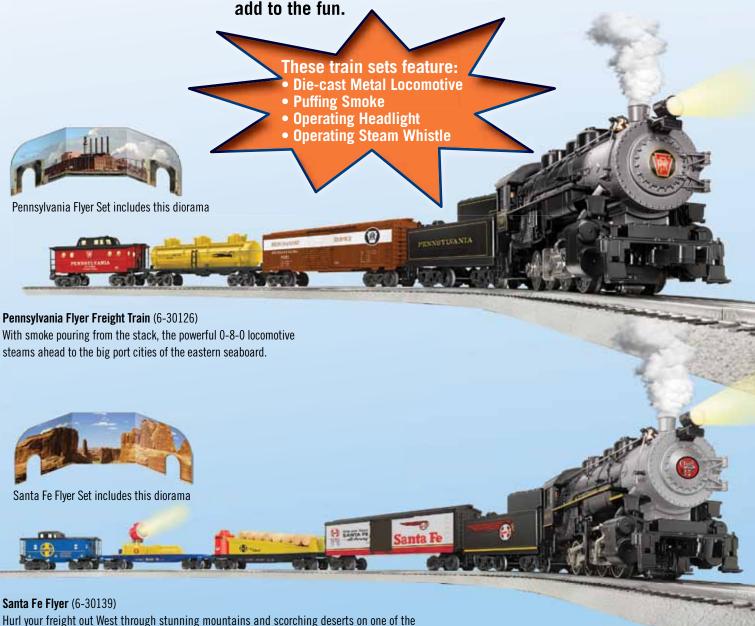




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Angela Pusztai-Pasternak TRAINS4KIDS editor Mom of a kid who likes trains

On the cover A diesel locomotive and a steam train (inset). Photo illustration, Tom Danneman; inset, Alex Mayes



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# What is it like to be an amount of the second of the secon

Locomotive
engineer Casey
Thomason
tells us what
he does and
why he likes
trains

by Angela Pusztai-Pasternak

Engineer Casey is inside the cab of his locomotive. He wears safety glasses and earplugs when he works.

### Q What is an engineer?

A As an engineer, I operate a locomotive. I move trains full of goods over railroad tracks. Other engineers take people where they need to go. I also have to get my train where it needs to go on time. Most importantly, my job is to be safe.

#### Q Where do you work?

A I work for Norfolk Southern railroad in Georgia. It is in the southeastern part of the U.S.

#### Q What's your workday like?

A Actually, I work at night. Every day, my railroad tells me when and where I need to show up. Then, they tell me what I need to haul and where I need to take it. I get on my engine, and make sure it's working well. I run trains to Birmingham, Alabama. Once I arrive, I rest. And, finally, my railroad calls to tell me to bring a train back to Columbus, Georgia.

# Q How old were you when you became an engineer?

A I became an engineer when I was 21 years old.

# Q What's the best part of being an engineer?

A The best part is knowing that I became an engineer. I wanted to be one since I was in kindergarten.

# Q What's the worst part of being an engineer?

A I work long hours. At 3 in the morning, I would rather be at home in bed. But when I was a kid, I would have loved to run a train at night!

# Q Who works with you on the train?

A My conductor handles everything except operating the train. We work long hours together. We have become good friends. I see him more than I see my family.

# Q What type of freight do you carry on your train?

A I haul many different types of raw materials, like rock, paper, chemicals, and wood chips.

# Q What is fun about being an engineer?

A I am in control of a big train. One of the hardest parts is stopping the train where you want it to stop. Anybody can make the train run, but stopping it is the real challenge.

# Q What one word describes the type of engineer that you are?

A I am determined. I can think of times when other engineers would have given up. But instead of stalling on a steep hill, I keep my train going. Sometimes, I think I'm running out of time to get my train where it needs to be. But I get it there. I stay focused on my job. That's being determined.

#### Q Why do we need engineers?

A One train can carry up to 150 loads of rock a day. If semitrucks carried all of that rock on highways, there would be lots of traffic. Also, the weight of the semitrucks would damage the roads. Trains also use less fuel than semitrucks. We need engineers to keep trains moving. Using trains to move goods instead of semitrucks helps the environment.

# Q How did you become interested in railroading?

A My dad liked trains. He took me to watch them near the railroad tracks. He was a newspaper photographer. I learned from him how to take pictures of trains. When I was a kid, I used to wave to the engineer. The engineer would blow his horn. Now, I blow the horn in my locomotive for kids when they wave to me!

# Q What have you learned from being an engineer?

A I've learned how to be patient. I don't know many people who can sit for hours and do nothing. But waiting for a train to arrive will get you used to doing just that! I might be waiting for another train to go past me. I might be sitting next to the tracks waiting to take the perfect train photo. Or, I might be waiting for paint to dry on my model railroad project. No matter what, I definitely need patience for trains!

#### Q What do you do for fun?

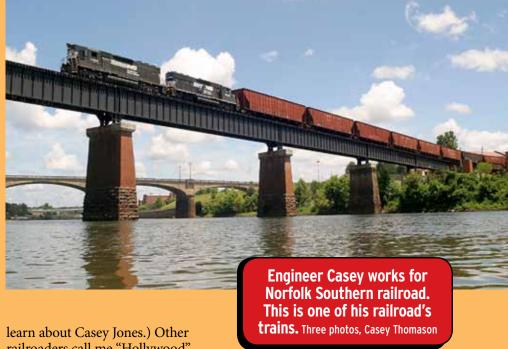
A I like to go fishing and bike riding with my kids. I have three kids. Noah is 2. Michael is 4. And, Hayley is 6. I also like to work on my N scale layout. My kids and I like to go to railroad museums, too.

## Q What is your favorite food?

A I love smoked pork barbecue!

#### Q Do you have a nickname?

A My parents gave me the nickname "Casey." My middle name is Luther. The famous locomotive engineer, Casey Jones, has the same middle name as me. (See "He Loved Locomotives" on pages 14-21 to



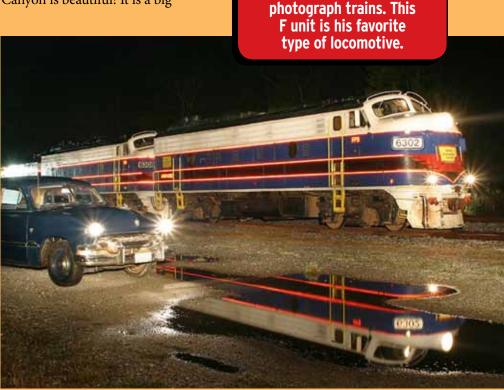
railroaders call me "Hollywood" because I like to change my hairstyle. Some call me "Cap'n Crunch" because I can eat a whole box of cereal in one workday!

#### **Q** Why do you like trains?

A There are many reasons why I like trains. They helped me to learn about the U.S. I wanted to go to the Grand Canyon Railway in Arizona. It is in the southwest. If I didn't go there, I would have never seen the Grand Canyon. The Grand Canyon is beautiful! It is a big

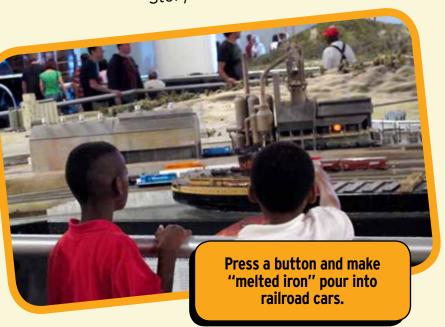
rocky cliff with a river going through it. Riding trains gets you out into the world. It's more fun than playing video games. I've taken a lot of trips to see different railroads. Because of that, I learned a lot about American history. And, I learned how to read maps, take pictures, and camp.

**Engineer Casey likes to** 



You can watch trains roll across the U.S. in just one day and standing right next to the tracks

Story and photos by Angela Pusztai-Pasternak



hether it's the fastest roller coaster around or the latest video game to hit stores, you want to ride it or play it, right? Let's take a look at America's coolest model railroad layout, and see where it takes you.





The museum is huge. You might not see everything you want in one visit. Go back again!

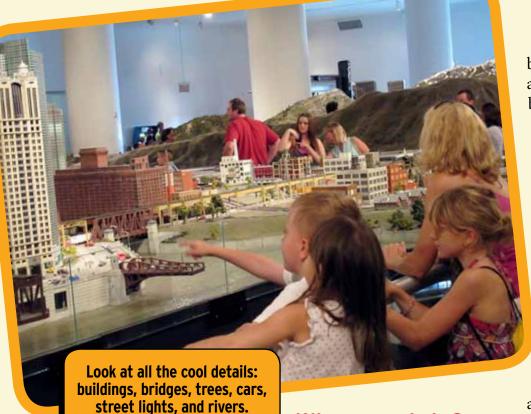
The model railroad layout shows a big part of the U.S. in miniature (from top). It shows containers full of goods and a hamburger shop, too.

## What is it?

The Museum of Science and Industry in Chicago, Illinois, has an awesome model railroad layout. It shows you how trains take people where they want to go. It also shows you how trains haul raw materials, like grain, to factories. It is in HO scale, which is the most common size. The model railroad cost \$3.5 million to build. The museum named it "The Great Train Story." Thirty trains run on 1,425 feet of track. The model shows how trains travel from Chicago in the Midwest to the country's far west corner in Seattle, Washington.

You can buy museum tickets at www.msichicago.org. Be sure to check for free admission days!





