



Bureau of Land Management

# Junior Explorer



# Jr. Prospector

let's find the gold!

*National Historic*  
**OREGON TRAIL  
INTERPRETIVE CENTER**

Activity Book

# Public Lands Belong To You!

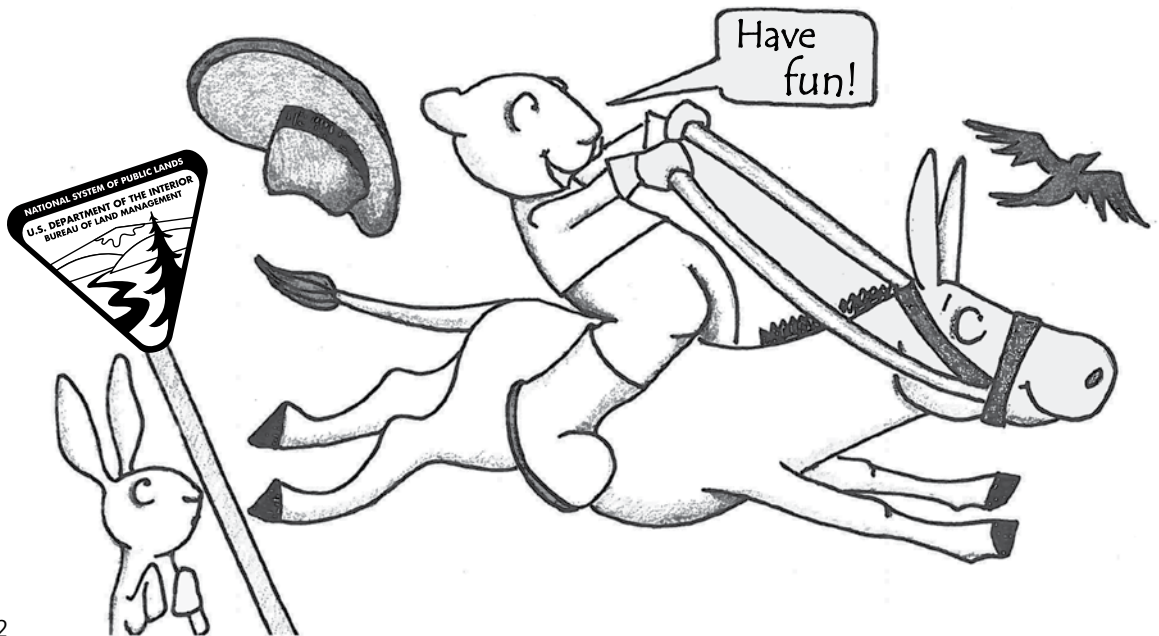
The Bureau of Land Management (BLM) is a federal government agency that takes care of more than 245 million acres of land. Most of these lands are in the western part of the United States. These lands are America's public lands, and they belong to all Americans. These public lands are almost equal in area to all the land in the states of Texas and California put together.

The BLM manages public lands for many uses. The lands supply natural resources, such as coal, oil, natural gas, and other minerals. The lands provide habitats for plants and animals. People enjoy the big open spaces on the lands. The lands also contain evidence of our country's past, ranging from fossils to Indian artifacts to ghost towns.

## Junior Explorers

BLM's Junior Explorer program helps introduce young explorers like you to the lands and resources that the BLM manages. This Jr. Prospector Activity Book focuses on historic gold mining in the surrounding area. There is much to be learned from the people who came back on the old Oregon Trail to strike it rich in the 1860's.

You can work through the activities in this booklet on your own or invite a sibling, parent, or an adult you know to join you. When you complete the activities, check with a Park Ranger to have your Certificate signed, and you're on your way to exploring and protecting America's public lands.



