



Learn

Explore

Protect

Railtown 1897 State Historic Park

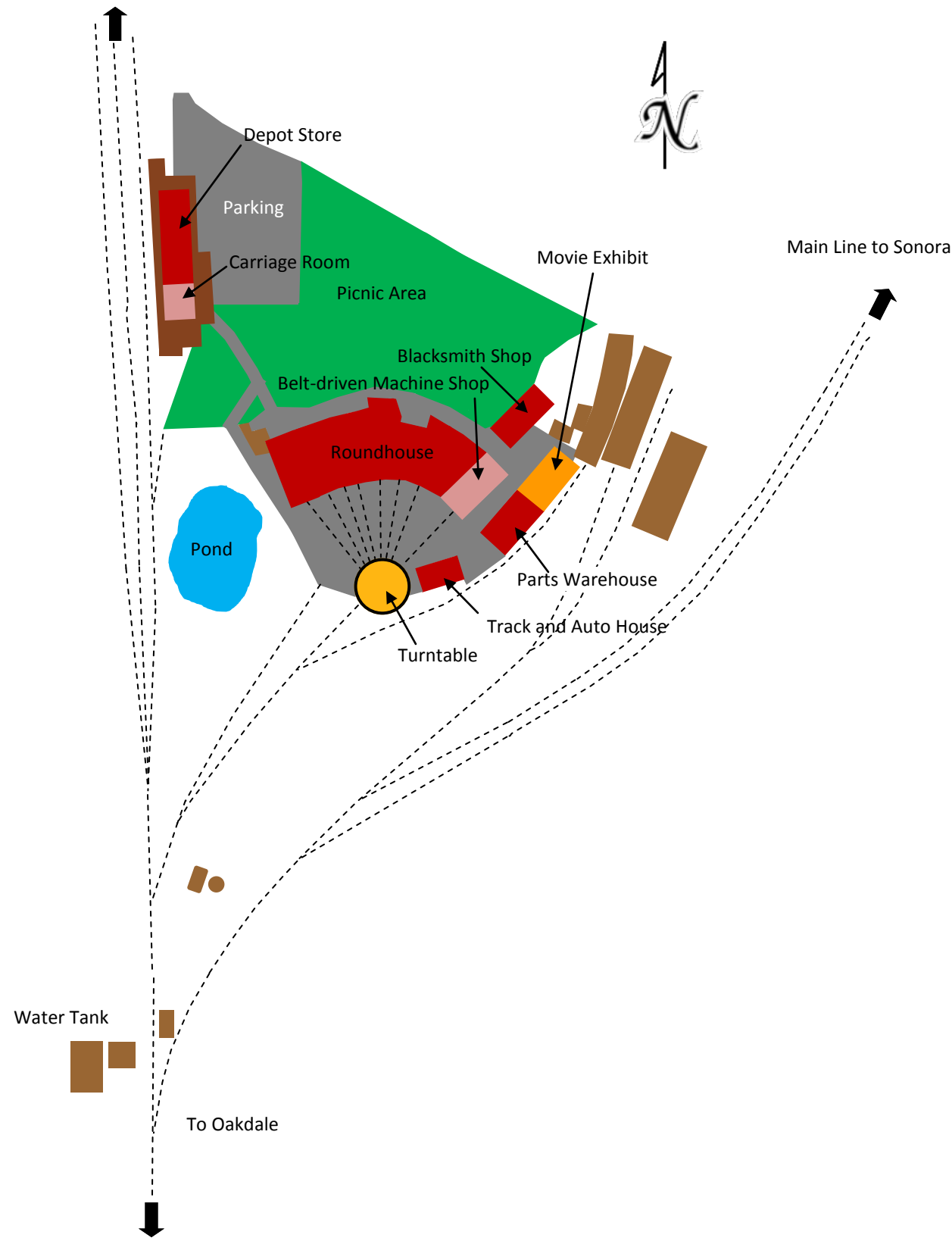
Preserving the Historic Sierra Railroad Shops and Equipment

Junior Ranger Adventure Guide



Railtown 1897 State Historic Park

Angels Branch Line
(Discontinued in 1935)



Become a Junior Ranger!

Your Name

Date

Earn your Junior Ranger award by completing the activities in this book as you explore the park. Bring your completed Railtown 1897 Adventure Guide to the Depot Store. Once you have taken the Junior Ranger pledge, you can help the hundreds of rangers who protect and care for our California state parks.