# How did they build the model?

The model train layout took 40 people more than a year to build. The buildings and mountains were made in Chicago. Artists in North Miami Beach, Florida, constructed the trains and electrical controls. Teams worked on the same parts at the same time by using a computer program. This gave the artists the exact sizes they needed to work from.

Photographers took hundreds of photos for modelers (people who make model railroads) to look at when making the buildings. You can see a model of Chicago's Willis Tower (once called the Sears Tower), the tallest skyscraper in America. The layout also has a model of the Space Needle in Seattle. In real life, it is 605 feet tall and has a restaurant in it.

### What can I do?

Even though you can't touch the trains, there are spots around the layout with buttons to press. Each button causes a different action on the layout. There are seven actions you can make happen by pressing a button.

- Blast a tunnel through a mountain
- Help lumberjacks cut down trees
- Make a crane move shipping containers onto a barge
  - Blow a ship's whistle
- Make a drawbridge open and close over a river
- Pour melted iron into torpedo railcars
- Stop a Chicago commuter train so riders can get on.

There's a lot to see on this model railroad layout. You'll find mountain climbers, a hamburger shop, an apple orchard, a school bus, and people at the beach. The layout has nearly 200 buildings and 30 bridges.

### Where can I eat?

There's so much to see at the museum, you'll be there a while. You'll probably get hungry. You can bring your lunch or buy food at the museum's Brain Food Court.

When you're done eating, be sure to look for the "Swiss Jolly Ball." It is a pin ball machine with a giant metal ball that travels

around it. The ball rides a toy steam engine and a pretend electric locomotive. As it makes its way around, the ball makes bells ring, whistles go off, and lights flash.

# What else can I do at the museum?

The worst part about the model railroad layout is that you can't touch it, except for the buttons. Have no fear! Other train stuff surrounds the layout. There's a part of a Pennsylvania Railroad steam locomotive cab right next to the model railroad layout. You can sit right where an engineer or a fireman once did. It has some of the knobs, levers, and gauges you'd find in a real steam locomotive. (Learn how steam engine parts work on the pull-out poster on page 23.)



The museum has a real train inside of it, too. You can take a pretend ride on the Pioneer Zephyr. It is a passenger train that was once the world's fastest at 100 mph!

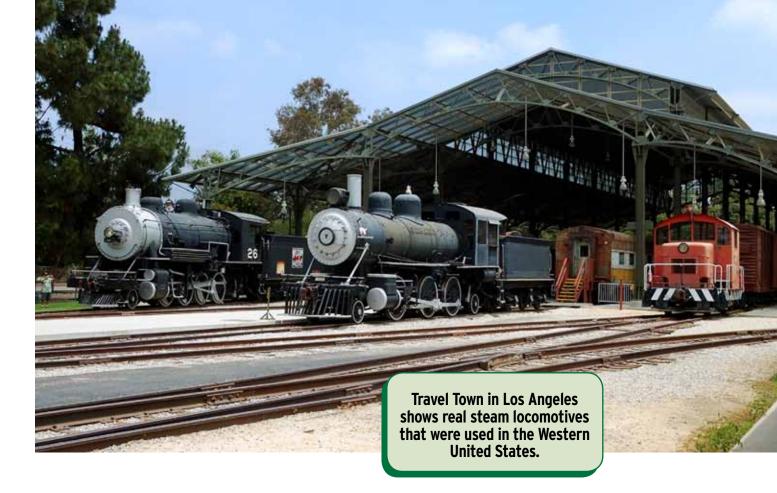
Another fun thing to do at the museum is take a makebelieve coal mine tour. You get to ride a work train and see how coal is mined. The tour will tell you how coal was mined in the past and how it's done today.

and Industry is open daily. Have your parents call 800-GO-TO-MSI or go to the museum's website, www.msichicago.org, to plan your trip. •

Plan your day around the coal mine tour and the Pioneer Zephyr experience.







ave you ever wondered what it would be like to be a locomotive engineer? Or a conductor on a passenger train? One of the best and most fun ways is to visit a railroad museum. One museum, Travel Town, is located in Griffith Park in Los Angeles, California.

For people who like trains and want to know what they look and feel like up close, this is the place to be. Travel Town allows visitors to look at and explore railroad equipment of all shapes and sizes. You can climb on locomotives and

even sit in the engineer's or fireman's seat. That gives you an experience as close as possible to what real railroaders do. You can be where the train crew once worked. You can think about how the engineer pulled the throttle to make the engine go. Or think about how the crew made sure the water and fire were just right to make steam power.

At Travel Town you can explore more than a dozen steam engines, two diesel locomotives,

# mains

Climb onboard and explore railroad history

Story and photos by David Lustig



PAVEL

two trolley cars, and a motorcar along with many freight and passenger cars. The museum also displays old cars and trucks.

A part of the City of Los Angeles' Department of Recreation and Parks, Travel Town started in 1952 as a place to experience everyday objects from our past.

There are many kinds of steam engines. They are given names by looking at their wheels and seeing how they move. Travel Town's first steam engine was Southern Pacific No. 3025. It is called a 4-4-2. It has four guide wheels, four drivers or powered wheels, and two support wheels. It was designed to pull fast trains. Travel Town has other locomotives, too. The engines are from other big railroads. Their names are Santa Fe, Union Pacific, and Western Pacific. Travel Town also has engines from small railroads called short lines.

You'll also find a locomotive from the Pacific Electric. The Pacific Electric ran streetcars that carried people and electric trains that hauled goods. The railroad operated in Southern California.

Other museums have this, too.

Travel Town and other railroad museums display locomotives and railcars so people can see what the U.S. was like many years ago. You'll see some of these railcars that the locomotives pulled. Some are boxcars and tank cars that carry goods. Another type is a caboose, where the train crew rode. You'll see passenger cars called coaches, where people took rides. There are special cars like diners where riders could eat breakfast, lunch, and dinner. And, Travel Town has sleepers where passengers once slept

while the train moved. Think about your bed moving up to 79 mph while you sleep!

The museum has volunteers that clean the locomotives and train



cars. That way everyone can enjoy them for a long time. Kids as young as 14 can volunteer.

but it's worth it!

Travel Town is also a great place to sit and have a picnic lunch at one of the many tables. You can bring your own food or get snacks and drinks there. You can also wander through the gift shop loaded with train clothes, souvenirs, magazines, and costumes. Thomas the Tank Engine is also on display on the first Sunday of every month. Museum workers on weekends answer questions about the locomotives and train cars. And one day each month, Travel Town has a big tour to tell all about each piece of equipment. The museum has a special area for young children, too. Kids can hear train stories and play games.

Railroad museums are all over America. See our "Information box" to the right to help find one near you. Take a trip back in time to the days when steam ruled the rails. •

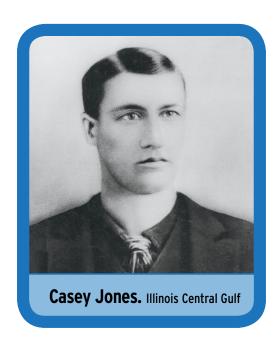
# Information box

Travel Town is located at 5200 Zoo Drive in Los Angeles, 12 miles north of downtown in Griffith Park next to the 134 freeway at the Forest Lawn Drive exit. For more information, call 323-662-5874 or visit www.traveltown.org.

Railroad museums are easily found across the nation. Here are a few ways to find them. Go to our website www.Trains.com/Trains4Kids for a list of museums and website links. Also, the Association of Railway Museums and the Tourist Railway Association Inc. keep lists of museums and scenic railroads with operating trains. Visit www.railwaymuseums. org or www.traininc.org today!

# He loved locomotives

Casey Jones, the brave engineer, became an American hero

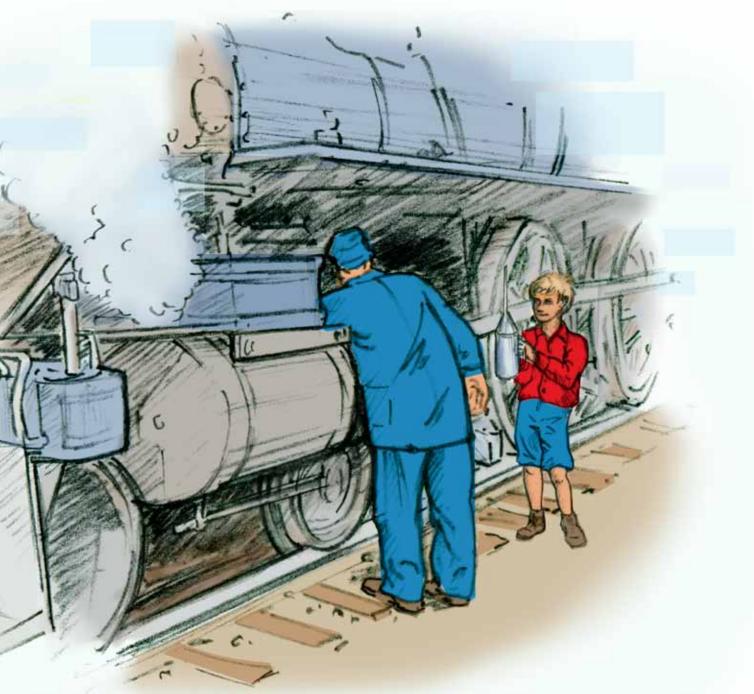


Story by David P. Morgan Illustrations by Jay Smith

ohn Luther Jones loved locomotives.
He was a farm boy in Cayce,
Kentucky. He liked to watch trains.
He would wait until a freight train
on the Mobile & Ohio Railroad pulled up to
the water tank for a drink. John liked to watch
the fireman leave the engine cab and climb
over the engine. The fireman would move the
water spout to fill up the engine's tank. John
would also watch the engineer. The engineer
would oil the engine with a long-necked can.
John was always right behind the engineer. He

would look where the engineer looked. He would see the glistening steel of the pistons and the big driving wheels. He'd ask questions. How fast would the engine go? Who built it? Sometimes the engine crews would laugh at him. But mostly they would explain it all to him. They would tell John about everything from safety valves to headlights.

