



**GREAT BASIN
NATURALISTS**

**FOREST
RANGERS**

**ACTIVITY
WORKBOOK**



Activity #1

Galena Creek Park Trees

Galena Creek's forest has many different kinds of trees. Lots of them are coniferous, which means they are trees that have special leaves that are needle-shaped or scale-like. These trees grow cones and are usually evergreen, which means they don't lose their needles in the fall. Coniferous trees can be identified by counting the number of needles in a bundle, and by looking carefully at the needles, bark, and cones.

Coniferous Trees at Galena Creek Park

Jeffrey Pine

Needles: 5" – 10", Bundles of 3
Cones: 5" – 8" Prickles curve in
Bark: Smells like butterscotch

Ponderosa Pine

Needles: 5" – 10", Bundles of 3
Cones: 3½" – 5" Prickles curve out
Bark: red, puzzle pieces

Lodgepole Pine

Needles: 1" – 2¾", Bundles of 2
Cones: 1" – 1¾", Long Prickles
Bark: Pale Red / Gray

Piñon Pine

Needles: 1½"- 2½", no bundles
Cones: 2" - 3", Few thick scales
Bark: Scaly, Short tree

Douglas Fir

Needles: ¾" - 1¼", soft, flat, no bundles
Cones: 2" – 3" Three pointed bracts between scales
Bark: Gray/Brown, Ruttled

Red Fir

Needles: ½" – 1", Curve upward off branch, Flat, No bundles
Cones: 6" – 8", Sit upright
Bark: Dark Red, (Silver when young)

White Fir

Needles: ¾" – 1½", Flat, Come off 2 sides of branch, No bundles
Cones: 3" – 5", Sit upright
Bark: Gray/Drab Brown

Incense Cedar

Needles: jointed scale-like and flat, Different than needles, length varies
Cones: 1", three prongs/winged
Bark: red tint, fibrous



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Activity #1

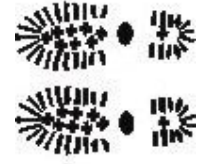
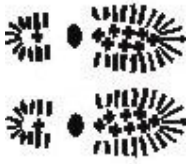
Tree Identification Activity

Use the Coniferous Trees at Galena Creek park chart to help you identify trees. Collect and attach a needle or bundle of needles (or draw a picture of the needle) and write the name of the tree.

Tree #1 _____

Tree #2 _____

Tree #3 _____



Activity #2

Take a Hike!

Take a self-guided nature hike on the Galena Creek Nature Trail (see park map -starts at south end of Bitterbrush Trail). Before hiking please get a trail guide from the Galena Creek Visitor Center (located at the North entrance).

Walk along the trail and when you see a number on a post along the trail read the section in the guide that has that number.

Try to answer these questions!

1. What is Nevada's state flower? _____
2. What is the most common pine tree in Galena Creek Park? _____
3. What is the Fish Hatchery made out of? _____
4. Draw a picture of the plant that Native Americans used to make a violet dye.
5. How does mistletoe get its food? _____
6. Draw a picture of someplace where frost wedging has happened.
7. On what mountain does Galena Creek begin? _____
8. What two living species make up lichen? _____
9. Where is there erosion that could have been caused by flooding? _____

Draw a picture of the eroded area.

10. Draw a picture of a dead tree community.

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Activity #3

Nature Crossword

If you are learning about nature, chances are you will read or hear some words that you don't know. See if you can use the words below to complete the crossword on the next page!