Find answers to the questions you are asked by touring the park with a guide, by reading park information or by exploring the park with your family. Park rangers and other paid and volunteer staff will be happy to help you discover the park.

Take the Junior Ranger challenge and begin your adventure today!



Railtown 1897 State Historic Park:

Preserving the Legacy of Steam Rail Travel

**Life in Tuolumne County was affected by
the existence of the Sierra Railway**

Have you ever thought about how difficult and uncomfortable it was to travel before there were cars and planes? The Native Americans had to walk or paddle a canoe or boat to travel distances. To cross the country on foot would have taken a person five to six months of difficult walking.

When the Europeans arrived in this country, they brought horses and oxen that could pull wagons and stages. This made travel and the transportation of goods easier, but it was not a very comfortable way to travel. Settlers traveling by wagon train with the supplies they needed to start a new life could expect the journey from coast to coast to take as long as walking — five to six months.

Riding in a stage was a quicker way to travel. But it was hot and dusty in the summer, cold and damp in the winter, and stages traveled along roads that were usually rutted and bumpy. The seats were uncomfortable and the stage often crowded. Food along the way was poor and it was hard to get rested. However, a person could now travel across the country in twenty-two to twenty-five days.



Traveling by stage coach was uncomfortable.

Train travel changed everything. People could now ride cross country in comfort in as little as five days by rail. Goods and products were easily transported between major cities. People who lived in relatively isolated towns were now connected to the rest of the country through rail lines.

The early steam trains and railroads played a very important role in the development of this country. Railtown 1897 State Park preserves the shops and equipment of the Sierra Railway and is dedicated to preserving this historic site not only by protecting the old engines, railcars and buildings, but by teaching and passing on the skills and knowledge of this bygone era.



Running a railroad requires many specially trained workers.

Match the job to the photo

Engineer

The engineer is responsible for keeping the steam engine running and making sure that the train travels at a safe speed.



Conductor

The conductor is in charge of the train and its crew. He inspects the cars, signals the engineer during switching operations, logs the trip, makes sure the train operates safely, and on passenger trains, checks tickets and sees to the needs of passengers.



Hostler

Hostlers ready the locomotive at the start of the day and service locomotives between runs. They are also responsible for moving the locomotives around the rail yard.



Fireman

The fireman and the engineer work as a team to operate the steam locomotive. The fireman makes sure the train has enough power to climb hills or travel at the required speed. On coal locomotives, the fireman shoveled the fuel into the firebox. Wood was tossed in by hand.



Brakeman

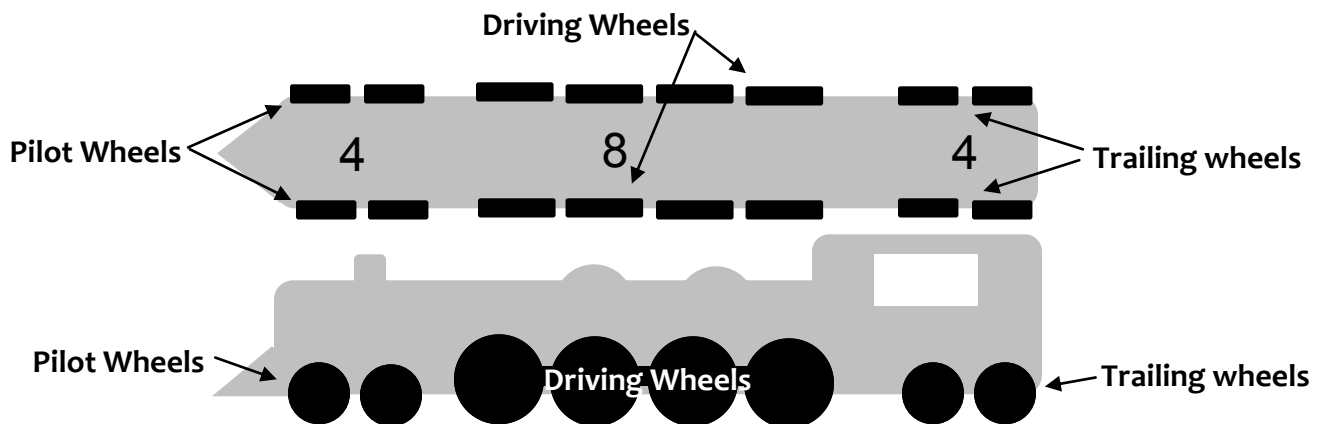
The brakeman on steam trains had one of the most dangerous jobs on the railroad. He was responsible for slowing and stopping the train. Before modern automatic air brakes, the brakeman had to set the mechanical hand wheel, brakes as the train was moving. Sometimes, when a train was going down a hill, the brakeman was required to operate the brakes from atop the moving train. Today's brakemen make sure the train cars are connected properly and that the rail switches are lined up in the right direction.