# Going back in time...

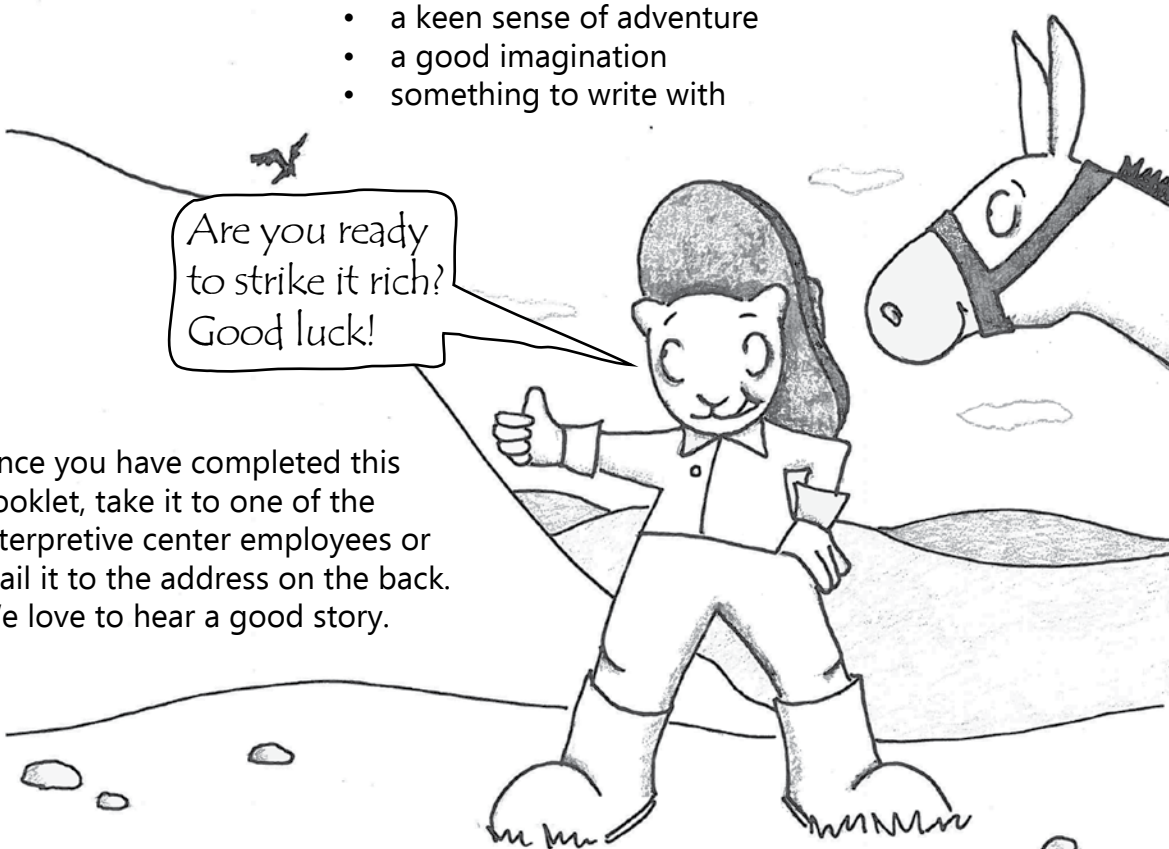
The year is 1861, and gold has just been discovered in the Blue Mountains of Eastern Oregon. Pack the wagons and head back on the old Emigrant Road, it's the Blues or bust; a new gold rush has started. Use this booklet to help you travel back in time to the golden days of eastern Oregon. Come along and let's discover what it was like to be a gold miner in this untamed land!

During the days of the Oregon Trail the area you see around you was much different than it is today. Flagstaff Hill, where you are now, did not even have a name, and the big valley that you see out the windows was a vast empty plain. The only sign of civilization might be a dusty wagon train passing through on their way westward. It wasn't until gold was discovered here that emigrants began to settle permanently in the Baker Valley and surrounding mountains.

## How to Become A Junior Prospector

Tools you will need include:

- a keen sense of adventure
- a good imagination
- something to write with



Are you ready  
to strike it rich?  
Good luck!

Once you have completed this booklet, take it to one of the interpretive center employees or mail it to the address on the back. We love to hear a good story.