PARASITE

MIGRATE

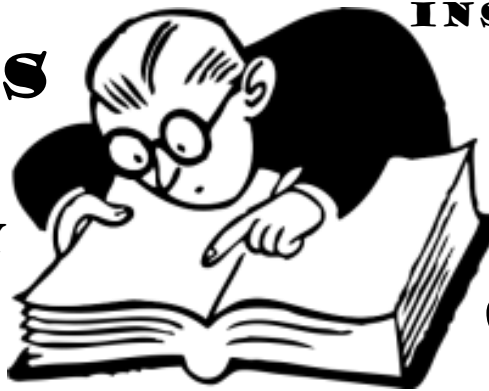
HABITAT

CARNIVORE

GRASS

INSECTIVORE

ECOLOGY



**FOOD
CHAIN**

VENUS

SCAVENGER

FLYTRAP

HIBERNATE

PHOTOSYNTHESIS

HERBIVORE

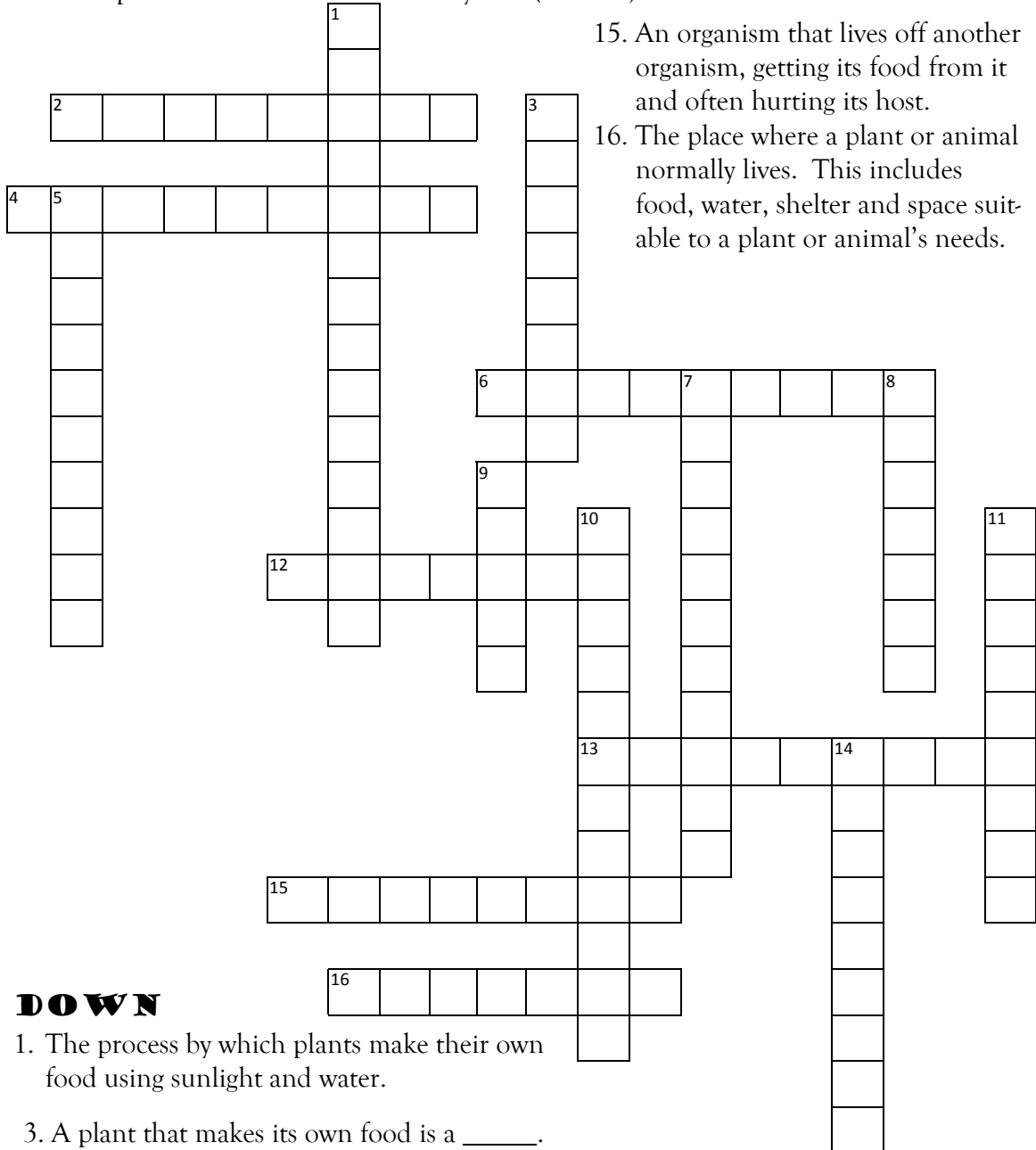
PRODUCER

OMNIVORE

ADAPTATION

ACROSS

2. An animal that eats both plants and animals.
4. An animal that eats only meat is a _.
6. An animal that eats only plants is an _____.
12. The seasonal movement of a complete population of animals from one area to another.
13. A map of who eats whom in an ecosystem (2 words).



