



GO Activities April–July 2018

Invent a Flying Machine

For much of history, humans have tried to fly. As people tested different materials and designs, the machines they created and tweaked took many forms. In the early 1900s, Victor Ochoa used everyday materials like bicycle parts and canvas to invent his flying machine, the Ochoaplane.

Can you create an invention that will hover inside a wind tunnel? What will your flying machine look like? To see a picture of Victor Ochoa and his Ochoaplane, visit the “Go” section of the *Spark!Lab* object wall.

Design a Shoe

Most shoes have the same basic parts, but tweaking them can result in just the right style for your needs—from climbing a mountain to going to a party. In the 1970s, track coach and Nike co-founder Bill Bowerman used his family’s waffle iron to create a special sole for running on artificial turf. After some testing and tweaking, his design led to a new style of athletic shoes.

What type of shoe will you design? What makes your shoe different from other shoes? Visit [American Enterprise](#) to see Bill Bowerman’s Nike waffle sole athletic shoe.

Create a Tactile Map

A map can tell you about your location, about a place you want to go, and how to get from one place to another. For people who are blind or have low vision, flat paper maps are not very useful. Tactile maps use raised surfaces and different textures to mark important features. These maps can help anyone better navigate their surroundings.

Will your map be of a room, a building, or a larger area like a neighborhood? What places are important for people using your map to know about? Explore the 3D-printed tactile map of Resurrection City, from the 1968 Poor People’s Campaign, in the [African American History and Culture](#) gallery.

Invent a Vehicle

People use different types of transportation for different needs. Sometimes we can walk, but often we need a vehicle to help us travel somewhere fast, or far away, or more safely than by foot. Or we need a vehicle to help us move things or people. How did you get from one place to another today?

What kind of vehicle will you invent? Who or what will your vehicle carry? Visit [On the \\$ Water](#) and [America on the Move](#) to explore the history of boats, cars, trains, and other vehicles. \$

Invent a Bicycle Accessory

Bicycles became a cheap way for people to travel in the late 1800s and early 1900s. Bicycles gave some women new chances to work and to explore areas beyond the family home and farm. As bicycles became more popular, people needed new bicycle accessories. Some of the most popular early accessories included lights, collapsible cups, air pumps, and skirt clips.

What type of accessories do you think bike riders need or want? What are the benefits of the bicycle accessory you invented today? To see a bicycle with bling, be sure to look at the [Tiffany bike](#) in [Object Project](#).

Design a Piece of Luggage

From the early days of stagecoach travel to flying on a modern jetliner, luggage has been an essential accessory for long trips. As the ways and reasons we travel have changed, the luggage we use has changed as well. Heavy wooden trunks were popular pieces of early luggage. Modern bags are small and light, and often have built-in wheels to make them easier to roll through large airports.

What features does your luggage have? How does your luggage help travelers? Visit [Many Voices One Nation](#) to see the luggage used by Napoleon Lares when he immigrated to the United States from the Philippines in 1984.

Design a Metro Interior

Many people who visit or work in Washington, DC depend on the Metro rail system to get around. In recent years Metro has been replacing its older trains, some dating back to the early 1970s, with new railcars. The upgraded cars have changes in the design that affect the rider experience.

What would your design for a Metro interior look like? How will your design create a better experience for all riders? Visit [America on the Move](#) to experience what it was like to ride in a [Chicago "L" train](#) in the 1950s.