

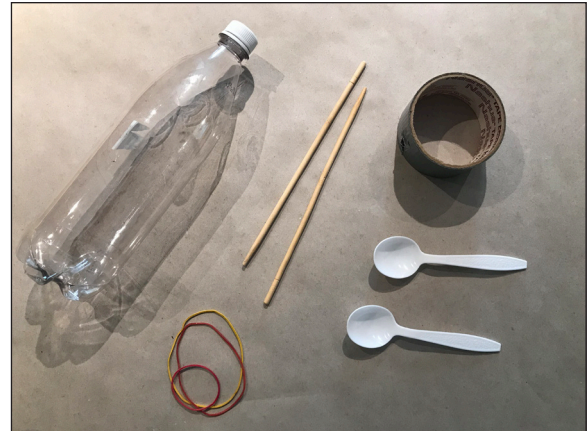


Rubber Band Boat

Build and experiment with your own rubber band powered boat.

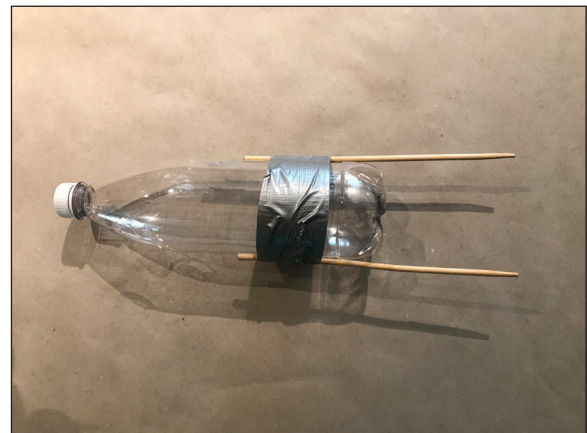
Materials:

- ▶ Plastic bottle with cap
- ▶ 2 chopsticks or other wooden sticks
- ▶ Duct tape or hot glue
- ▶ 2 plastic spoons
- ▶ Rubber bands



1. Add Sticks to Bottle Boat:

- ▶ Line up sticks on either side of the bottle. Make sure that four inches stick out off the back.
- ▶ Secure firmly by wrapping with tape or gluing.



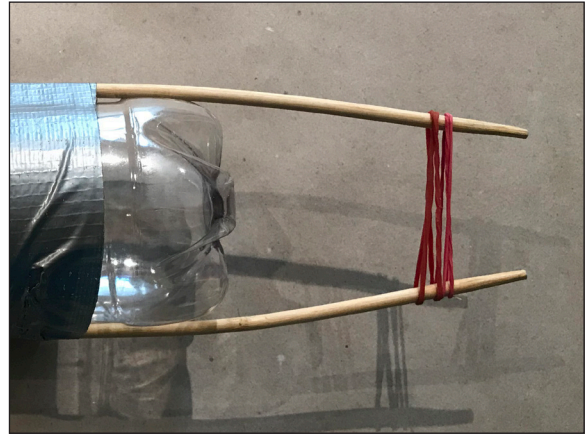
2. Make Paddles:

- ▶ Cut or break handle off of the spoons so that they are one inch long.
- ▶ Line up short handles with each other, flipping one spoon so the cups of the spoon point in different directions.
- ▶ Tape or glue the shortened handles together.



3. Add Rubber Bands:

- ▶ Stretch two rubber bands over the ends of the sticks.
- ▶ Twist and re-wrap the rubber bands until they are tight.



4. Connect Paddles:

- ▶ Slide the spoon paddle between the tight rubber bands until it is centered.
- ▶ Tape or glue the spoon paddle so just the middle of the rubber bands is holding it in place.



5. Test It:

- ▶ Spin the spoon paddle so that the rubber bands begin to twist.
- ▶ Keep the paddles still and lower your boat into the water.
- ▶ Let go!

6. Experiment:

- ▶ What happens if you spin the spoon paddle the other direction?
- ▶ Add different amounts of water to the bottle, how does this change how the boat behaves?
- ▶ How much does twisting the rubber bands matter? Try twisting them a little bit versus a whole lot!