# Glossary

**Basalt** – a hard, black, sometime glassy, igneous rock

**Batholith** – A large mass of igneous rock, composed of granite

**Boom Town** – prosperous town: a town that significantly increases in size and wealth, often as the result of new and profitable industry

**Claim Jumper** – a person who seizes another's claim of land

**Gold** – a soft, heavy, corrosion-resistant, yellow metallic element that is highly valued

**Igneous rock** – describes rock formed under conditions of intense heat or produced by the solidification of volcanic magma on or below the Earth's surface

**Limestone** – a sedimentary rock made from ocean organisms

**Lode** – a deposit or vein of ore

**Marble** – a dense crystallized metamorphic rock formed from limestone

**Metamorphic rock** – a rock that has changed its form and character through heat and pressure

**Ore** – mineral from which metal is extracted

**Placer** – a deposit of river sand or gravel containing particles of gold or another valuable mineral

**Prospect** – an excavation undertaken in search of ore

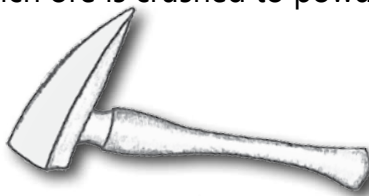
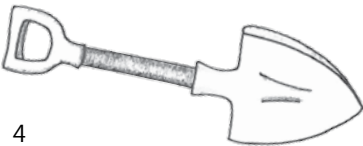
**Sandstone** – a sedimentary rock made of sand

**Sedimentary rock** – describes rocks formed from material deposited as sediment by water, wind, or ice and then consolidated by pressure

**Slate** – a fine-grained, layered metamorphic rock

**Sluice box** – an artificial channel for conducting water, often fitted with a gate

**Stamp Mill** – mill or machine in which ore is crushed to powder by means of heavy stamps or pestles



# Where is the gold?

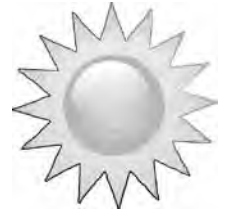
If you are going to mine for gold you've got to know where to find it.

If you take a walk outside the interpretive center you will see the beautiful Elkhorn Mountains, which are part of the Blue Mountains. The Blue Mountains are what is called a batholith which is made mostly of granite. Granite is an igneous rock that was first a huge dome of molten rock or magma below the earth's surface that was pushed to the surface and cooled down forming the rocks we see today. The surface of the Flagstaff Hill where we are standing is covered by another type of igneous rock called basalt which is formed from lava flowing on the surface and cooling.

Imagine a time before the mountains were there, and even before the time of dinosaurs. There would have been a vast sea to our west. The floor of that sea was covered with a bed of solid rocks called limestone and sandstone. They are called sedimentary rocks.