John Luther Jones wanted more than anything else in the world to be a locomotive engineer. He wanted to sit on the right-hand side of the locomotive cab.



When he was 16 years old, he collected all of his money — one hundred dollars. Then he rode a train into Columbus, Kentucky.
Columbus was a big junction town 14 miles away. In Columbus, the Mobile & Ohio Railroad taught him how to be a telegrapher. He learned Morse code, which was a way of sending messages before there were telephones. Railroaders used Morse code to talk to each other. John also did lots of tasks around the station and railroad yard. He filled the water keg for steam engines to fill up with water. He

also helped to load farm animals on to trains. He learned a lot about how to run a railroad. It was a new world to him. And, he loved it.

A while later, John got married. Then, he became a steam locomotive fireman. His fellow railroaders gave him a nickname. They said there were too many John Joneses. What he needed was a more distinctive name.

"Where do you come from?" asked one. "Cayce, Kentucky," replied John.

"Then that's it. We'll call you Casey. Casey Jones!" another railroader said.

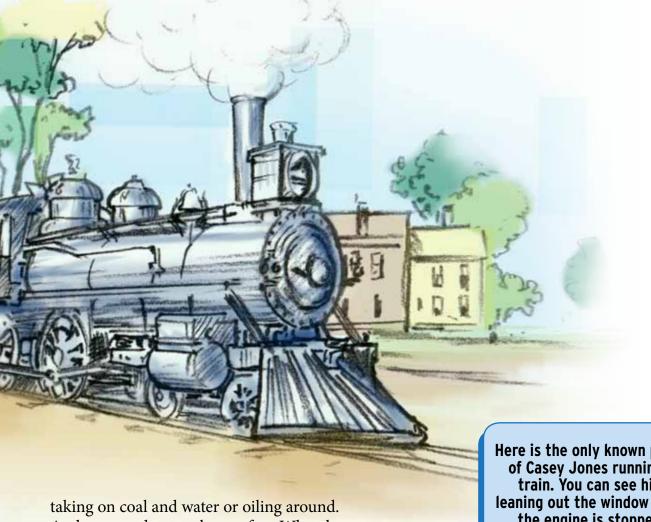


n February 1890, when he was 26 years old, John Luther "Casey" Jones got what he wanted more than anything else in the world. He was promoted to an engineer. He had quit the Mobile & Ohio two years earlier and hired out as a fireman on the Illinois Central Railroad. Now his dream had come true.

As a youth, Casey had sworn that he would

be more than just an engineer. He would be the best. He received the same joy from his work, and put as much into it, as an artist or a lawyer or a doctor. He managed to get his train over the road on less coal and to stop fewer times for water than other engineers.

His special zest was speed. For one thing, he did not waste time. He never dawdled while



And once under way, he ran fast. When he was at the throttle, the train was always on time.

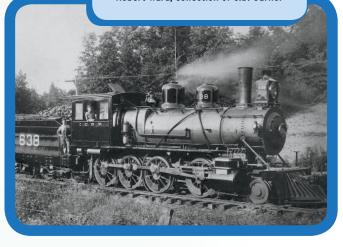
On New Year's Day, 1900, Casey was assigned to the fastest run on the railroad, the high speed passenger trains between Chicago and New Orleans. The railroad men called these trains "Cannonballs." Each way the schedule allowed about five hours, including stops and taking water, for the 188-mile sprint from Memphis, Tennessee, south to Canton, Mississippi. The railroad was single track, and there were no signals. An engineer was expected either to make the time or to make way for someone who could. No excuses accepted.

Some of the older engineers refused this run because they were afraid of derailing the train on a curve. It took nerve. Too much nerve, some men thought. But the speed and the rough track did not bother Casey. He loved a challenge. He was eager to make good where others had failed.

Of course Casey Jones made good. He was daring, but never foolish. He knew each bolt and nut in his fast, new engine, Ten-Wheeler

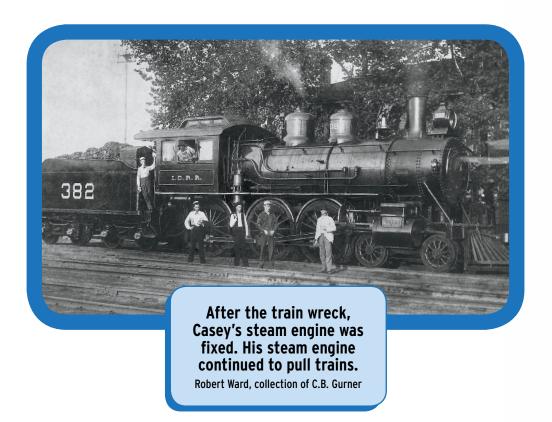
Here is the only known photo of Casey Jones running a train. You can see him leaning out the window while the engine is stopped.

Robert Ward, collection of C.B. Gurner



No. 382. Casey knew just when to apply the air brakes a bit to steady the 382 as it raced into a curve, and just where the throttle could safely be left wide open to gain speed. Casey knew every foot of the railroad his train ran over. He memorized each switch, each trestle, each curve, and just how much speed each was good for.

He was born for such a run.



t 12:35 a.m. on April 30, 1900, Casey Jones left Memphis on the Cannonball. The train was an hour and a half late. Casey turned to his fireman, Sim Webb.

"If you keep the old girl hot, Sim, we'll put her into Canton on time."

"I'll keep her hot," Sim replied.

Soon, the land flew by at 70, 80, even 90 miles an hour. The engine's whistle sent a haunting call across the Mississippi Valley. People heard the whistle and marveled. It could only be Casey Jones and the Cannonball. No other engineer would be running so fast.

But just 14 miles away, two long freight trains had arrived at the town of Vaughan, Mississippi. Casey would have to stop there and wait while the freight trains rolled by him.

Then: clump, bang! A coupler pulled out of a freight car, the air hoses broke apart, and brake shoes suddenly grabbed at the wheels, stopping the train. The caboose and last three cars of one freight were stuck on the main line!

Casey was approaching fast. He had made up almost all the lost time. A sweeping curve to the left took the tracks into Vaughan. Casey could not see ahead. Sim Webb moved to the left side of the cab to be Casey's "eyes."

Suddenly, Sim saw the two red marker lights of the freight train's caboose. He yelled to Casey.

"There's something on the main line!"

An ordinary man might have frozen in fright. Or jumped for safety. But Casey Jones jumped to his feet, twisted the brake valve on, and pulled on the whistle cord. He shouted to his fireman: "Jump, Sim, jump!"

Sim slid down the handrails and hit the dirt. Just then, engine No. 382, its brakes shooting out sparks, plowed through the caboose and on into a car of hay, a car of corn, and almost through a car of lumber. The tender tore loose, jumped sideways across the track, and the mail car behind climbed up on top of it. The engine ground to a halt, its cab stripped away, steam pouring from its boiler. Casey lay near a driving wheel, the whistle cord clutched in his lifeless hand. At 3:52 a.m. John Luther Jones, age 36, had run his last mile.

The passengers were frightened, but they were alive. So was Sim Webb. Casey's bravery had saved everyone else.



here were many train wrecks in 1900. In the month of April, during which Casey met his death, there were 27 other rear-end collisions alone in the United States. Other good men gave their lives. Sometimes the accidents were far worse than the one at Vaughan, Mississippi. Yet Casey Jones was remembered and the others were forgotten.

Why was Casey Jones remembered? Why is he the most famous engineer of all?

Well, Casey had a friend in Canton, a cinder-pit attendant named Wallace Saunders. Wallace had always been on hand when Casey's engine arrived. He would see that its ashes were dumped and its fire properly cleaned. Casey always had a smile and a cheerful word for the faithful roundhouse worker. Wallace mourned Casey's death. As he went about his work, he began to hum a tune about a brave engineer. Slowly he added words to it.

Other men started singing the song, and it spread quickly through the Mississippi countryside. Finally a publisher heard of it and printed it. That was in 1902. The music was now heard in a hundred theaters. It became a part of every vaudeville act, a must at every community song fest. All across America, and in foreign countries too, people wrote their own songs about a brave engineer who had run too fast and rammed the Cannonball into a freight. Few people who heard and sang the famous melody actually thought of Casey as a real man. They thought that the verses were fiction, made up by some songwriter. To them Casey Jones was not one but all brave engineers who had ever died with one hand upon the throttle.

