

# SAIL CARS

## CHALLENGE:

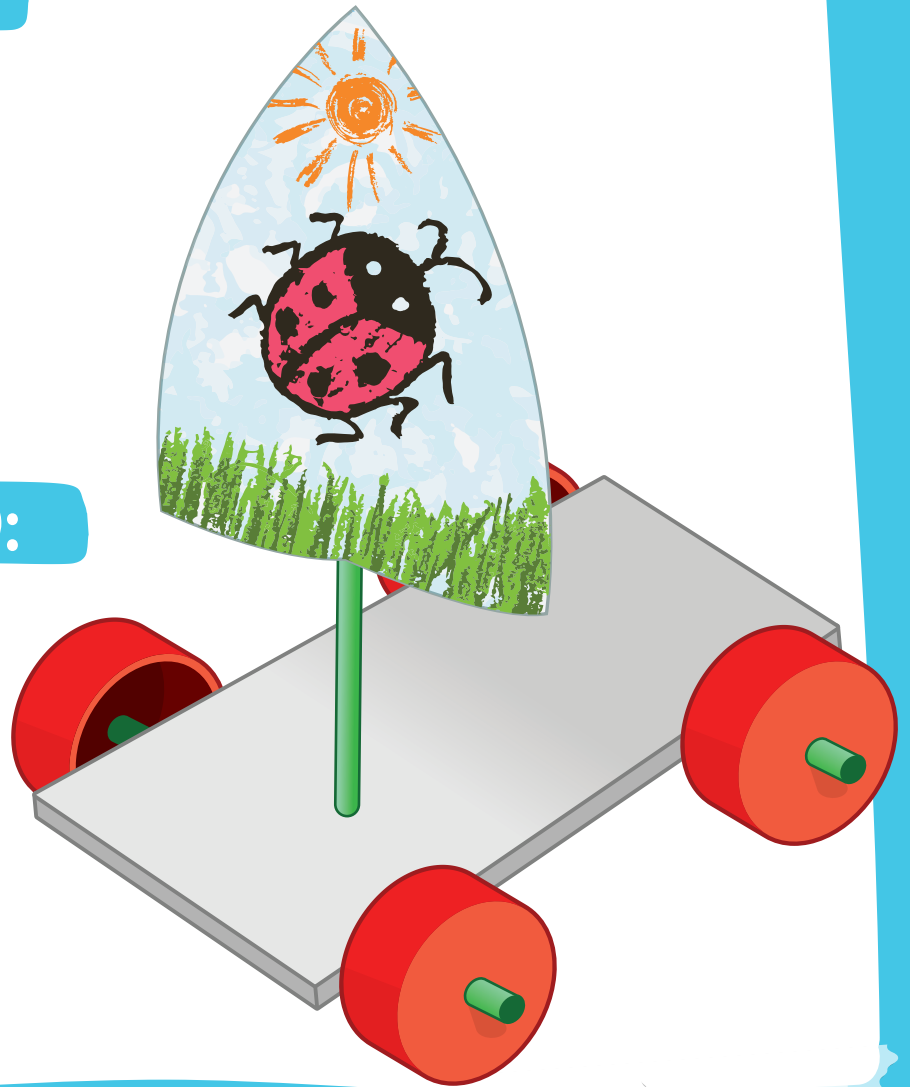
Construct and test sail cars in a few different ways to discover how size, shape, and design affect the speed and performance of vehicles.

## YOU'LL NEED:

- Cardboard
- Construction paper
- Straws
- Scissors
- Bottle caps
- Glue

## GET INSPIRED:

Visit YouTube, search "How to make a sail car for kids," and get inspired by the awesome various sail car examples that are out there.



## PLAN IT OUT:

When you've gathered your materials and gotten some inspiration, it's time to make your design plans. Take out a sheet of paper and a pencil and sketch out your sail car.

## PROCEDURE:

Build your sail car and put your design to work. Test out your initial design and see how it works. Think about the variables that might affect your vehicle's performance. Some examples include wheel size, width of driving train, size of sail, placement of sail, and surface on which the car is traveling. Now, try to improve your vehicles so they travel farther in a shorter period. For an additional math challenge, you can calculate the circumference of the wheel and determine how many times the wheel rolled based on how far the sail car traveled.

## DISCUSSION:

How does a vehicle's design affect its speed and performance? What changes did you make to improve your sail car design? What would you do differently next time?