Count the Wheels

Locomotives have different numbers of wheels. You can tell the type of locomotive by counting the wheels.

For example a 4-8-4 wheel configuration is called a Northern. There are four pilot wheels (two on each side), eight driving wheels (four on each side), and the four trailing wheels, (two on each side).

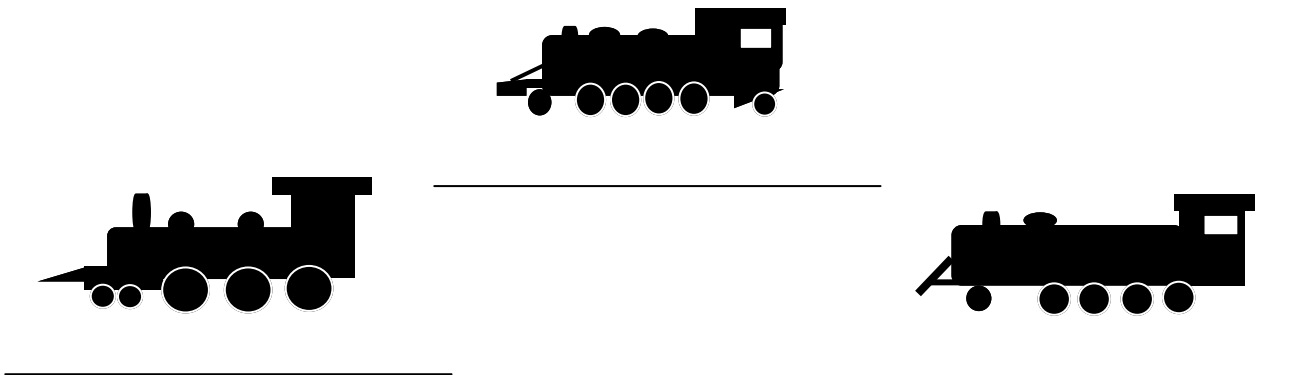


Can you match the correct wheel code with the engine shown below?

Mikado 2-8-2 The Mikado engine had good traction and handled curves well. The No. 34 is a Mikado.

Ten Wheeler 4-6-0 Ten Wheeler locomotives were very stable. The No. 3 is a Ten Wheeler.

Consolidation 2-8-0 The No. 28 is a Consolidation locomotive. They were used for hauling freight.