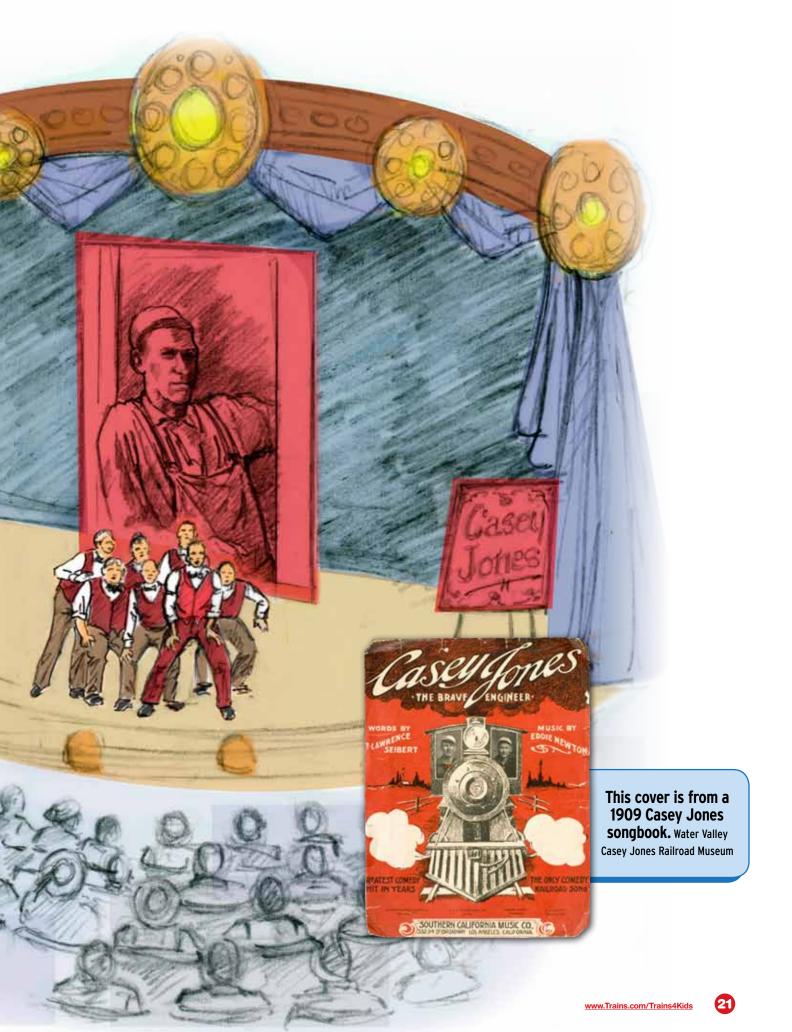
So it was that the farm boy from Cayce, Kentucky, grew up to be the most famous railroad man of all time. He still is, even though more than a century has slid by since that awful night in April 1900.

As long as there are locomotives and men to run them, there will be John Luther "Casey" Jones.

DAVID P. MORGAN was the editor of Trains magazine from 1953 through 1987. This story is condensed from a children's book he wrote in 1954 called "True Adventures of Railroaders."



Burl Ives
Carl Sandburg
Eddy Arnold
Grateful Dead
Joe Hickerson
Johnny Cash
New Christy Minstrels
Pete Seeger
The Robert DeCormier Singers



# Railroad Word round-up



hen you work for the railroad, you work in all kinds of weather. Train crews work on hot, sunny days. They work on trains that go through the desert. Look at the long freight train above. That Union Pacific Railroad train is going through the Arizona desert. Circle the words about railroads below. Look up, down, across, back, and diagonally.

## WORDS:

**BRANCH** BRIDGE CAB **CATENARY** COMMUTER COUPLER **CREW** CROSSBUCK **CURVE** DERAIL DIAMOND DIESEL **ELECTRIC ENGINE EXPRESS FIREMAN FLYER FLYOVER** GRADE INTERMODAL LOCAL **MANIFEST PASSENGER** RAILROAD SIGNAL **SPUR STEAM** TICKET TIES **TRACK** 

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TRAINSHED TRESTLE

TURNOUT YARD

# full steam ahead!

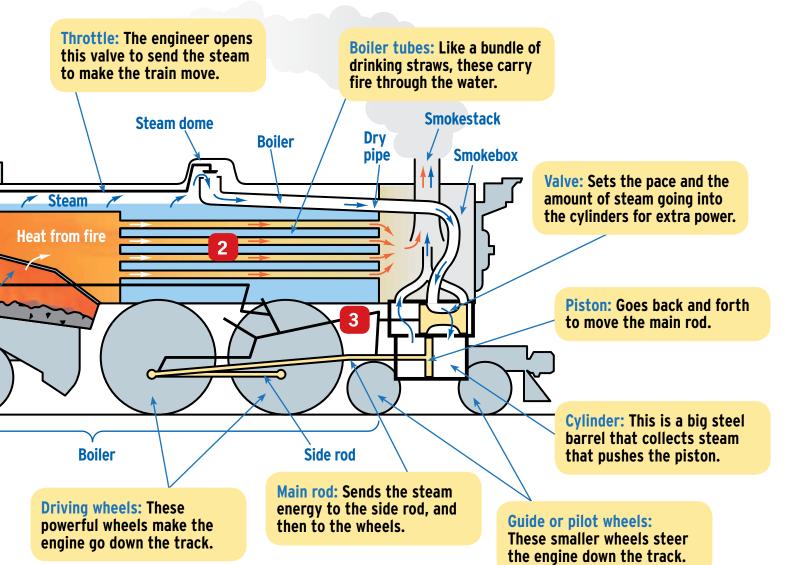


Illustration by Rick Johnson



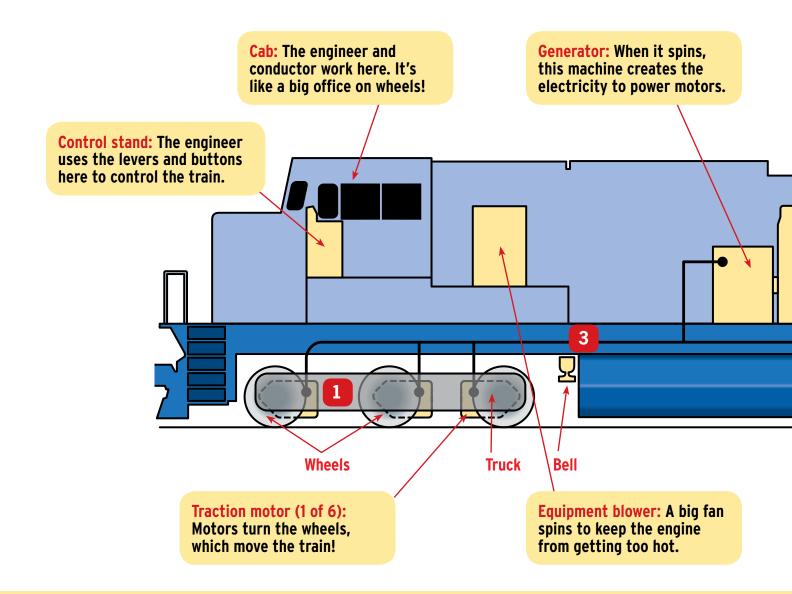






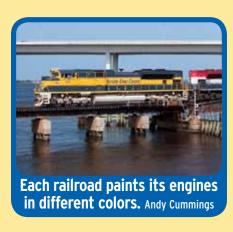
# How at estimates

Diesel fuel + a big engine +









# a generator = pulling power!

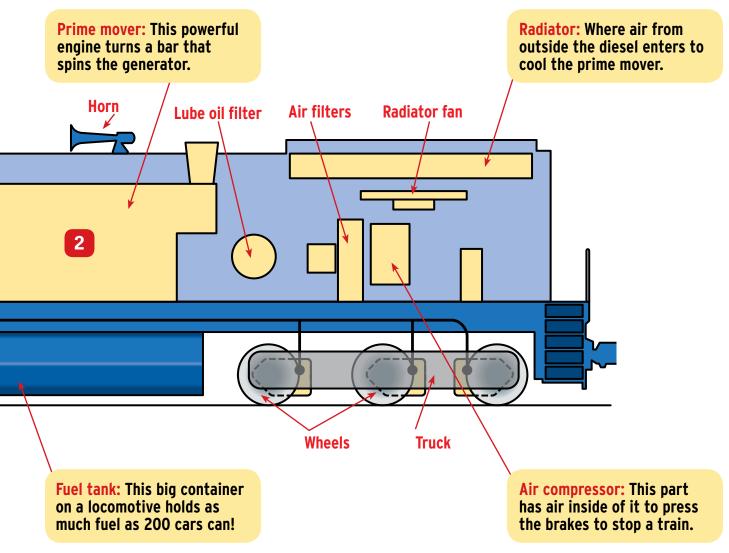


Illustration by Rick Johnson



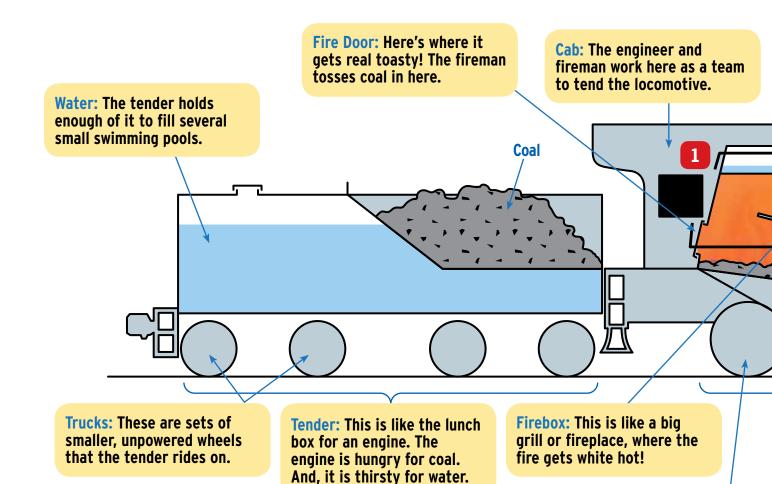






# How asteam

Fire + water =



Steam locomotives come in many colors, even blue!