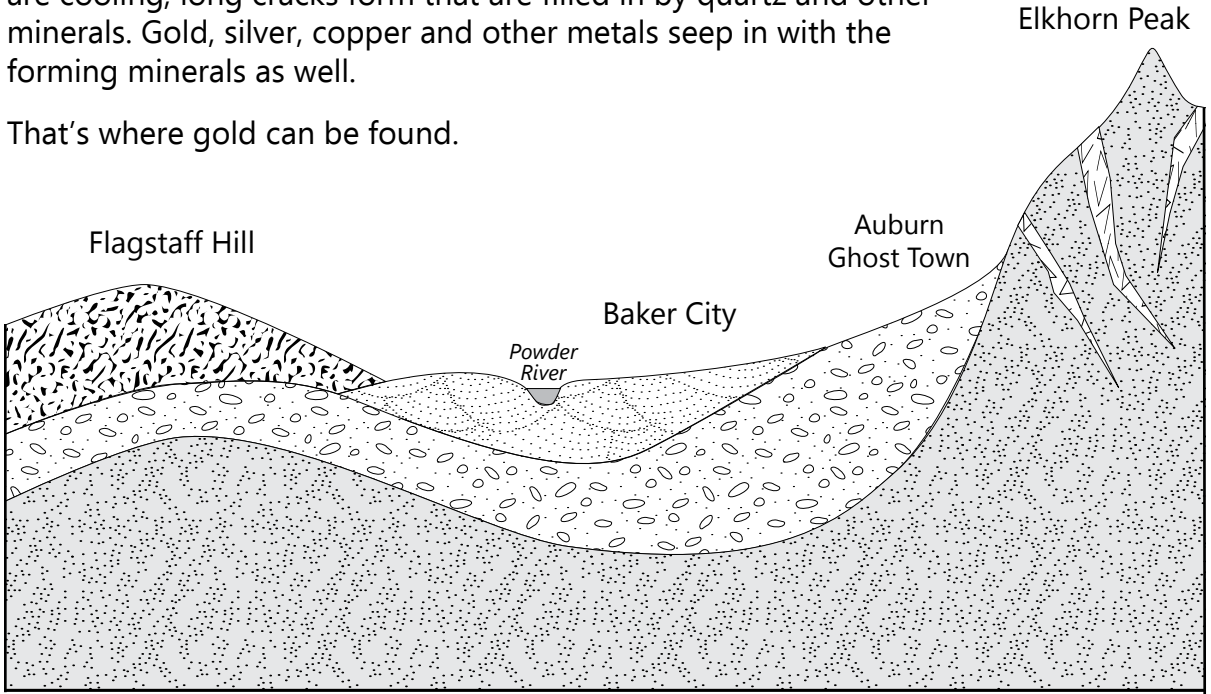
# “There’s gold in those hills...”








When the Blue Mountains began to rise, some of those sedimentary rocks were heated up and smashed between the layers of magma. They were heated up, melted, and then cooled; now they are new type rock called metamorphic rock. Some examples of this type of rock are slate and marble.

Gold is formed deep within the earth. When the sedimentary rocks are cooling, long cracks form that are filled in by quartz and other minerals. Gold, silver, copper and other metals seep in with the forming minerals as well.

That’s where gold can be found.



-  basalt
-  metamorphic rock
-  granite
-  quartz vein
-  sandy river deposits

# Find your way to the gold...

Now you know where to find your gold, but who found it here first?

You might overhear a story being told around the campfires in the mining camps of the Lost Blue Bucket Mine. Well, the story goes something like this: Back in 1845 a group of pioneers left the Oregon Trail in search of a shortcut. They got lost for days. Then, one day some folks were looking for water in a nearby dry streambed. We're not sure if they found water but they brought back some shiny yellow pebbles. The people on the wagon train thought it was copper and asked how much they found. They answered "enough to fill one of those blue buckets."

