January — “How Does a Train Stay on the Track?”

Ever wonder how a train stays on the track without falling off? This lesson will explain the engineering and physics that makes it possible. Participants will build their own wheel sets and test their hypothesis to discover the answer.

February — “The Art of Advertising”

Railroads were master ad designers. This lesson will discuss historical advertising techniques and the approaches railroads utilized to appeal to American consumers. Participants will then have an opportunity to create their own unique railroad advertisements.

March — “Finding a Route”

Before a railroad was built, people had to survey a route. This lesson will teach participants how to read maps ranging from basic geographical points for beginners to topographical maps for older learners. Participants will put their new found skills to the test planning the best route for their new railroad.

April — “Bridging the Gap”

Railroads often encounter obstacles to constructions such as rivers, canyons, or construction techniques railroad engineers used to build bridges throughout the country. Participants will then design and build their own bridges out of popsicle sticks and see whose bridge can support the most weight.

May — “Mail on the Go”

Prior to planes, railroads were responsible for transporting much of the mail across the country, but trains did not always stop at every station. This lesson will explore railway post offices and ask participants to work together to design a way that a bag of mail could be transferred safely to a passing train without stopping.
June — “How Does a Steam Train Work?”

The use of steam technology revolutionized every aspect of American life. In this lesson, participants will learn the science behind harnessing the power of steam, different applications of steam technology, and operate a small model steam engine.

July — “Efficient Hauling”

Nearly everything you buy traveled by rail at some point. That is because railroads can haul a large amount of freight over long distances more efficiently than trucks or planes. In this lesson, participants will learn the science behind railroad efficiency then put their knowledge to work by building their own “soapbox” freight car. Whose car can haul the most over our course without crashing?!

August — “Communication Revolution”

The invention of the telegraph completely altered the ways people communicated with one another and the time it took for information to spread. This lesson explores the simple science behind the telegraph and its impact on society. Participants will then build their own working telegraph.

September — “A Beautiful Ride”

Trains were mobile advertisements and railroads wanted the best looking consists possible. Many of the country’s most icon trains are memorable because of the way they looked. In this lesson, participants will explore the livery and color schematics behind these trains, then design their own beautiful train set.

October — “Logistics, Logistics, Logistics”

To maximize efficiency, railroads need to plan every move in advance. Participants will learn how railroads use mathematical analysis and calculations in their everyday operations then work together to connect a pre-determined number of cars in a specific order utilizing the fewest moves possible.

November — “Architecture”

It was not just the trains that had to look good, a railroad’s buildings had to meet customer approval as well. This program will explore various styles of architecture utilized by railways across the country then invite participants to design their own railroad depot with crafting supplies and paints.

QUESTIONS?

Contact the museum’s Curator of Education, Dr. Christopher MacMahon at (575) 528-3426 or email cmacmahon@las-cruces.org