Trailing truck

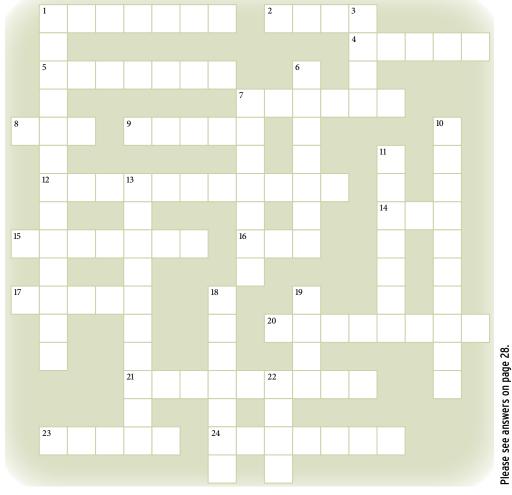


The place where a railroad crosses a street is called a grade crossing. That's where you need to *Stop*, *Look*, and *Listen* to see if a train is nearby. Then, if you don't see or hear a train, you can cross safely with a grown-up.

See if you can solve this crossword puzzle and learn more about railroading.

### Across

- 1. The part of a train where railcars connect
- 2. Abbreviation for Burlington Northern Santa Fe
- 4. Railroaders use this to talk to one another
- 5. Canada's passenger railroad
- 7. This small "lip" on the inside of a wheel helps it stay on the tracks
- 8. A rock that can be melted into iron
- 9. Part of the railcar that rolls on the rails
- 12. Two railcar boxes stacked on top of each other
- 14. Abbreviation for Railway Post Office
- 15. Railcar that looks like a bathtub and carries metal or rocks; also the name of a type of boat
- 16. Abbreviation for Association of American Railroads
- 17. Like a huge nail that keeps rails attached to ties
- 20. Most freight locomotives are diesel-
- 21. When open, it lets air pass between cars' brakes. When closed, at the end of a train, it keeps air in.
- 23. A set of tracks has two
- 24. Place to buy a train ticket and board a train



#### Down

- 1. Railcar with a cover that carries grain
- 3. Special track used when trains turn onto another route; also the name of a green animal that hops
- 6. Railcar that looks like a tube with round ends and carries liquids
- 7. Railcar that is flat and carries really big things and wood
- 10. The engine or part of a train where the engineer sits
- 11. A test to make sure a train's air brakes work
- 13. What rail is called when it comes apart; this kind of rail can make a train go off the tracks
- 18. Special rocks next to and between railroad tracks
- 19. Abbreviation for American Locomotive Co.
- 22. Trains move this black rock; also something you don't want Santa Claus to give you

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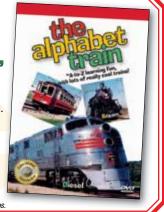
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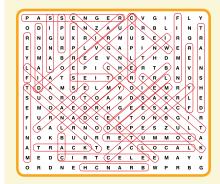


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# **Answer key**

## Railroad word round-up, page 22



## Cross with care, page 27



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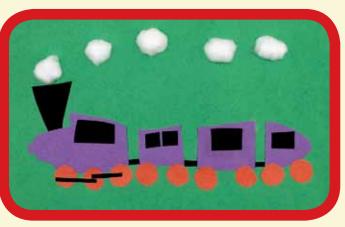
# A yardmaster puts together trains, and so can you!

This is the biggest hump yard in the U.S. (top). A yardmaster works at a computer. Matt Van Hattem; inset: Jim Wrinn

yardmaster puts railcars together to make a train. He works at the hump yard. A hump yard has a big hill and lots of tracks. At a hump yard, a locomotive pushes railcars up a hill. Then, the railcars slowly travel down the hill onto their right tracks. Next, the yardmaster matches a locomotive with a line of railcars. Finally, the train leaves the yard to go wherever it needs to go. Union Pacific Railroad has the world's largest hump yard (above). It is in the Midwest in North Platte, Nebraska. You can pretend to be a yardmaster. Follow the directions below to make your own train. — *A. Pusztai-Pasternak* 

# "Arm" train craft

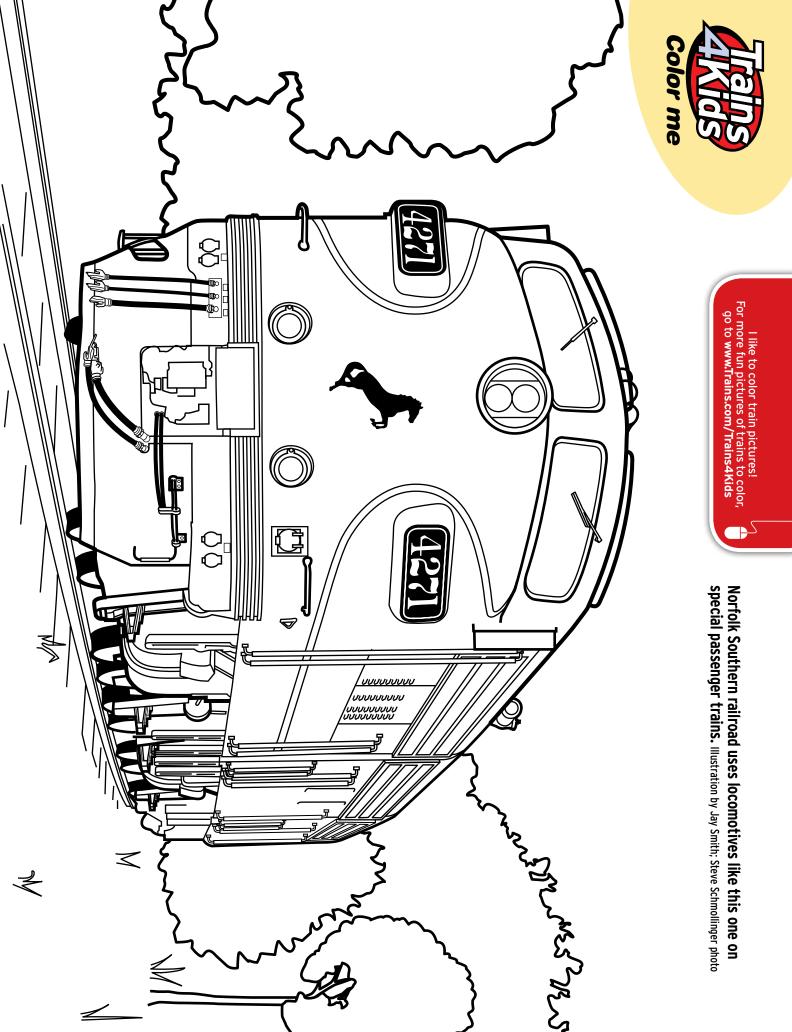
- **1.** With your palm down, put your hand and arm on a big paper. Keep your fingers together. Have someone trace around your hand and arm up to your elbow. Cut it out.
- **2.** Cut off the hand part to make the engine. Make two more cuts to the arm part to make railcars. Glue the engine and railcars in a row on the other large paper.
- **3.** Draw and cut out 9 circles from scrap paper for the wheels. Glue them to the bottom of the engine and cars.
- **4.** Draw a triangle on black paper for the smokestack. Draw 5 squares on black paper for the windows. Cut them all out. Glue them to the train.
- **5.** Cut 2 strips of black paper to connect the wheels. Cut 3 more strips to connect the cars as shown. Glue them on.
- **6.** Glue cotton balls near the smokestack.
- **7.** Decorate your train even more! You are the yardmaster. Make your train special!



You will need:

- 2 pieces of 12 x 18-inch construction paper in 2 different colors
- Scrap construction paper (1 in black and 1 in another color)
- Cotton balls
- Glue or glue stick
- Pencil
- Scissors

Project idea from www.thebestkidsbooksite.com







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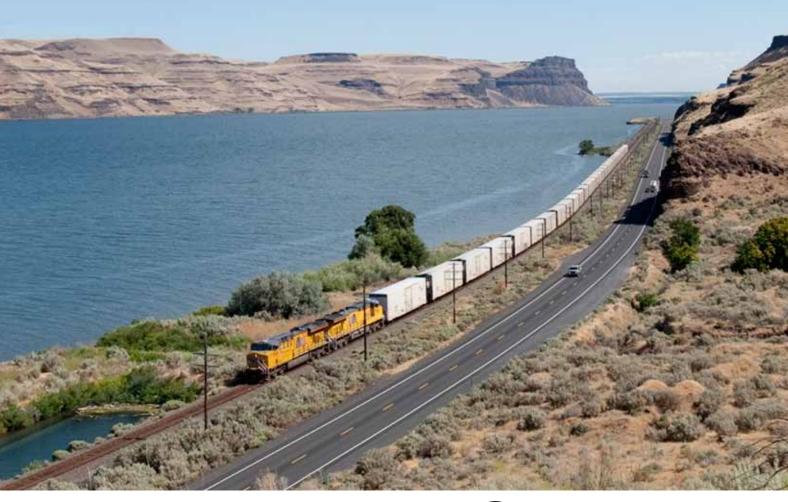




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Special trains run across America carrying fruits and vegetables from West Coast farmers to East Coast grocery stores

By Brian Solomon



id you know that your favorite fruit may have taken a train ride before it reached your dinner table?