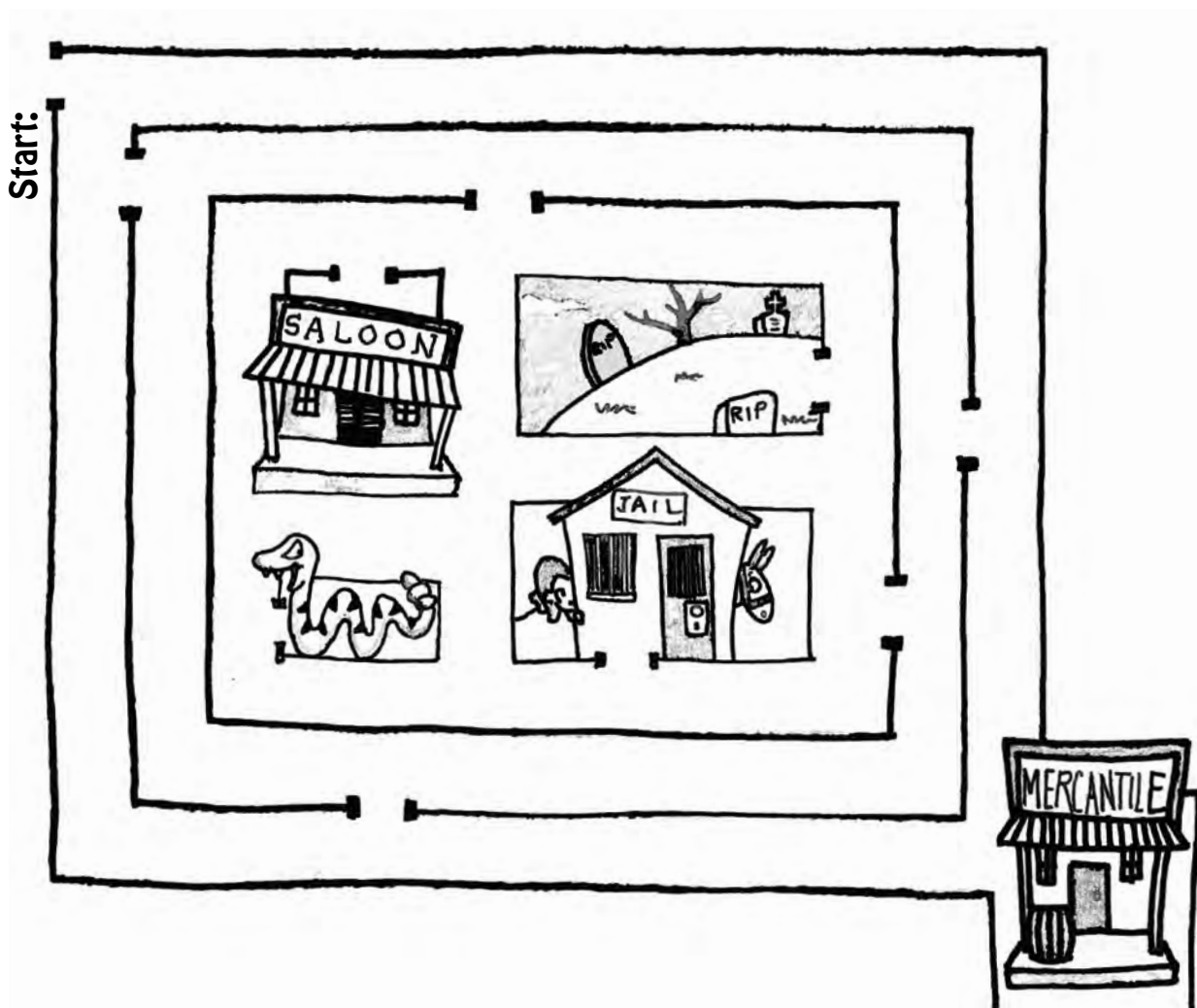
Some years later, after the big California gold rush, one of the emigrants found those shiny pebbles she had brought with her and had them identified as gold! The search for that spot where the gold was first discovered in Oregon led to the gold rush that brought your miner out here. It is known as the Lost Blue Bucket Mine, and the best part is, it's still out there. No one has ever found the rest of that gold...



# Old Auburn

The settlement of Eastern Oregon really came about because of gold mining. Towns sprang into existence overnight, and were called boomtowns. Some can still be seen today such as Baker City and Sumpter. Others are only dots on a map now where the towns used to be such as Auburn. While a few of those towns still exist but very few people still live there, we call those places ghost towns. Ask an employee or volunteer at the interpretive center to show you where these ghost towns are on a map.

See if you can navigate the streets of old Auburn to get to where you can begin your mining adventure.





# At the Mercantile

Now that you have made it to the mercantile store you are ready to get the proper equipment.

Your gear is all mixed up from the long trip out here. You'll have to unscramble the words and to get organized.



KPCI XEA



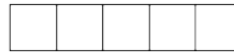
HOLVES



RETLANN



ANBOC



LOFRU



STLA



HADN WORTEL

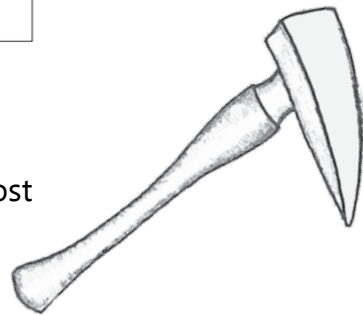
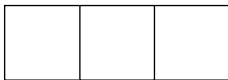


MATEGN



## Something is still missing!

Unscramble the circled words and you'll find the most important piece of your equipment.