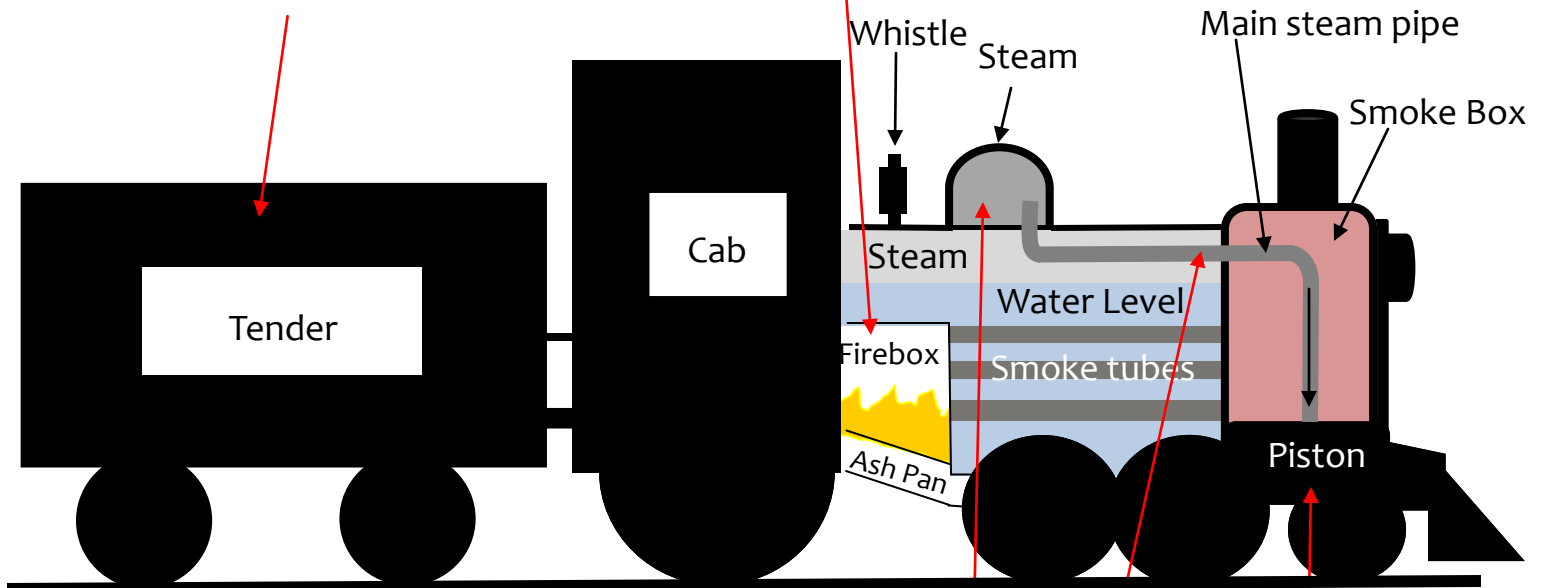


Question: The No.2 locomotive in the roundhouse is a Shay and built to bring logs out of the mountains. How is it different from the other locomotives?

How a Steam Locomotive Works

Steam engines pulled trains until they were replaced in the mid-1950s by diesel locomotives. The next two pages show how a steam locomotive works.

1. Fuel and water are stored in a special car called a tender that is pulled behind the locomotive. Wood or coal were shoveled into the firebox by the fireman. Railtown locomotives run on oil that is stored in the tender.



The firebox heats up the water in the boiler by fire and the smoke tubes heat up the water in the boiler.

2. Steam from the heated water rises into the steam dome. (Any water droplets fall back into the boiler).

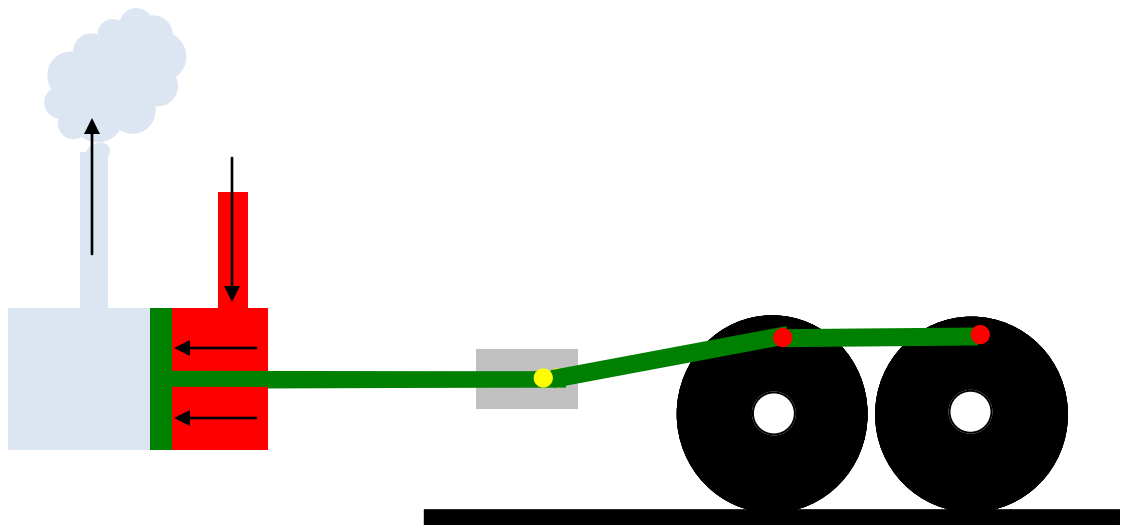
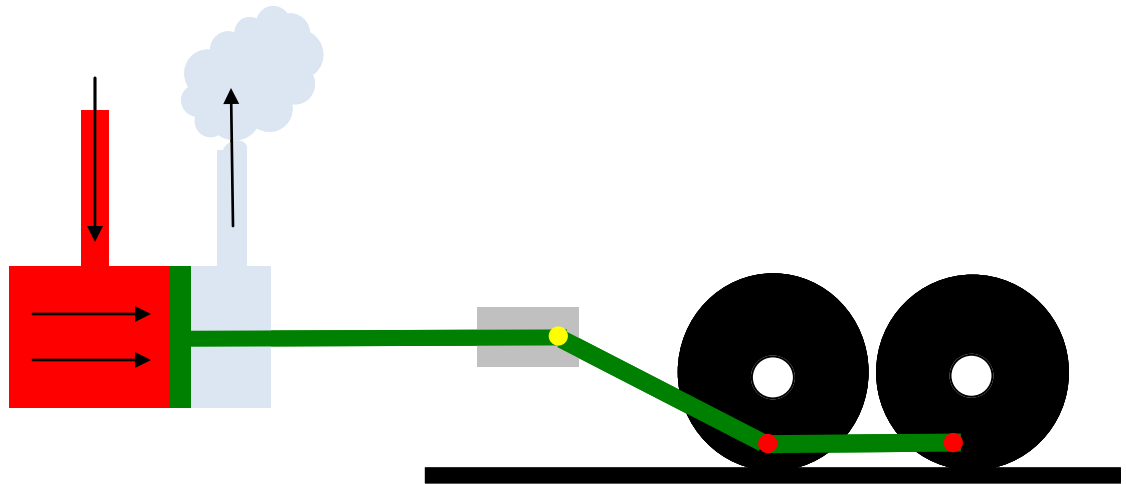
Superheated or "dry" steam moves from the steam dome through the