Depending on where you live, and what kind of fruit you like, that piece of fruit may have indeed gone for a very long train ride on a very special kind of train.

Railroads have special words for the different types of freight they carry. Fruit is called "perishable freight." Railroads know they must move perishable freight quickly and carefully. Compare fruit with coal. Coal is like rocks. It can sit in a freight car for days and weeks, in all kinds of weather. Coal can get bumped around or shaken without any damage. But you wouldn't want to eat an apple that has been sitting out in the heat, or has been bumped, dropped, and squished, would you? No! So when fruit, vegetables, and other

perishable freight go by train, they ride in special boxcars called refrigerator cars.

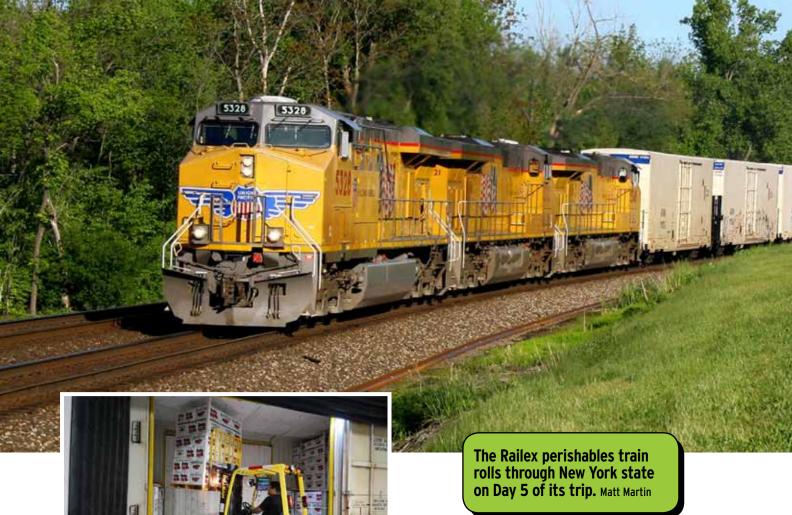
Do you have a refrigerator in your house? Well, think of a refrigerator car as a giant refrigerator on train wheels. It is so big that men drive forklifts inside the car to load and unload it.

The door to the refrigerator car is 12 feet high! You can easily find these cars on a freight train. They don't look like other freight cars. They are often painted white or bright yellow. This is to let the sun's rays bounce off the car. That helps keep the food inside of it cool. Dark colors such as brown and forest green absorb light and heat, making the cars hot. They aren't good colors to paint refrigerator cars.

Some trains carry only refrigerator cars.

These are special trains that run on special schedules. They move fruit and vegetables from the farms where they





A forklift driver in California is loading boxes of fruit into a refrigerator car. David Lustig

are grown to faraway grocery stores. Trains move these groceries quickly, safely, and at up to half the cost of trucks.

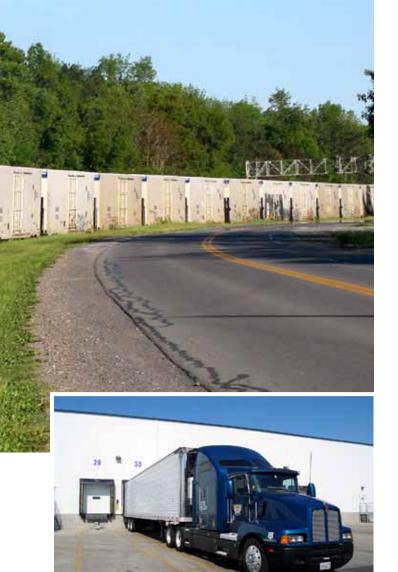
## **Cooled and ready to eat**

Where do different fruits come from? That depends on where you live and the time of year. Apples and pears are grown in Washington, Oregon, and California. Citrus fruit such as oranges are largely grown in California, although some come from Florida, too.

Is your favorite fruit an apple? Washington state is famous for its apples. The funny thing

about Washington apples is that even though they are only picked in September and October, you can enjoy them all year long. That's because after they are picked they are "put to sleep" in special refrigerators called "controlled atmosphere coolers" until shipping time. By keeping apples and other fruits at just the right temperature, they can sleep all year long until it's time for them to ripen.

What does this have to do with apples riding on a train? Well, when an apple rides a train all the way across the United States, the journey takes five full days. During this time the train must cross mountains, deserts, and farms. In all of these places it can get really hot. If the apples on the train became too warm, they would begin to ripen too soon. They might even go bad before anyone ever gets to eat them. To keep apples from going bad, the refrigerator cars are kept at just the right cold temperature. That temperature is usually 34 degrees



Fahrenheit, just above the freezing point. At 32 degrees water freezes and turns to ice. Each type of fruit has its own perfect temperature. Oranges and other citrus fruits travel at 38 degrees, just a bit warmer than apples. Cantaloupe melons are kept at 33 degrees, even cooler than apples.

A truck brings California crops

to this warehouse for loading

onto the train. David Lustin

Five days on a train

If fruit has only a short distance to go from where it is grown to where it is eaten, then it usually goes by truck. But when fruit has to go all the way across the



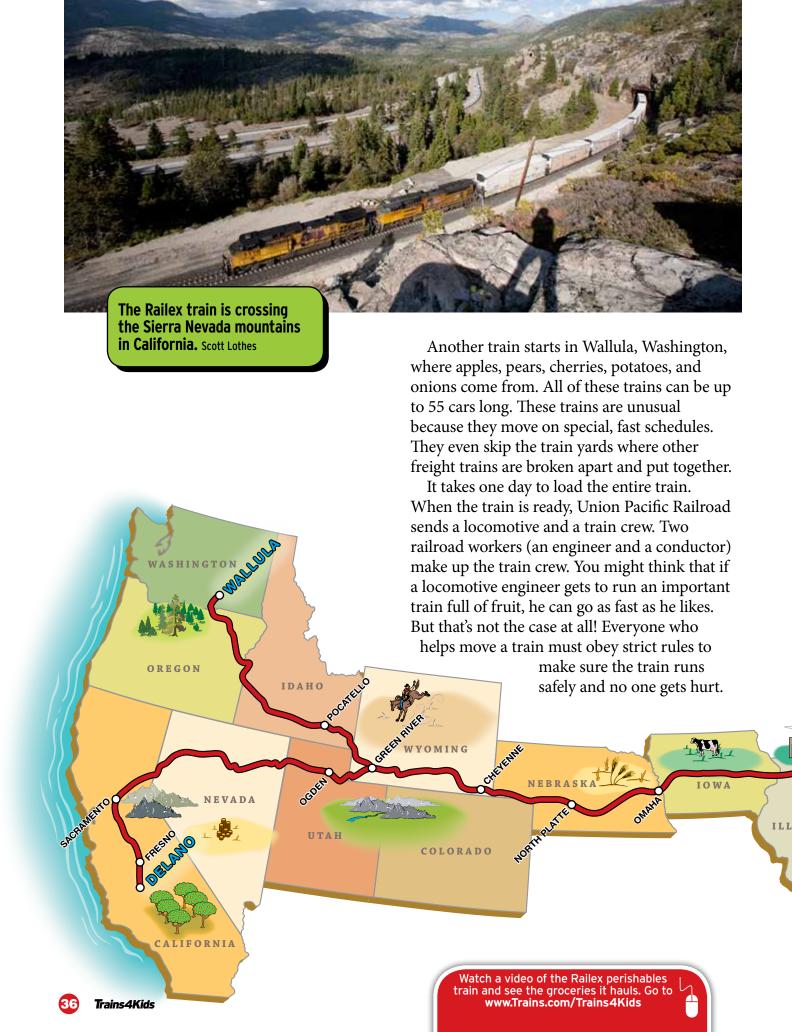
will ride a train soon. David Lustig

country, a train ride may be the best way to send it. Each refrigerator car can carry about three or four trucks of fruit. How much is that? Well, one big refrigerator car can hold about 3,000 cases of apples. Each case carries about 72 apples. That means each freight car holds as many as 216,000 apples. That's a lot of apples! If you ate 10 apples every day, it would take you almost 60 years to eat them all! But remember, that's only one refrigerator car. Some trains carry 50 to 80 refrigerator cars at a time, filled with apples, pears, lemons, grapes, oranges, peaches, melons, carrots, tomatoes, broccoli, potatoes, and more!

One company called Railex fills up an entire train of refrigerator cars three times a week. Its train moves fruit, vegetables, and other

perishable freight across the country. Two of the trains start in Delano.

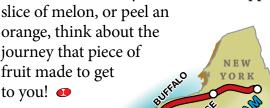
California, part of California's Central Valley, where lots of fruit and vegetables are grown.



