Train Ride Project Kit

Congratulations! You're going on a train ride! Use these project ideas to enrich your educational experience. Read through them before you go to make sure you understand the terms and concepts, and to help you determine if you want to expand upon any of them. You'll find fun facts and printable worksheets at the end of this packet.

a- elementary level activity b- middle school level activity c- high school level activity

Language Arts

Trains inspire the imagination! Research the train you will be riding on online ahead of time and write a fictional story surrounding it. Imagine you were there when that train was used for the first time. What is the setting of your story? Who are the characters? What adventures do they have?

a. Write or draw a short story involving trains. Make sure to include characters, setting, and a plot.
b. Write a short story involving trains. Make sure to include setting, characters, conflict, and resolution.
c. Write a story involving trains. Include settings, characters, conflict, resolution, and character development. Try to incorporate some of the history of the train you are riding as well.

Materials required: Notebook, pen/pencil
Submission: A copy of your writings/drawing, and any pictures/videos

Teaching or learning notes:

Applied Math

One of the most classic math problems of all times involves trains: “If two trains leave different cities headed towards each other…” Choose one of the problems below to complete.

a. A train is headed from Sacramento to Los Angeles. It moves at 60 miles per hour, and has to go 360 miles to reach its destination. How long will it take the train to reach Los Angeles? Draw a picture to go with your train problem.
b. Two trains leave Sacramento at the same time. Train A is headed towards San Francisco (90 miles away) and Train B is headed towards Los Angeles (360 miles away). If Train A is travelling 15 miles per hour and Train B is travelling 50 miles per hour, which train will arrive at its destination first? By how much? Include an illustration.
c. Two trains leave two different cities heading toward each other at different speeds. Train A, traveling 70 miles per hour (mph), leaves Westford heading toward Eastford, 260 miles away. At the same time Train B, traveling 60 mph, leaves Eastford heading toward Westford. When do the two trains meet? How far from each city do they meet? Include an illustration.

Materials required: Notebook, pen/pencil, calculator or smartphone (optional)
Submission: Your calculations, estimations, and conclusions, and any pictures/videos

Teaching or learning notes:

Science

Over the years, the science of trains has evolved. From steam to electricity, the engineering and design of trains has constantly changed to make them more efficient. Learn more about the science of locomotive power.

a. Talk about the difference between steam and internal combustion engines. Draw pictures of both with labels pointing out their differences.
b. Draw a detailed diagram of how a steam engine works, complete with labels and brief descriptions of the importance of each step/part.
c. Draw a detailed diagram of how an internal combustion engine works, complete with labels and brief descriptions of the importance of each step/part.

Materials required: Notebook, pen/pencil
Submission: A copy of your drawings, diagrams, maps, or designs, and any pictures/videos

Teaching or learning notes:

Social Studies

Trains have a rich history. Visitwww.csrmf.org/explore-and-learn/railroad-history and learn more about the history of railroads in America. When were they first invented? When were they first commercially used? How important were they to the building of America?

a. Write or draw about the beginnings of railroads and what it might have been like to have been there.
b. Choose one person who was influential to the history of railroads and detail who they were and their importance.
c. Create a timeline for the history of railroads. Include important dates, people, and places.

Materials required: Notebook, pen/pencil, smartphone (optional)
Submission: A copy of your writings/drawings, and any pictures/videos

Teaching or learning notes:

Fun Facts

- Early trains relied on ropes, horses or gravity. America's first steam locomotive lost a race to a horse.
- Some high speed rail services can reach speeds over 300 kph (186 mph).
- Ore trains in Sweden traveling down to the coast generate five times the amount of electricity they use, powering nearby towns and the return trip for other trains.
- It is possible to travel from Portugal to Vietnam solely by train. At 17,000 km, this is the longest train journey in the world.
- Hogwarts Express Train used in the Harry Potter movies is an actual train that runs even today in Scotland. The line winds through gorgeous settings, including highland valleys and besides lochs.
- In Moscow, stray dogs have learned to commute from the suburbs to the city. They reach the city, scavenge for food, then catch the train home in the evening.
- Many 'Ghost Trains' run on the British Rail Network. These trains, often unadvertised, run extremely rarely, at obscure times, through bizarre routes, purely to keep the line officially open whilst discouraging passenger use. Ghost train hunters roam the country searching for them.
- When placed on maps using food sources as cities, slime molds have almost perfectly replicated major train systems in Europe, the USA, Tokyo, and Canada.
- In 1869, Chinese and Irish laborers working on the Central Pacific Railway managed to lay down 10 miles of tracks in just one day. This accomplishment has not been matched even in modern times.
- After WW1 the French had the railway cars that Germany surrendered in stored in a museum. During WW2 when France was preparing to surrender, Hitler ordered the walls of museum torn down and the railway cars returned to the exact spot of the 1918 armistice in order to humiliate the French.
- Most train horns are based on musical chords. Common passenger trains found in the U.S. are usually based on major 6th chords, which are not as threatening as most freight trains, which are based on more dissonant, frightening , such as diminished 7th chords.
- There is a train station in Sweden that uses people's body heat to warm adjacent buildings.

My Train Ride

1. Draw a picture of your favorite part of train ride..

2. Describe your favorite part and why you love it.

3. What is friction and its role in train locomotion?

4. Draw or describe the train you rode..

5. Describe or draw one example of engineering you saw.

6. Name 3 ways in which trains are important?

BONUS:

Describe how the train engine works on the one you rode.. You can include a separate page (or use the back of this page) for drawings if you'd like.