3. After "drying" the superheated steam moves to the piston valves.

Steam from boiler



Exhaust Steam



Can you guess why steam locomotives make a chug-chug sound?

Railroad Language

Railroad workers use horns, lights, bells and hand signals to “talk” to each other. These signals were first used more than 130 years ago before people had radios.

Train Whistles

● = Short toot

— = Long toot

— Apply brakes, stop

— — Release brakes, proceed

— — ● — Approaching highway crossing

● ● ● When the train is *stopped* it means back up. When the train is *running* it means stop at the next station.



Lanterns Colors

Red — Stop

White — Go

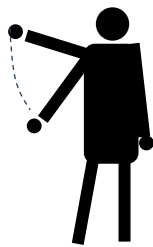
Green — Go slowly, caution

Blue — Placed on cars or objects where men are working



Hand Signals

Daytime



Caution, move slowly



Stop

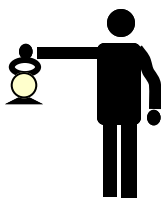


Apply brakes

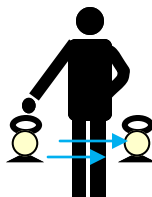


Release brakes

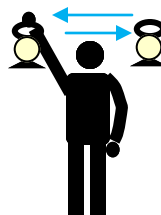
Night time



Slow down



Stop



Apply brakes



Release brakes

Can You Speak “Railroad”?



Two long toots, a short toot and another long toot means what?

A blue lantern has been placed by the caboose. What does this signal mean?



The conductor is waving a lantern back and forth above his head. What is he telling the engineer?

Keeping the Railroad Running

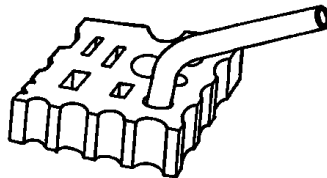
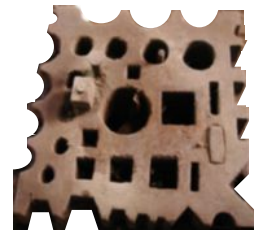
The Blacksmith's Shop

When a workman was repairing a train car or locomotive, he often needed a special tool. There would be no place nearby to purchase the tool, so the workman would draw a picture of what he needed and give it to the blacksmith. Using the forge, anvil, hammer and other equipment, the blacksmith was able to make the needed tool by heating, pounding and bending the metal into the correct shape.

London pattern anvil



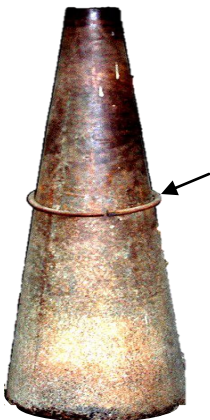
Swage anvil (also called a swage block)



Anvils were used for bending, shaping and forming metal.

This is a blacksmith's tool called a Cone Mandrel. What do you think the blacksmith made with it?

(Hint, what is this?)



Look for these tools and others in the blacksmith shop.

Repairing the Tracks

Handcars

When railroad tracks needed repairing, men and tools were transported to the site by handcars. With four men pumping the handle, the handcar could get up to a running speed of eight miles an hour. However, pumping the handle was hard work, and if the repair site was far away, the men were tired before they even began to do their work. So, track crews often set up temporary camps if they were working a long ways from home.