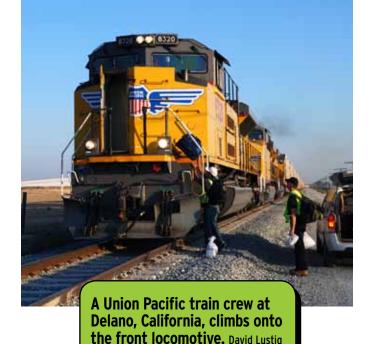
This includes the engineer and conductor on the locomotive. It also includes the train dispatchers in Omaha, Nebraska, who control the signals and switches all the way to Chicago, and the railroad workers along the line who repair the tracks and signals. A five-day trip is way too long for one train crew to spend in the locomotive. Every couple hundred miles, a new crew takes over. This is sort of like a big relay race. Each crew runs the train for a half-day or so.

On its journey east, the train crosses mountains in California, deserts in Nevada and Utah, wide-open plains in Wyoming, and farmland in Nebraska, Iowa, and Illinois. At Chicago, a big city where lots of railroad lines come together, Union Pacific hands over the train to another railroad called CSX Transportation. To save time, Union Pacific's locomotives stay on the train. Then the train passes through farms and forests in Indiana, Ohio, a little bit of Pennsylvania, and most of New York state. Finally, the train arrives at a big refrigerated warehouse in Rotterdam, New York. It takes one full day to unload the train. Then trucks deliver the fruit and vegetables all across the Northeast for people like you to enjoy.

So the next time you bite into an apple, eat a



NDIANA



These food items ride the Railex perishables train from <b>Washington</b>	
Apples	Nursery plants and trees
Carrots	Onions
Cherries	Pears
Frozen foods	Potatoes
Frozen french fries	Rhubarb
These food items ride the Railex perishables train from California	
Artichokes	Honeydews
Asparagus	Kiwi fruit
Broccoli	Lemons
Cantaloupes	Nectarines
Carrots	Onions
Cauliflower	Oranges
Celery	Peaches
Cherries	Plums
Garlic	Pomegranates
Grapefruit	Potatoes
Grapes	Tomatoes
These food items ride the Railex perishables train from <b>New York</b>	
Bananas	Juice
Clementines	Oranges
Grapefruit	Yogurt

# You've got a ticket to ride

If you would like to ride a train in your town or somewhere else, here's how

By John Diers

Your family can take a short train ride for just a few dollars. But what if your town has no train station? What can you do? You could ride a train on your next family vacation. Or better yet, take a long train trip for your next vacation. Let's go!

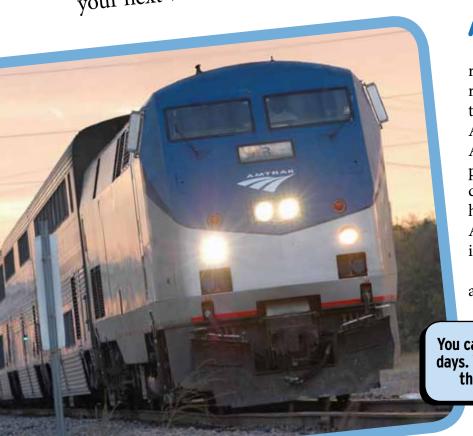


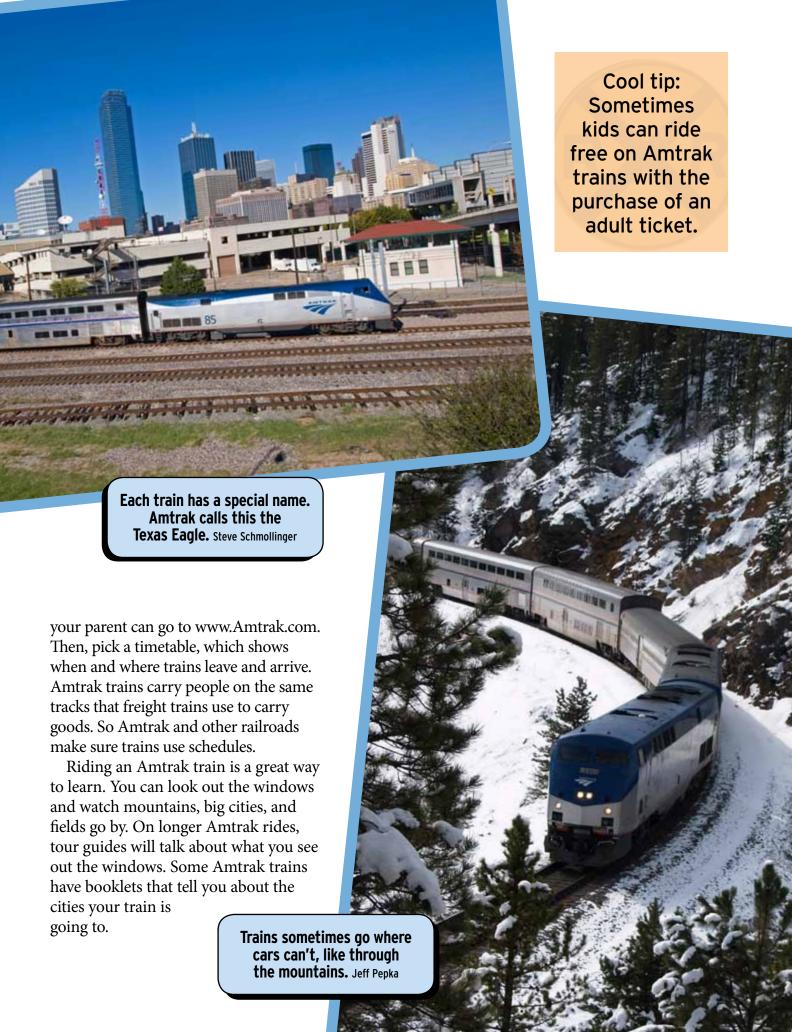
#### **Amtrak**

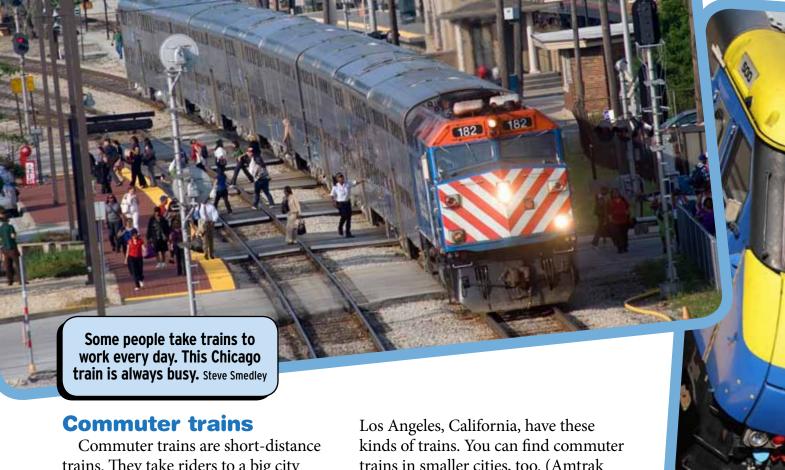
In the U.S., we have one big passenger rail network called Amtrak. Some trains run for just a couple of hours. Other trains take days to go across the country. Amtrak trains go between cities all over America. Many of these trains have places to eat called dining cars. The dining cars have foods like french toast, hot dogs, and chicken tenders. Some Amtrak trains even have cars with beds in them, which are called sleeping cars.

If you and your family decide to ride a train, you can plan your trip. You and

You can ride Amtrak trains for days. You can sleep and eat on the train. Steve Schmollinger







trains. They take riders to a big city from smaller towns nearby. People take commuter trains to go to work, go shopping, watch sports games, and

more. Big cities like Chicago, Illinois; New York, New York; and

trains in smaller cities, too. (Amtrak also has some commuter train rides.) You can easily find a commuter train to ride by searching online. Type in a city name and "commuter train." It is a fun train ride that doesn't cost much.



#### **Tourist railroads**

More than 50 years ago, steam engines pulled passenger trains. Now, diesel locomotives pull most trains. But you can still ride a steam train for fun. Tourist railroads across America have regular steam train rides. Other railroads and groups run special steam train trips. The excursions, or rides, happen throughout the year. Have your parent go to www.traininc.org to find a fun steam train ride for you.

Enjoy the sights and smells of a steam train. Ride one at a tourist railroad. Alex Mayes



## Light rail, subways, and more

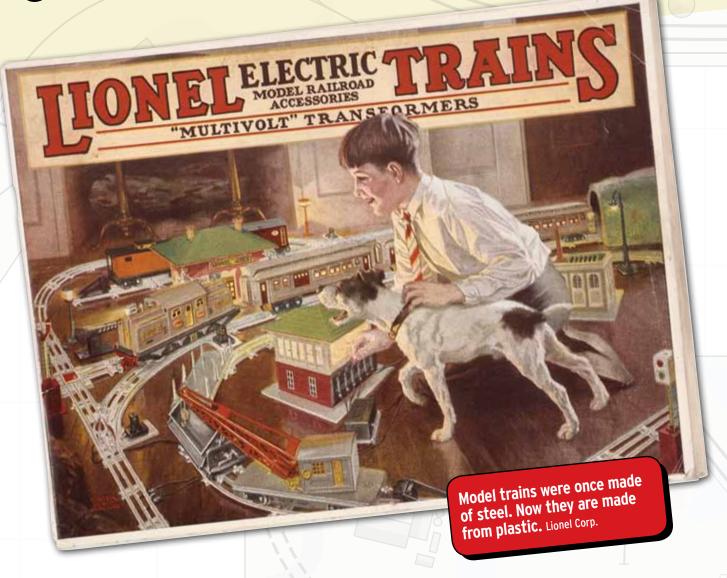
Your train-riding choices are never ending! Many cities have light rail trains. They travel on special tracks that are not shared with other trains. Some light rail trains even run down the middle of the street! San Francisco, California, is famous for its cable cars and streetcars, two special types of light rail trains. Some big cities have subway trains that go underground. Other cities have elevated trains, which travel on rails that look like they are on stilts. Las Vegas, Nevada, and Seattle, Washington, have special elevated trains



Light rail trains use special tracks to travel on. They don't share with other trains. Wes Carr

called monorails. All of these different types of trains help people get to where they want to go. These trains don't cost much to ride. You can find many places to ride trains in your state. So have fun and ride a train!

