



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at [www.projectexploration.org/stemathome](http://www.projectexploration.org/stemathome).

## In this activity, you will:

design and build your dream car.



## Supplies Required:

- Plastic bottle
- 4 bottle caps
- 2 toilet paper rolls
- Tape
- Glue
- Scissors
- Markers, crayons, or colored pencils

## Video

Follow along as *If I Built a Car* is read aloud: <https://tinyurl.com/y23hrn8p>

## Overview

While riding in the backseat of the family car, Jack tells his dad about the dream car he wants to build. It will have a snack bar, go underwater, drive on autopilot, fly, and do other totally amazing things. If you could design and build your dream car, what would it look like? What could it do?

Beginning in the 1770s, many people tried to make cars that would run on steam. Beginning in the 1880s, inventors tried very hard to make cars that would run well enough to use every day. These experimental cars ran on steam, gasoline, or electricity. By the 1890s, Europeans were buying and driving cars made by Benz, Daimler, Panhard, and others, and Americans were buying and driving cars made by Duryea, Haynes, Winton, and others. By 1905 gasoline cars were more popular than steam or electric cars because they were easier to use and could travel further without adding fuel. By 1910 gasoline cars became larger and more powerful, and some had folding tops to keep drivers and passengers out of the rain.



## Instructions

1. Problem: What do we want to solve? Look at the materials you have available. Build a car that has special features and can do something unique.
2. Solutions: What are some ways to solve the problem? What is your special car going to do? What unique features will it have? What kind of parts will it need? Who would like to drive this car?
3. Model: Build your design! Use your materials to build your car.
4. Test: Does your model work? Test your car.
5. Reflect & Redesign: Was your model successful? Does it need to be redesigned? Does your car have all the special features you planned it to have? Do you need to add or change anything?

## Additional Resources

1. You have been invited to present your car at the Chicago Car Show. Describe and demonstrate the special features of your car to the audience. Also, answer any questions that they have about your car.
2. Watch the video of the history of cars: <https://tinyurl.com/sfpaxvy>
3. Read about different cars: <https://tinyurl.com/sxj2aw3>

## Share It Out

**Share on social media:** Share your car on social media, and describe what makes it special! Use the hashtags:

#DreamCar  
#ProjectExploration  
#StemAtHome

For more activities like this one, go to [www.projectexploration.org/stemhome](http://www.projectexploration.org/stemhome). If you're interested in learning more about Project Exploration and our free events, programs, and activities, please find us on social media and be sure to follow!



Call or text us for help: 312-772-6634

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