sap
- Often many holes in one space
- Sometimes will have sap dripping out





### Squirrel Snack

- Pine cone seeds eaten by squirrel
- Leaves behind a mess of the woody pine cone pieces and a now chicken leg looking pine cone



### Beetle Trail

- Some beetles chew nesting tunnels in trees or logs
- You can identify the beetle species by shapes of tunnels or patterns left behind (take a picture and try to identify when you get home)



Black Bear



Mountain Lion

### Mammal Scat

- Animal droppings, clues to what the animal is and what it has been eating
- **Black Bear**- large piles, often black and loose, may contain grasses, contains manzanita berries in the fall
- **Mountain Lion**- large piles, segmented and often buried, contains fur and bones
- **Coyote and Fox**- fox scat is usually  $>.5$  inch in diameter, coyote scat  $<.5$  inch. Tapered end, contains



Coyote

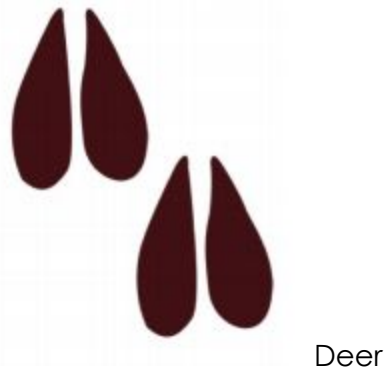


Deer

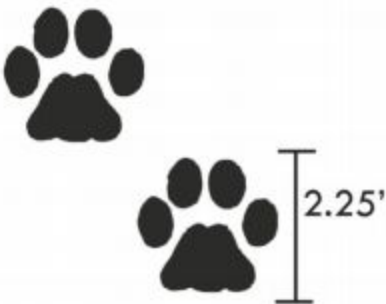
- animal remains and seeds
- **Raccoon- DO NOT TOUCH** may contain parasites fatal to humans! variable diet, blunt ends
  - **Bobcat-** segmented and often buried, contains fur and bones
  - **Deer-** small droplets
  - **Jackrabbit-** obvious nipped grass, small
  - **Porcupine-** summer scat is small, dark, often connected in a chain. Winter scat is woody

### Mammal Tracks

- Best in mud or snow, compare multiple tracks
- **Two Toes-**  
**Deer**, ungulate, have hard hooves made from modified toenails
- **Four Toes-**  
**Bobcat** (width ~2 inch) & **Mountain Lion:** (width 3.5 inch) generally round in outline, claws do not show, planter pad with two lobes on top.  
**Coyote:** (width ~2.25 inch, front toes overlap rear toes) & **Red Fox:** (width ~2 inch, front toes do not overlap rear toes) generally longer than wide, claws

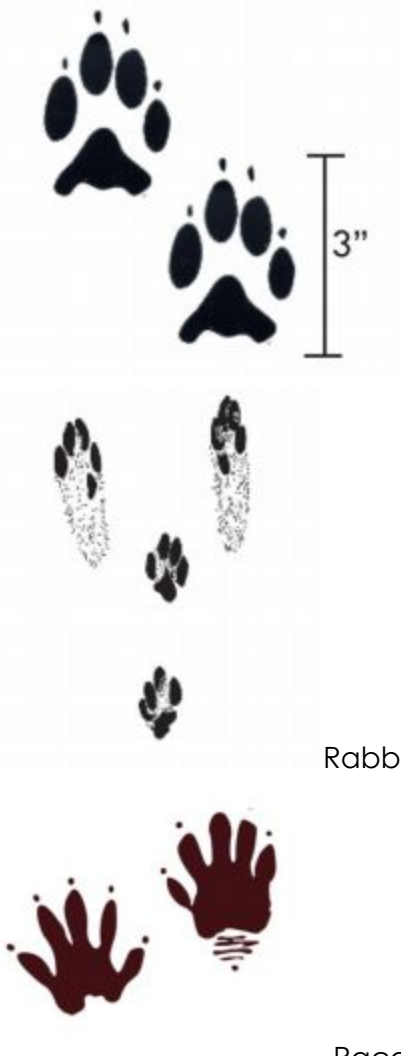




Deer



Bobcat



 <p>Coyote</p> <p>Rabbit</p> <p>Racoon</p>	<p>show, planter pad with one lobe at top.</p> <p><b>Rabbit:</b> width ~1.5 inch or less, narrow track</p> <ul style="list-style-type: none"> <li>• <b>Four Toes for forefoot &amp; Five Toes for hindfoot-</b></li> </ul> <p><b>Porcupine:</b> width ~1.5inch, long claws, rounded pad may show bumpy texture</p> <p><b>Squirrel:</b> Tree Squirrel: width ~2.5 inch, forefeet offset Ground Squirrel: width 1.5 inch, forefeet parallel</p> <ul style="list-style-type: none"> <li>• <b>Five Toes-</b></li> </ul> <p><b>Black Bear:</b> width ~4 inch, large sized, heel does not appear on forefoot</p> <p><b>Racoon:</b> width ~2.5 inch, forefoot and hindfoot resemble small human hands and feet with fat/round toes</p> <p><b>River Otter:</b> width ~4 inch, forefoot spread round fingers not attached to print, webbed hindfoot with fat/round toes</p> <p><b>Beaver:</b> width ~3 inch, long fingers on forefoot, webbed hindfoot with long toes</p>
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<p>FEATHER TYPES</p> 	<h3>Feathers</h3> <ul style="list-style-type: none"> <li>• There are 100's of bird species; take picture of feather to try and identify what bird it belonged to and what type of feather it is; wing, down, tail, contour, semiplume, bristle, filoplume</li> </ul>
	<h3>Bones</h3> <ul style="list-style-type: none"> <li>• Is it a full skeleton or just a bone? Can the animals be identified by looking at it or taking or drawing a picture to identify later? <ul style="list-style-type: none"> <li>○ Antlers</li> <li>○ Hooves</li> <li>○ Teeth</li> <li>○ And more!</li> </ul> </li> </ul>

### Discussion:

Have students compare using their notes and pictures to another area that they have seen or been in. Have them write down the similarities and differences.