# Fig. 1988 There's a train



# Model trains come in all sizes One of them should be perfect for you

# in my houses

By Carl A. Swanson

I'm a model railroader. That's a fancy way of saying I started playing with toy trains when I was a kid and never stopped. Why should I? It's a great hobby. I get to run trains whenever I want. And, I learned lots of cool stuff along the way.

Building a table for my train taught me how to work with wood. I used a computer program to figure out how to fit my train, tracks, and

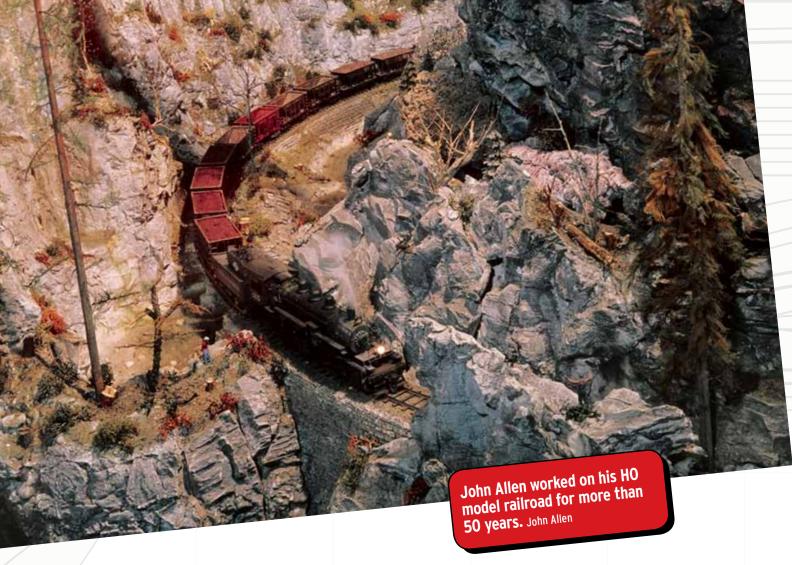
scenery in my basement railroad room. I ran electrical wires to supply power to the track, streetlights, and lighted buildings on my railroad. That's how I learned about electricity.

I wanted to make new miniature buildings look old. So I taught myself how to use an airbrush, a small tool that sprays paint.

Who thought learning could be so much fun? I like working on my model railroad.

Compare this quarter to the model trains below. Which size do you like best?





## Little trains, long history

The first toy trains were made about 150 years ago, not long after real trains appeared. Old toy trains did not move on their own. You had to push them. In time, someone made a model engine with a wind-up motor. The trains could scoot along on their own. But they only moved for a little while!

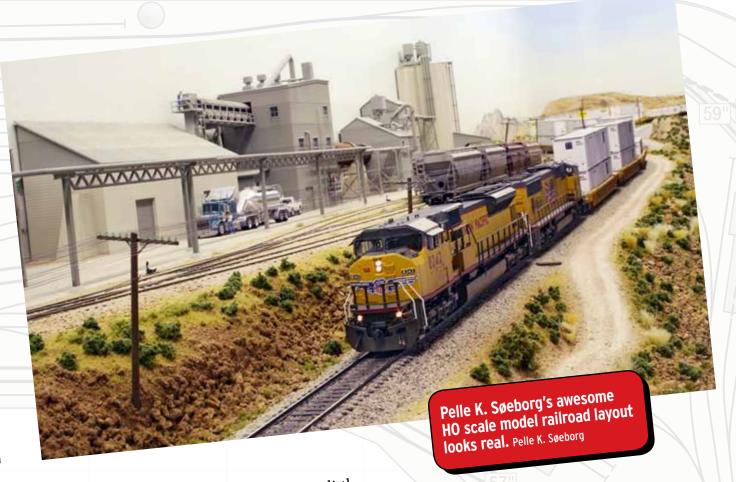
About a hundred years ago, before your grandparents were born, people were inventing things that used electricity. Joshua Lionel Cowen added a small electric motor to a wooden box and placed it on a circle of track. As the story goes, he thought store owners could place the moving box in their windows to show off the things they had for sale. Instead, people came in the stores asking how they could buy "that train in the window." And, one of the most famous model railroad companies began.

The Lionel company along with other companies still makes electric trains today.

Trains are made in all sizes. The sizes are called "scales" by model railroaders. Z scale trains are so small you can fit an entire model railroad inside a briefcase. Large scale trains are so big a grown man has to use both hands to lift one model engine!

## Get started on your model railroad!

Buying a trainset is the best way to get started in model railroading. A set will have a locomotive, railcars, a circle of track, and a power pack to control all the action. There's a lot of railroad action inside those great big boxes! What's the best size? That's up to you.



Go with what you like best. If you want a little help with your choice, remember that really small trains come off the rails easily. Really large model trains need a lot of space to set up and run. That leaves you with the sizes in the middle, called HO scale and O scale.

The most popular trains today are HO scale.
An HO boxcar, a type of railcar that in real life carries goods, is about six inches long.

Want bigger fun? Go with O scale, which is twice the size of HO trains ("HO" stands for Half O scale, in case you were wondering). HO scale are the same size trains that were made long ago when Mr. Cowen was running the Lionel fun factory.

A lot of trainsets are sold in stores around the holidays. Sometimes you can even find them at drug stores and grocery stores. These sets don't cost a lot of money, but they also

might not last as long as better sets will. A really good trainset will last you a long, long time. It might even be the start of your own model railroad layout.

Magazines and books are good ways to learn more about the hobby. MODEL RAILROADER magazine covers the HO hobby, and CLASSIC TOY TRAINS is the top magazine for O scale.

There are lots of model railroaders around. You may have a relative or family friend that can help you get started. If you have a hobby shop in your town, you're in luck! Pay them a visit and see what is on their shelves. The folks in the store might even help you find a local model railroad club. There is a lot to learn, but it is so much fun. A trainset is railroad action that fits in your house. So jump on board!

# Dishing up today's special

Find out where people can eat while riding the train. And, make your own dining car recipe!

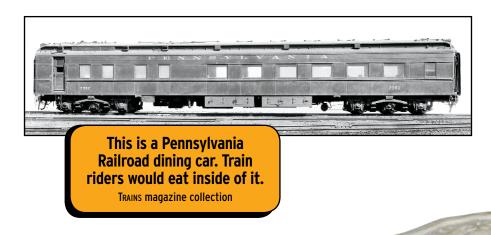
ome trains travel long distances. Trains that have people on them are called passenger trains. Passengers on long train rides get hungry. So there's a railcar where they can get something to eat. The railcar is called a dining car.

Dining cars are like restaurants on wheels. They have tables and chairs. Chefs work in the kitchen inside the dining car. Waiters and waitresses serve food. You can eat breakfast, lunch, and dinner on the train. While you eat, you can look out the window of your moving train!

A long time ago, dining cars were fancy. Pennsylvania Railroad dining car chefs made food like these sweet potato puffs (see recipe, right). They served them to the passengers.

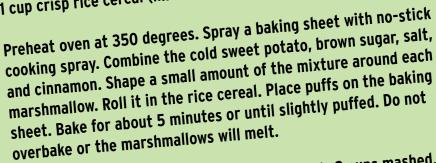
On today's trains, dining cars aren't as fancy. But riders still enjoy good food while looking out the window. Pretend you are a dining car chef. Make this recipe with your mom or dad.

— Robert S. McGonigal



## **Sweet potato puffs**

1 cup cold, cooked, mashed
sweet potato
1 tablespoon brown sugar
1/4 teaspoon salt
1/2 teaspoon cinnamon
8-10 large marshmallows
1 cup crisp rice cereal (like Rice Krispies)

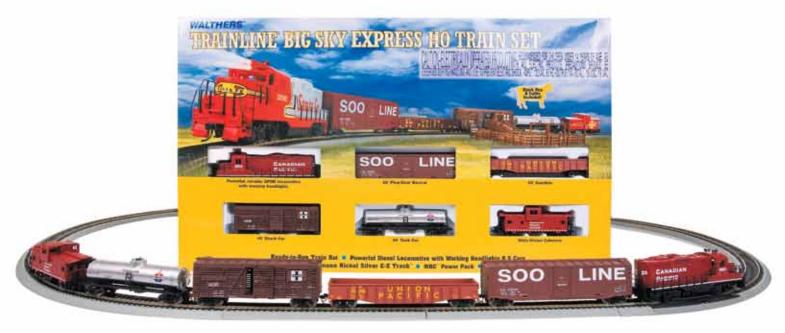


Notes: One 29-oz. can of sweet potatoes equals 2 cups mashed. If you use canned sweet potatoes, drain them and do not add salt.



# 

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