



ENGINEERED BY



SUBARU

RACE CAR DESIGN CHALLENGE

Engineering

Today you will be an automotive engineer! Those are people who design cars. You are going to design and build your own race car today. Then you will build a race track and test your race car and share what the results are.



ARIZONA
SCIENCE
CENTER

Never stop wondering.
Never stop imagining.™

RACE CAR DESIGN CHALLENGE

SUPPLIES

- Clipboards
- Measuring tape
- Cardboard
- Felt
- Sandpaper
- Bottle caps
- Straws
- Glue
- Toilet paper rolls
- Construction Paper
- Blank CDs
- Tape
- Scissors
- Legos

CHALLENGE

Design Your Car

1. Start by drawing what you want your car to look like. Consider the materials you have available to you.
2. Once you have a sketch of your car design, use the supplies to make your race car (toilet paper rolls, bottle caps, construction paper, straws, cups, blank CDs, small boxes).
3. Remember your car will need to be able to roll.
4. Once your car design is built, create a test track for it.
5. Due to the lack of motors the racetrack is going to use force and gravity to make the cars move. This means the racetrack will be a ramp track. There can be some creativity on the look of the racetrack and maybe add some dips and rises to see if the cars can go through them.
6. Use cardboard, textbooks and maybe some texture on the track
7. Once the racetrack has been built, lay a measuring tape next to the track so that you can measure how far the race car went.
8. Test the race car down the track.

QUESTIONS

1. What happened when the car went over the texture portion of the track?
2. How far did your car travel?
3. If you add a higher start ramp, does that change how far your car traveled?