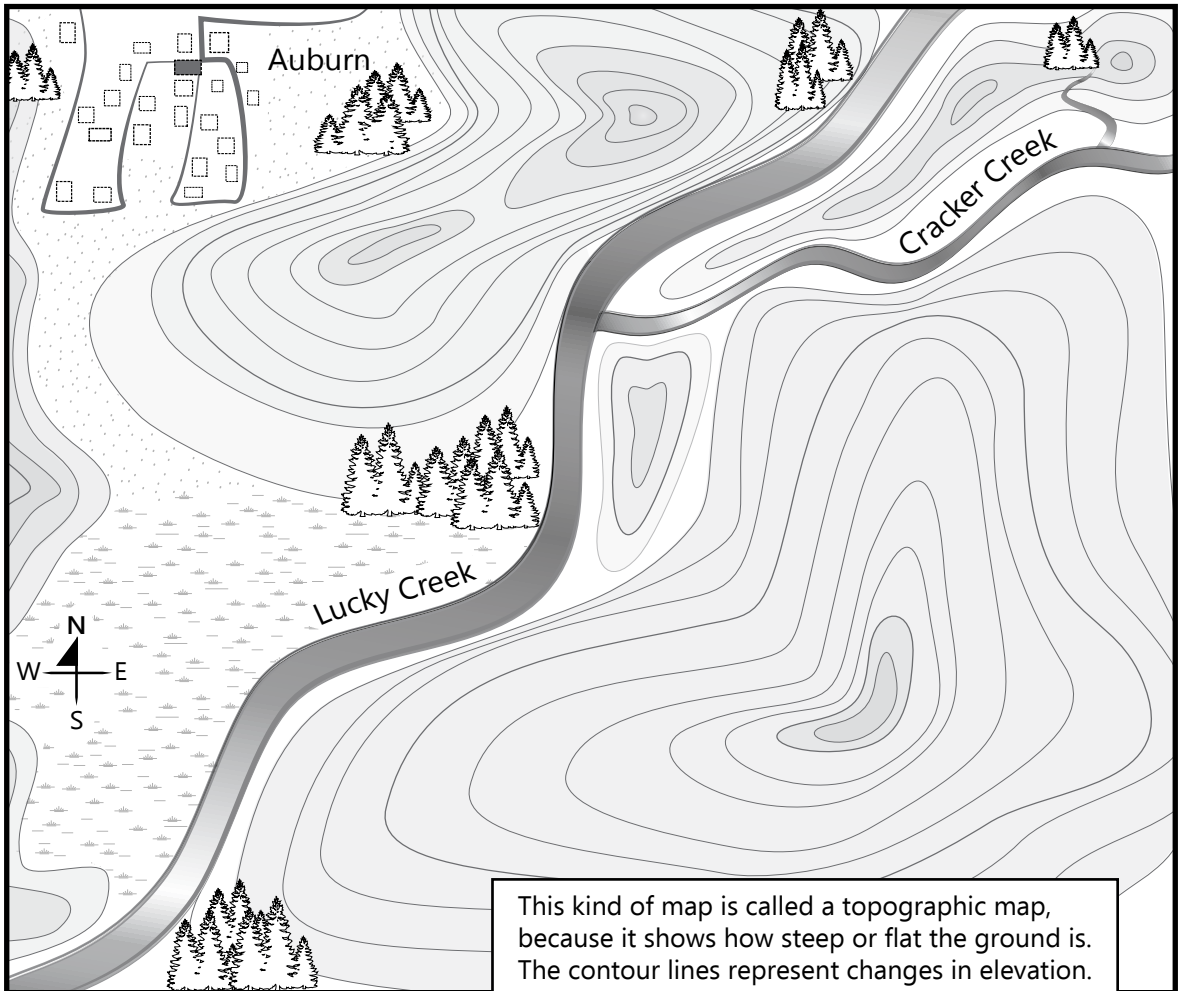
Now you're talking. With that item, you can really get somewhere.