15. An organism that lives off another organism, getting its food from it and often hurting its host.

16. The place where a plant or animal normally lives. This includes food, water, shelter and space suitable to a plant or animal's needs.

DOWN

1. The process by which plants make their own food using sunlight and water.
3. A plant that makes its own food is a _____.
5. Changes that help plants and animals to survive in their environment.
7. An organism that eats insects is an _.
8. The study of the relationship between living things and their environment.
9. An example of a common producer that needs mowing.
10. An example of an insectivorous plant (2 words)
11. An animal that can eat whatever it can find is called a ___.
14. To spend the winter in close quarters in a dormant condition.

Activity #4

Look Up!

There are many different types of birds that can be found in the Galena area. Some of them live here year-round, some just spend the spring and summer here, and others just spend the winter. Watching birds can be a lot of fun and it can be done anywhere! You can set a bird feeder up in your backyard to help you see what birds live near you or you can travel to different habitats to look for numerous kinds of birds. It can be helpful to use binoculars and a field guide, which is a type of book that can help you to identify the birds you observe.



American Robin

- Orange chest
- Active during the day
- Complex continuous song



California Quail

- Blue-gray bird
- Found on the ground
- “Chi-ca-go” song



Dark-eyed Junco

- Dark head with tan body
- Hops on the ground
- Musical trill or sharp “tick”



Hairy Woodpecker

- Red spot on back of head
- Found on tree trunks and main branches
- “Peek” or a whinny



Mountain Chickadee

- Small, black and white
- Feeds in groups
- “Chick-a-dee” or “cheese-bur-ger”



Steller's Jay

- Blue body
- Harsh call, mimics other animals
- Bold, curious, and noisy



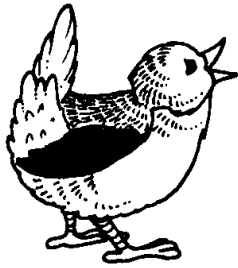
Red-tailed Hawk

- Red tail, brown body
- Perched on a pole or tree
- Steam whistle: “kee-eee-arrrr”



Western Tanager

- Bright yellow and black
- Eating insects high in trees
- Monotonous “Pit-er-ick”

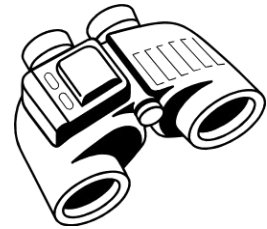


Activity #4

Going Birding!

Use the chart on the previous page to help identify birds in the park.

- Look for birds while taking at least a 15 minute walk.
- Sit still for at least ten minutes looking & listening for birds.
- Answer the following questions.



1. What birds did you see? _____

2. What birds did you hear? _____

3. Draw a picture of any birds you saw that aren't on the chart:

4. Describe any bird calls you heard that weren't described in the chart:

Activity #5

Searching!

Galena Creek Park is home to many different kinds of living things including trees, shrubs, animals and more. It is becoming harder to find some of them in the wild. See if you can find the names of the diverse plants and animals in the search below.

Note: The words in Parentheses () are not included in the word search, but are there to teach the full name of the item.

(PLANTS)

- Sagebrush
- Jeffrey (Pine)
- Quaking Aspen
- Lodgepole (Pine)
- Ponderosa (Pine)
- Elderberry
- (Green Leaf) Manzanita
- White Fir
- Bitter (brush)
- (Mountain) Mahogany

(ANIMALS)

- Coyote
- Stellar Jay
- Mule Deer
- (Bushy-tailed) wood rat
- (Mountain) Chickadee
- (Hairy) woodpecker
- Red-tailed Hawk
- Cottontail (Rabbit)
- (Ground) Squirrel

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



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Activity #6

Take a Closer Look!

As you walk, hike, or ride through Galena Creek Park it is easy to forget to take a closer look around. Going on a scavenger hunt can help you observe many small details that you might otherwise miss. Get ready to start searching and exploring!

Go on a Scavenger Hunt

Put an "X" next to each item you find. Please look at items, but don't take them with you. Please do not disturb or destroy any plants, animals or their homes.

