

“In the Human Body”

Module 15, Adventure 2



Prompt:

In this activity, you will create a vehicle or moving object from recycled and craft materials in your home. You will need to use either your breath, a fan, or the wind outside to power this vehicle. Much like the breath from your lungs, a fan or wind pushes air, and that air can push a vehicle.

Materials:

- Recycled Materials, such as an egg carton, toilet paper or paper towel rolls, cardboard, bottles, containers, etc.
- Explorer Notebook or a piece of paper
- Pencil or pen
- Miscellaneous craft items such as rubber bands, tape, glue, paperclips, index cards, construction paper, popsicle sticks, toothpicks, etc.

Instructions:

1. Think about what your design will look like. The following questions will help:
 - a. What will push the vehicle? Your breath, or a fan, or wind?
 - b. How will your vehicle touch the ground (if it does touch the ground)?
 - i. Will there be wheels or a smooth surface?
 - c. How heavy will your vehicle be?
 - i. The weight may impact how much air you need to push it!
 - d. What materials help to catch the air?
 - i. How will your design include this material?
2. Sketch your design in your Explorer Notebooks or on a piece of paper. Check out the last page for a page design idea. You can use this or set up your page however you want!

3. Using recycled and craft materials, create your vehicle.
4. Test the vehicle. How does it work?
5. For an added challenge, pick a starting point and see how far your design goes. Measure the distance between the starting point and the spot where it stops.
6. Make changes to your creation as needed after testing and try it again. Can you make the design go further?

Resources:

1. For some inspirations, check out how to build a wind-powered car through this instructional video made by Science Buddies:
<https://www.youtube.com/watch?v=lyvWd-TqqLI>
2. You can also see how to build a balloon-powered car in this instructional video made by Science Buddies: https://www.youtube.com/watch?v=jr3BOE_EpOk

Extensions:

The following are optional steps you can take if you want to extend this adventure:

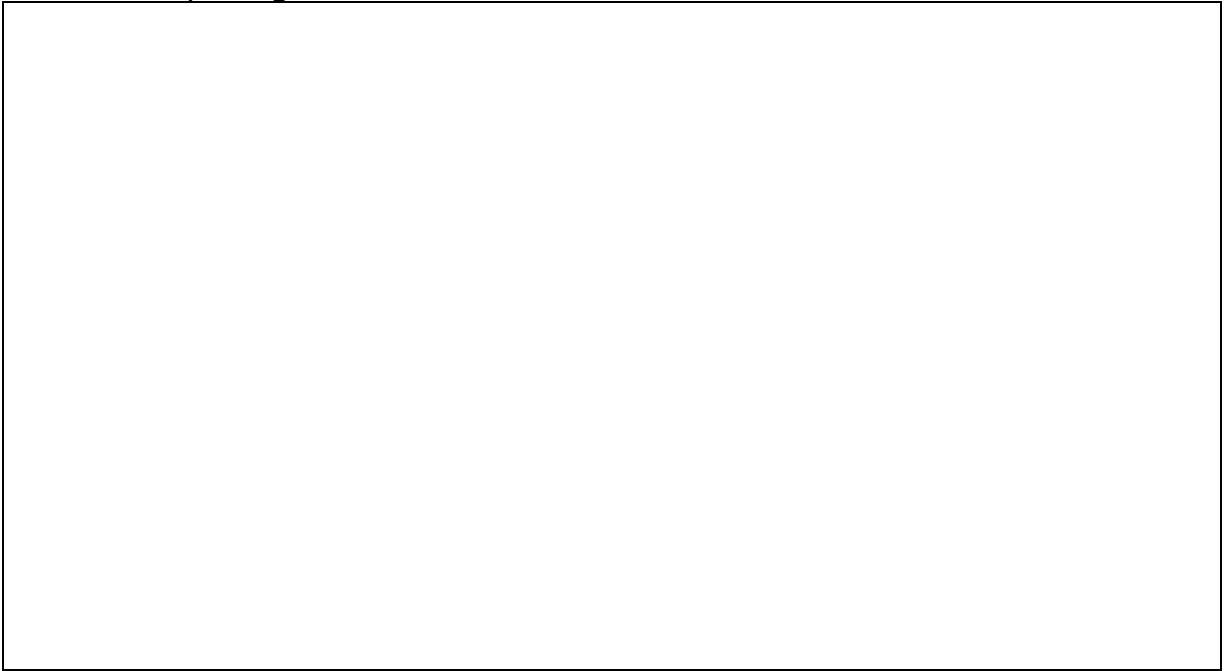
1. Test how your vehicle's movement changes based on whether you are breathing, using a fan, or outside using the wind.
2. Test how the vehicle's movement changes when you make it heavier.
3. Go to the "In the Human Body" topic on Flipgrid and share what you made!

Explorer Notebook

You can use this to help you set up your Explorer Notebook!

Air Powered Vehicle Module 15, Adventure 2

Sketch of my design:

A large, empty rectangular box with a black border, intended for a student to draw a sketch of their design for an air-powered vehicle.