# Map Reading

Perhaps one of the most important skills a miner can have is the ability to read a map. Can you follow the directions given to get to your claim?

**Directions** Start at Auburn and head south until you reach Lucky Creek. Cross the creek and follow the base of the hill northeast to the fork in Cracker Creek and strike your claim.

Using your pencil, draw your route on the map and then mark where your mining claim will be located with this symbol:



This kind of map is called a topographic map, because it shows how steep or flat the ground is. The contour lines represent changes in elevation. The closer the contour lines are together, the steeper the hillside is.

# Placer or Lode?



Which type of mine will work best for you?

A **placer mine** is a type of mine that is above the ground. Gold panning is the simplest way of placer mining. Since gold is very heavy it sinks to the bottom of a pan when it is in the water while the rest of the gravel washes away. However, a large placer mine can wash away entire hillsides with huge high pressure sprayers.

A rock containing metal is called **ore**, and a large deposit of ore is called a **lode**. A lode or hard rock mine digs deep into the earth and can be hundreds of feet deep with passageways branching out in all directions. Lode mining is dangerous underground work. The remnants of that type of mine can be seen here on Flagstaff Hill.

Which of these methods of mining would work best for your site?

**placer**      or      **lode**

(circle your choice)



# Test your prospecting knowledge

## Across

2. city which was built to service gold mining in eastern Oregon

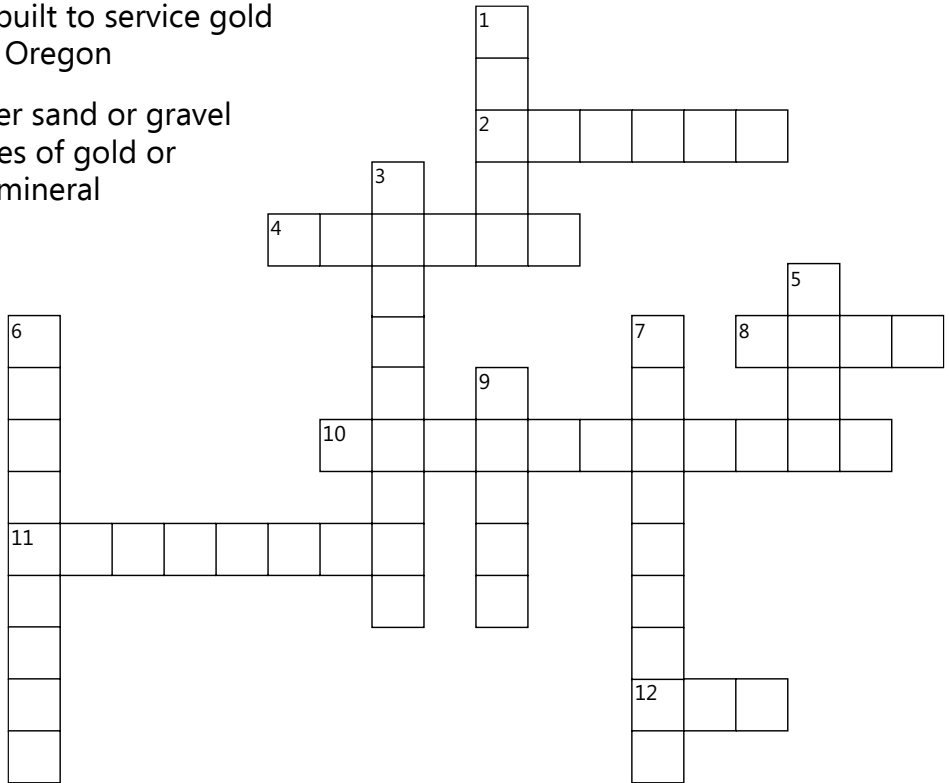
4. a deposit of river sand or gravel containing particles of gold or another valuable mineral

8. yellow metallic element that is highly valued

10. a person who seizes another's claim of land

11. an excavation undertaken in a search for ore

12. mineral from which metal is extracted



## Down

1. fine-grained, layered metamorphic rock

3. a large mass of igneous rock, composed of granite

5. a deposit or vein of ore

6. mill or machine in which ore is crushed to powder by means of heavy stamps or pestles

7. an artificial channel for conducting water

9. a person who works in a mine



# Eureka!

Your gold pan comes up with shiny yellow flecks! You have struck gold!