- A feather
- Something that is human-made
- Pine needle bundle with 3 needles
- A thorn, sticker, or barb
- A bird that is singing
- A cloud in the sky
- Something triangular in shape
- Something round
- Two different textures by each other
- Signs that an insect has been in the area
- A track not left by a human
- Something that tells you the wind is blowing
- Find two bushes with similar leaves
- Collect three pieces of litter to throw away
- A place where an animal might live
- Something naturally found in the park that is the color of your shirt
- A tree that will lose its leaves in the winter
- A good place for an animal to get a drink of water
- Tree bark that smells like vanilla or butterscotch

Draw one of the items here:

Draw one of the items here:



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Activity #7

Rocks Rock!

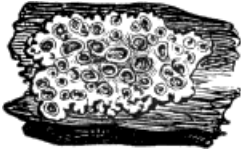
Geology is the study of our amazing, ever-changing planet. This includes the study of earthquakes, volcanoes, tsunamis, and the formation of mountains, rivers and valleys. Studying rocks is a huge part of geology. Now you'll have a chance be a geologist too!

Rock Observation Activity

Find a rock and draw it here:

Look closely at your rock and ask yourself the following questions: What does your rock feel like? Is your rock smooth and rounded? Does your rock have any sharp edges, breaks, or cracks that might have happened from the rock falling? Does your rock have layers that you can see? How many colors is your rock?

Now, tell your rock's story! Make up the story of the life of your rock. Use your imagination to explain how your rock came to look and feel the way that it does!



Activity #8

Liken' Lichens

Look for scaly blotches of color on rocks or trees. This is lichen. Lichen is a symbiotic union between fungus and algae. Symbiotic means that they help each-other to survive. The fungus couldn't live without the algae and vice-versa. Algae makes food and shares it with the fungus. The fungus provides shelter for the algae.

Sizing up Lichens

Most lichens grow VERY slowly in the harsh climate of northern Nevada. Some grow as little as 1 millimeter per year! The fastest growing lichens, grow 1 centimeter per year. Measure 5 lichens on 5 different rocks and figure out how old they might be if they are the fast growing type! If a lichen is 6 cm across, then it is 6 years old!

Lichen 1: Diameter = _____ cm. **SO**, age = _____ years old!

Lichen 2: Diameter = _____ cm. **SO**, age = _____ years old!

Lichen 3: Diameter = _____ cm. **SO**, age = _____ years old!

Lichen 4: Diameter = _____ cm. **SO**, age = _____ years old!

Lichen 5: Diameter = _____ cm. **SO**, age = _____ years old!

Draw a picture of your favorite lichen:



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Activity #9

Solo Sit

Take a moment to rest and to enjoy the beauty of the park. For this activity, find a place to sit, such as by a creek, on a rock, or under a tree. Try to spend at least ten minutes in the spot you have picked. Sit quietly without moving too much and without talking to friends. Look at your surroundings, listen carefully for sounds you would miss if you were talking and moving, and enjoy the many different creatures you may have missed seeing while playing. Have fun and be sure to keep your ears and eyes open!

