



# MECHANICAL ENGINEERING | SAIL CAR

## Description

SKILL LEVEL: ADVANCED

**In this craft, you will be using principles of mechanical engineering to build a sail car!** This activity works great when done either solo or in small groups. Teacher or adult supervision may be required. After completing the craft, you can hold a race to see which car can go the fastest by using fans or simply blowing on the sails. Students can also experiment with different sail shapes to see which design works the best.

**How does it work?** The sail car is not only fun to build, but it also introduces students to the concepts of inertia, momentum, and drag. They will experiment with these concepts as they try to build the fastest car possible!



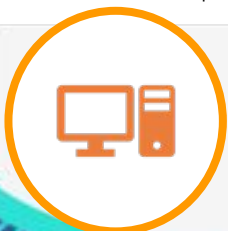
## Materials Needed

- Glue
- Scissors
- Tape
- 2 plastic straws
- 2 wooden dowels
- 4 plastic wheels
- 2 wooden blocks
- 9 popsicle sticks
- Construction paper



## Directions

1. Cut 1 inch off each straw and insert the wood dowels into the straw
2. Glue a plastic wheel on the end of each dowel
3. Glue seven popsicle sticks together (shape shown in video)
4. Glue a wooden block onto the end of two popsicle sticks
5. Tape the wheels to the popsicle base
6. Glue the wooden blocks onto the popsicle base
7. Tape the construction paper to the popsicles to make a sail



[Video Instructions](#)

# Supply Links

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Plastic wheels:

[https://www.amazon.com/gp/product/B08C4XL5JC/ref=ppx\\_yo\\_dt\\_b\\_asin\\_title\\_o03\\_s00?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B08C4XL5JC/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&psc=1)

Wooden blocks:

[https://www.amazon.com/Wooden-Cubes-Square-Projects-Woodpecker/dp/B00DNN5HOK/ref=sr\\_1\\_1\\_sspa?dchild=1&keywords=small+craft+wooden+blocks&qid=1627701213&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUEyUURSME9HR1dMR1VPJmVuY3J5cHRIZEIkPUEwMDAwODY5M1FEU0FXNFZEWUNCWiZlbnNyeXB0ZWRBZEIkPUEwMjA3MzgxMVg3V1QwT1NKMEk3WSZ3aWRnZXROYW1IPXNwX2F0ZiZhY3Rpb249Y2xpY2tSZWRpcmVjdCZkb05vdExvZ0NsaWNrPXRyZdWU=](https://www.amazon.com/Wooden-Cubes-Square-Projects-Woodpecker/dp/B00DNN5HOK/ref=sr_1_1_sspa?dchild=1&keywords=small+craft+wooden+blocks&qid=1627701213&sr=8-1-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUEyUURSME9HR1dMR1VPJmVuY3J5cHRIZEIkPUEwMDAwODY5M1FEU0FXNFZEWUNCWiZlbnNyeXB0ZWRBZEIkPUEwMjA3MzgxMVg3V1QwT1NKMEk3WSZ3aWRnZXROYW1IPXNwX2F0ZiZhY3Rpb249Y2xpY2tSZWRpcmVjdCZkb05vdExvZ0NsaWNrPXRyZdWU=)