What are you going to name your mine? Come up with a name that all will remember and how you struck it rich at the \_\_\_\_\_mine.

Now that your mine is in operation you will be making regular trips into town to make deposits at the bank. A few miles from your mine is the newly formed town of Auburn. This community is made up mostly of miners and the businesses that serve the needs of those out in the mines. These cities were sometimes called boomtowns because they seemed to spring up overnight after gold was discovered. Sometimes boomtowns can be rough places. Using at least 5 of the words below, write your own story about your miner's trip into Auburn.

**hotel**

**railroad**

**blacksmith**

**stables**

**bank**

**dusty**

**stagecoach**

**saloon**

**sheriff**

**horse**

**music**

**Main Street**





# Get Outside!

What about the rocks on Flagstaff Hill? Do you think they have gold in them?

Take a walk outside; look and feel the rocks around the interpretive center. Use the blank below to sketch or write about a rock you found. Describe the way it looked and felt. What color was it? Do you think it could be a gold bearing rock?

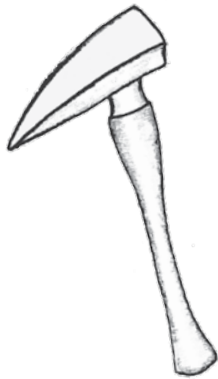
Why or why not?

Can you think of the rocks found around your home? Do you think any of them contain gold?

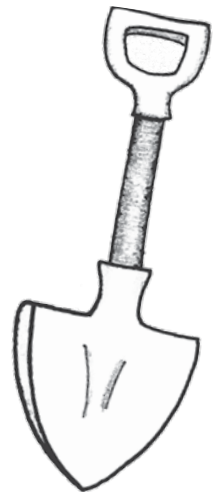


**draw a picture of where you might find gold**

# Word Search



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



axe	basalt	gold	granite	mining
ore	panning	prospector	quartz	shovel

## Conclusion

Mining is dangerous work, if you are out exploring on your own, remember to stay away from open mines. Also, mining takes a toll on the environment. If something is removed from an area such as soil from a stream it can cause significant damage. If your parents drive a few miles to Sumpter, Oregon you can see the impact of the gold dredging operations clearly from the road.

We want to take care of the world around us so be a safe and good caretaker of the land. The National Historic Oregon Trail Interpretive Center is a special place. It was created in 1992 to provide an educational and interpretive examination of the Oregon Trail Experience. Historians come to this site every year to study both the Oregon Trail as well as local and natural history.

**NATIONAL  
CONSERVATION  
LANDS**

As a Junior Explorer at the Interpretive Center you can help by exploring our nation's rich natural history, learning to read the signs of nature, and sharing your discoveries with family and friends!

# Congratulations!

You have really shown what it means to be a true Junior Prospector.

Now all that is left is filling in your Junior Prospector certificate. Take this up to an employee at the interpretive center and have them sign it to make it official.

This is to certify that

\_\_\_\_\_  
(name)  
has explored Oregon Gold Country  
on this day

\_\_\_\_\_  
(date)  
and is now a Junior Prospector.

## Junior Explorer



As a Bureau of Land Management Junior Explorer, I promise to:

- do all I can to help preserve and protect the natural and cultural resources on our public lands,
- be aware of how my actions can affect other living things and the evidence of our past,
- keep learning about the importance of nature and our heritage, and
- share what I have learned with others!

\_\_\_\_\_  
Explorer Signature

\_\_\_\_\_  
Official Signature



NATIONAL HISTORIC  
**OREGON TRAIL**  
INTERPRETIVE CENTER

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