Example: Why is it different or similar? - The amount of precipitation? Elevation? Soil type? Animal diets? Colors? Wind?

### Other Resources/Further Information:

Galena Creek Staff

*"The Laws Field Guide to the Sierra Nevada"* written and illustrated by John Muir Laws

Picture Sources:

<https://www.stevenkharper.com/jeffreypine.html> (jeffrey pine- male cone, female cone, bark)

<https://bonsaitonight.com/2018/03/23/repotting-a-jeffrey-pine/> (jeffrey pine needles)

<https://americanwildernessbotanicals.com/products/basin-big-sagebrush> (sage brush)

<http://www.lhseeds.com/cercocarpus-ledifolius-curl-leaf-mountain-mahogany>  
(mountain mahogany)

<http://science.halleyhosting.com/nature/basin/5petal/buckthorn/ceanothus/snow.htm>  
(tobacco brush)

<https://en.wikipedia.org/wiki/Manzanita> (manzanita bark)

<https://www.laspilitas.com/nature-of-california/plants/69--arctostaphylos-patula>  
(manzanita pink flower)

<https://www.photos-public-domain.com/2018/07/27/lichen-on-rock-face/> (green lichens)

<https://www.desertusa.com/desert-minerals/lichen.html> (yellow lichens)

<https://www.growiser.net/arceuthobium-campylopodum-western-dwarf-mistletoe.html>  
(mistletoe)

<https://www.pnwflowers.com/flower/ceanothus-prostratus> (mahla mat flowering)

[https://calphotos.berkeley.edu/cgi/img\\_query?enlarge=0000+0000+0110+2175](https://calphotos.berkeley.edu/cgi/img_query?enlarge=0000+0000+0110+2175) (mahla mat)

<https://www.desertusa.com/desert-minerals/lichen.html> (blooming pinedrop)

<https://www.desertusa.com/desert-minerals/lichen.html> (dried pinedrop)

[https://www.allaboutbirds.org/guide/Red-breasted\\_Sapsucker/id](https://www.allaboutbirds.org/guide/Red-breasted_Sapsucker/id) (sap sucker)

[https://www.google.com/search?q=pine+cones+eaten+by+squirrels&hl=en&sxsrf=ALeKk01dPomB7veTaWITsQAuPIXG96og0A:1585245558174&source=lnms&tbn=isch&sa=X&ved=2ahUKEwjPq4Hz27joAhVJFTQIHxixAkgQ\\_AUoAXoECA8QAw&biw=1259&bih=644#imgrc=Pk3TclC68RhNnM](https://www.google.com/search?q=pine+cones+eaten+by+squirrels&hl=en&sxsrf=ALeKk01dPomB7veTaWITsQAuPIXG96og0A:1585245558174&source=lnms&tbn=isch&sa=X&ved=2ahUKEwjPq4Hz27joAhVJFTQIHxixAkgQ_AUoAXoECA8QAw&biw=1259&bih=644#imgrc=Pk3TclC68RhNnM) (squirrel snack)



<https://www.nps.gov/grba/learn/nature/bark-beetles.htm> (beetle tracks)

<https://naturallycuriouswithmaryholland.wordpress.com/2014/08/25/black-bear-scats-reveal-diet/> (black bear scat)

<https://www.flickr.com/photos/openspacer/32461357258> (mountain lion scat)

<https://mcrd.org/tracks-and-scats/coyote-scat> (coyote scat)

[https://www.nrdnet.org/sites/default/files/wildlife\\_study\\_guide\\_2016.pdf](https://www.nrdnet.org/sites/default/files/wildlife_study_guide_2016.pdf) (animal tracks)

<https://academy.allaboutbirds.org/feathers-article/> (bird feathers)

[https://www.google.com/search?q=antlers+in+nature&tbm=isch&ved=2ahUKEwi4tuia2bjoAhWLMJ4KHZpJB0gQ2-cCegQIABAA&oq=antlers+in+nature&gs\\_lcp=CgNpbWcQAzoECCMQJzoCCAA6BAgAEENQzXRYmYoBYKGNawGAcAB4AIAB0gGIAfUJkgEFMC45LjGYAQCgAQGqAQtnnd3Mtd2l6LWltZw&sclient=img&ei=pOp8XrjUFlux-gSak53ABA&bih=548&biw=1231#imgrc=xaH\\_OfMasrJ6MM](https://www.google.com/search?q=antlers+in+nature&tbm=isch&ved=2ahUKEwi4tuia2bjoAhWLMJ4KHZpJB0gQ2-cCegQIABAA&oq=antlers+in+nature&gs_lcp=CgNpbWcQAzoECCMQJzoCCAA6BAgAEENQzXRYmYoBYKGNawGAcAB4AIAB0gGIAfUJkgEFMC45LjGYAQCgAQGqAQtnnd3Mtd2l6LWltZw&sclient=img&ei=pOp8XrjUFlux-gSak53ABA&bih=548&biw=1231#imgrc=xaH_OfMasrJ6MM) (antler photo)