Collisions with trains was always a concern. The men had to watch in front and behind them in case an unexpected train was heading their way. Anytime their view ahead was blocked by a curve, hillside or vegetation, the handcar would be stopped and a worker would walk ahead to make sure the track was clear. Handcars were replaced by motorized speeders around 1910.



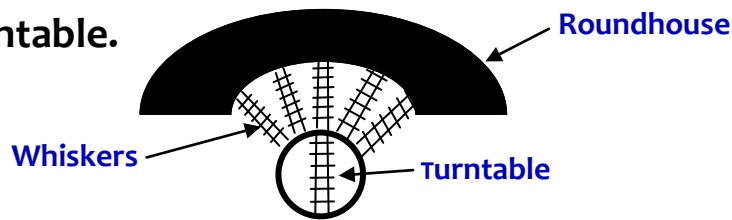
Velocipedes

Velocipedes are three or four wheeled hand cars that were propelled by a single person using a push-pull movement of the arms and legs. They only traveled in one direction, so they would have to be picked up and turned around for the return trip. They were used by track inspectors, bridge inspectors, telegraph line repairmen and signal maintainers.



The Roundhouse

The roundhouse is where the locomotives, rail cars, and the tools and equipment needed to repair them are stored. Outside the roundhouse a series of tracks lead from each stall to the turntable. These tracks are called “whiskers.” The roundhouse is “round” because it is situated around the turntable.



The Turntable

The turntable is a very important piece of equipment. It is sixty feet wide and uses compressed air to rotate it. The turntable is needed to get locomotives and cars from the roundhouse stalls to the main track. The original turntable was smaller and as engines got bigger, the Sierra Railroad needed a larger turntable.



Questions:

Why is the roundhouse built in an arc?

The original turntable had no motor to move it. It was called an “armstrong” turntable. How do you think it got this name?



HOBO, THE SIERRA RAILWAY DOG

Just like people, some dogs enjoy taking rides on trains. The Sierra Railway had its own railroad rover. His name was Hobo and he was a young dog when he arrived in Jamestown with his owner, Station Agent F.T. Boyd. Hobo was not a dog that was content to stay at home; he liked visiting new places and meeting new friends. Whenever he became bored, Hobo hopped on a passing train and got off wherever he felt like. When he grew tired of one place, he boarded a train and moved on, eventually returning to his home in Jamestown. Hobo didn't like the hot summer temperatures. So when the weather turned warm, he would make his way to the mountains. He would spend his summer vacation at Strawberry, returning to his railroad friends in the fall.

It seems everyone who met Hobo loved him and made sure he was cared for. There was always a bone or a treat when he came around for a visit, but it was the railroad men that Hobo was really fond of, and they of him.

Railtown Scavenger Hunt

As you walk around Railtown, can you find these tools and equipment?
Check the box below the photo when you spot the object.

☐

Chain

Useful for a variety of purposes.

☐

Locomotive Bell

Used to signal when train is moving

☐

Shop Stove

Used for warming work areas on cold days

☐

Smoke Stack

Different smoke stack shapes served different purposes. This one is for wood burning engines.

☐

Metal Roller,

Used to shape sheet metal

☐

Leaf Spring

A simple form of spring often used for suspension in wheeled vehicles such as trains.

☐

Train Tires

The replaceable portion of train wheels

Funny Train Jokes

Q: What is the angriest piece of track?

A: A cross tie

Q: What is the difference between a school teacher and a steam locomotive?

A: The school teacher tells you to spit out your gum, while the locomotive says “Choo Choo Choo!”

Q: Why is the railroad angry?

A: Because people are always crossing it!

Q: Why can't the engineer be electrocuted?

A: Because he is not a conductor!

Q: Why can't a steam locomotive sit down?

A: Because it has a tender behind!

Q: How can you tell a train just went by?

A: Because it left its tracks

Take the Junior Ranger Pledge

I, _____, promise to:

- Treat the earth and all living things with care and respect.
- Be careful of what I do and how it affects others.
- Learn about the importance of nature and our heritage.

Once you have finished all the questions and activities in this Railtown 1897 Adventure Guide, you are a Junior Ranger! Bring your Adventure Guide to the Depot Store to get your California State Parks Junior Ranger Award.

Congratulations!

*Has completed the Railtown 1897 Junior Ranger Adventure Guide
and is now an official Junior Ranger for California State Parks and
has pledged to be a friend to nature and a keeper of history.*

State Historic Park

Date



Staff Signature