

Junior Automotive Design Badge



Cars are one of the most popular forms of transportation. Have you ever thought about what type of car you would want to drive in the future? What does it look like? What color(s) are in the exterior and interior? Does it have any special features? There are many great ideas for vehicles.

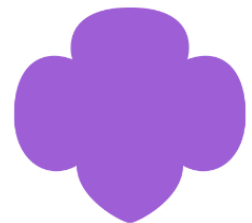
Now it is time to design your dream car!

To earn the Junior Automotive Design Badge, you will need to study the history of automobiles, research current car trends, create a list of special features and design elements that you want to include in your car, and create a model of your amazing dream car.

Time to complete this badge: between 1 to 2 hours or longer for the final creation step.

Supplies needed:

1. A computer or any device with the internet. This will be used for step 1 to conduct research.
2. Paper, colored pencils, markers – this will be needed for steps 1 and 4.
3. A pencil or pen
4. Air drying clay (colored clay or plain to paint later), or play doh.



Below are the steps to complete the Junior Automotive Design Badge:

1. **Car History:** Explore the history of the automobile in America. You can start at the beginning when the first car was built in the USA in 1893, or you can cover the last 100 years and start your research in 1925. Create a timeline using drawn or printed pictures from cars every 5 to 10 years until 2025 with a modern-day car. Or, create a slide show presentation in Canva with pictures of cars and the evolution of the style for the past 100 years. Share your presentation with friends, family, troop members, or other fellow Girl Scouts.

Questions to ask after this step:

- How have cars changed from 1925 until now? Why do you think these changes happened?
- What car in which decade was your favorite? Why?
- Do you think that a car from 1960 would be useful today? Why or why not?
- What are features in modern cars that are super useful today?

2. **Conduct automotive market research:** It is important to understand what current car customers want in the vehicles that they drive today. Doing this will not only give you useful information, but it will help you think about the features that you will want to include in your car design.

Included in this packet is a survey titled, “Automotive Market Research.” You will use this worksheet to gather information. You will need to speak to 5 to 15 (or more) adults that you know who drive cars. This can be family, neighbors, teachers, babysitters, etc. Put a tally of their answers in the appropriate box and circle the 5 features that they think are the most important items to have in a vehicle.

Questions to ask after this step:

- What were the top 5 features that the drivers you spoke to think are important?
- Why do you think these were the most important?

3. **Make a list:** What features do you want to include in your car? Make a list of 5 to 10 important features. Write these features on the back of your survey paper or add a slide to your car history presentation.

4. **Time to sketch!** On a separate piece of paper, sketch the design of your dream car. Add details including color, shape, and any special features. Label all important aspects of your car. Make sure to give it an awesome name!

5. **Let’s sculpt:** Using clay, or play doh, sculpt a model of your dream car. Consult your initial design. Have fun!

Questions to ask after this step:

- Was clay/playdoh the best material to use for the design of your vehicle? If not, is there another material that you would have used instead?

6. **Check in:** What did you learn about cars while earning this badge? Do you think that this process can be used in other areas (cooking, toy design, etc.)?

Congratulations! You have now earned your Junior Automotive Design Badge!

Automotive Market Research



Directions: Below are several features that can be found in some modern cars. With guardian supervision and permission, ask 5 to 15 (or more) adult drivers about which features are the most important to them. Read each person the list of features and have them pick their 5 most important features. Put a tally in the box for each choice. After you have spoken to 5 to 15 (or more) drivers, circle the 5 most popular answers.

Automatic Windows

Airbags

Automatic Car Locks

Blind Spot Monitoring

Automatic Emergency
Braking

Cruise Control

Moonroof

Rearview Camera

AC/Heat

Parking Sensors

Lane Departure Warning

AC/Heat

USB Outlets

Bluetooth