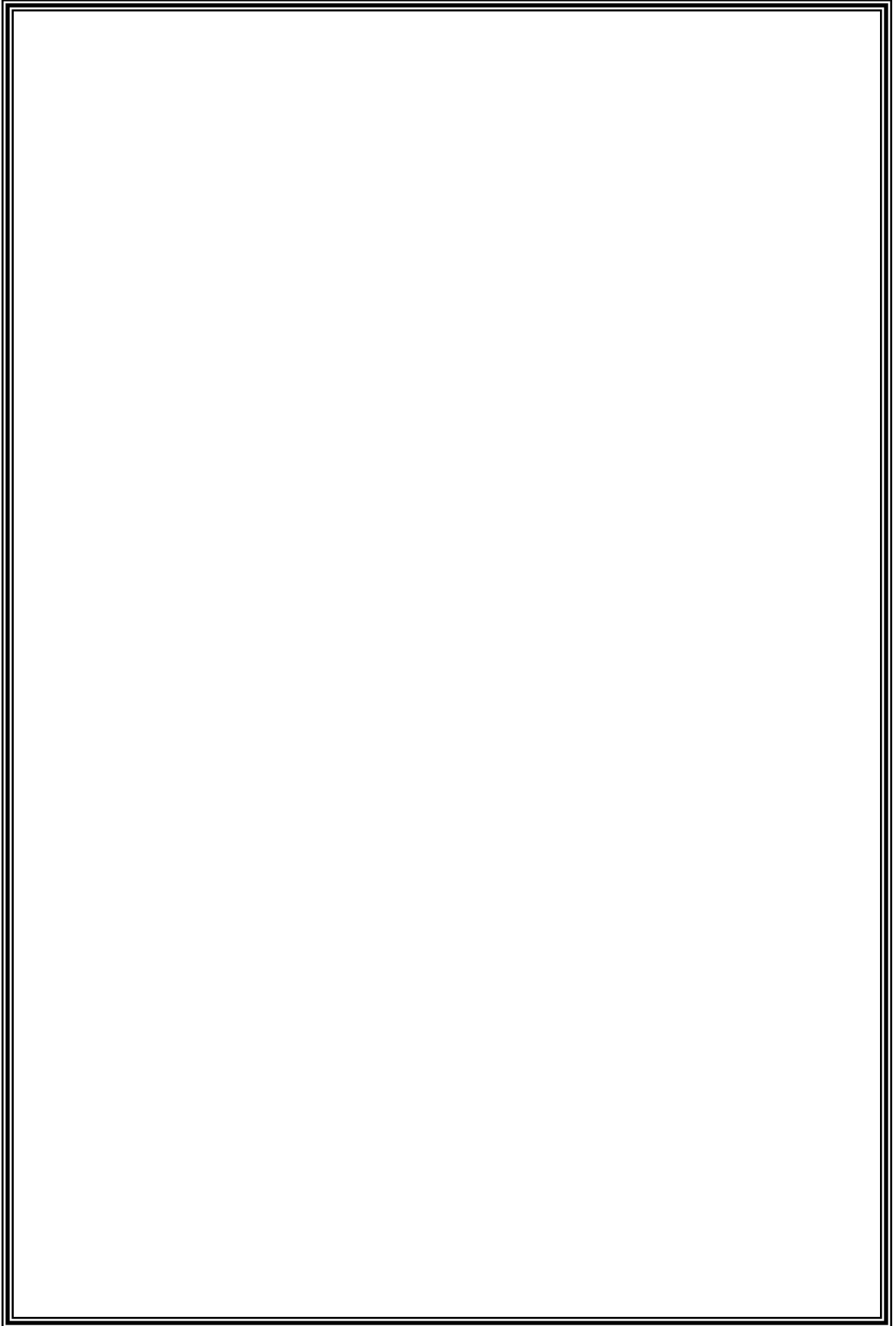
What's out there?

Make a list of everything you see and hear. If you're not sure what it is, make your best guess!

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____

Now, on the next page, draw a detailed picture of your surroundings. Make sure to include insects, rocks, trees, animals, and anything else that you may have seen.





Activity #10

Legends

Legends of the Bear

There are black bears that roam Galena Creek Park, but they are very shy and usually are not seen by people. Adult black bears are 4-5 feet long and weigh 150-400 lbs. These bears are the smallest of the bear family, but they are still larger than most adult humans. Even though they are called *black* bears often they are brown, blonde, or reddish. In the winter, bears hibernate. Their den can be a hollow in the ground, a hole under the roots of a fallen tree, or a big nest on the ground. The black bear's main food source is plants and berries. Black bears are predators, though, and do, *sometimes*, kill other animals for food.

The Legend of the Long-Tailed Bear

The Loucheux people told this legend about how the bear got such a short, stubby tail.

The bear once had a long, furry tail. Then he asked the fox how to catch crayfish. The tricky fox told the bear to hang his long tail in the water through a hole in the ice until the crayfish pinched it. Then he could pull them up on his tail.

The bear did as the fox told him, but when he felt a pinch on his tail, it was the ice freezing around it. When he finally tried to pull his tail out, it was frozen hard into the ice! The bear yanked hard and broke his tail off near the base- and has had a short tail ever since.

Now create your own exciting legend!

Hint: Here are a few ideas to write about: why the bear hibernates, why the bear likes eating plants/berries, why the bear is shy, why bears are so large, etc.
