

STEAM Challenge  
Rubber Band Car  
Simple Machine:  
Wheel and Axle

# YOUR CHALLENGE:

*Build a car that can go fast and far, like a few feet across your room! The catch? Your power source is a rubber band and there are no seat belts! Get ready!*

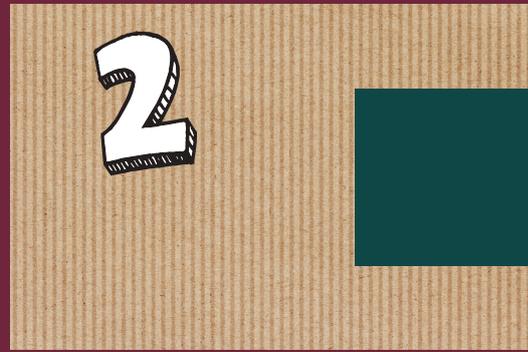
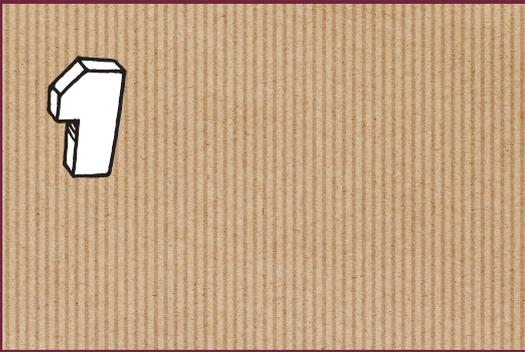
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## Materials

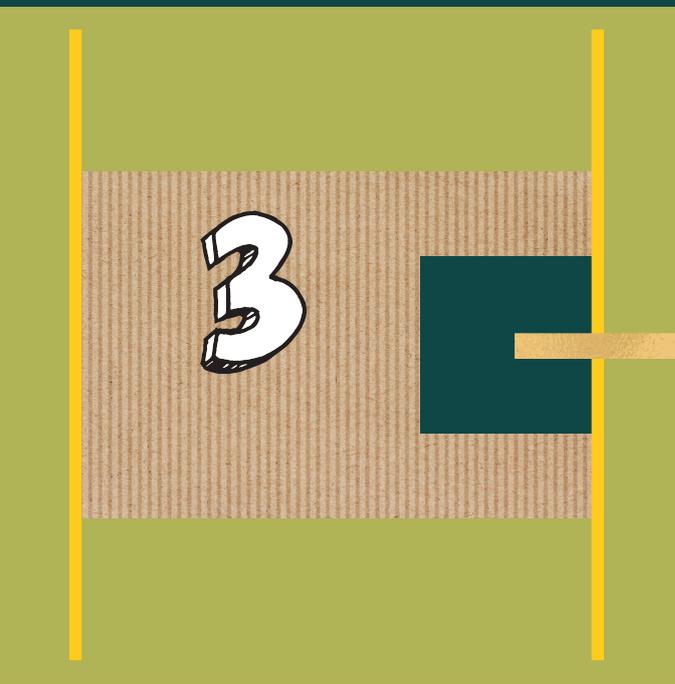
- 4 CDs
- 1 square piece of cardboard (about 5x5 in)
- 4 faucet washers, 1/4 in
- poster putty
- rubber bands (different sizes)
- ruler
- scissors
- masking tape
- 2 wooden skewers





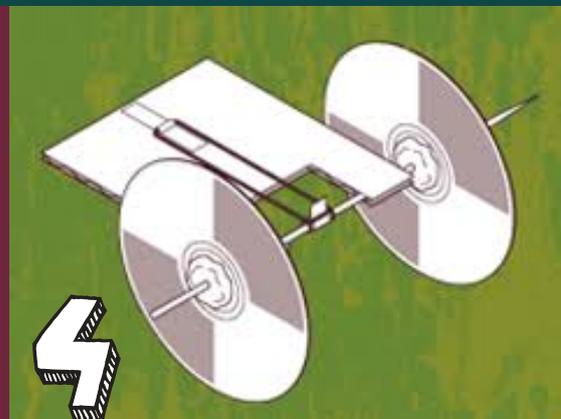
Step 1: Take your cardboard and hold it so that the corrugation runs right to left not forward and back, this is important for when you put your axle in.

Step 2: On one side cut a 2 inch by 1.5 inch deep notch, discard cut out cardboard

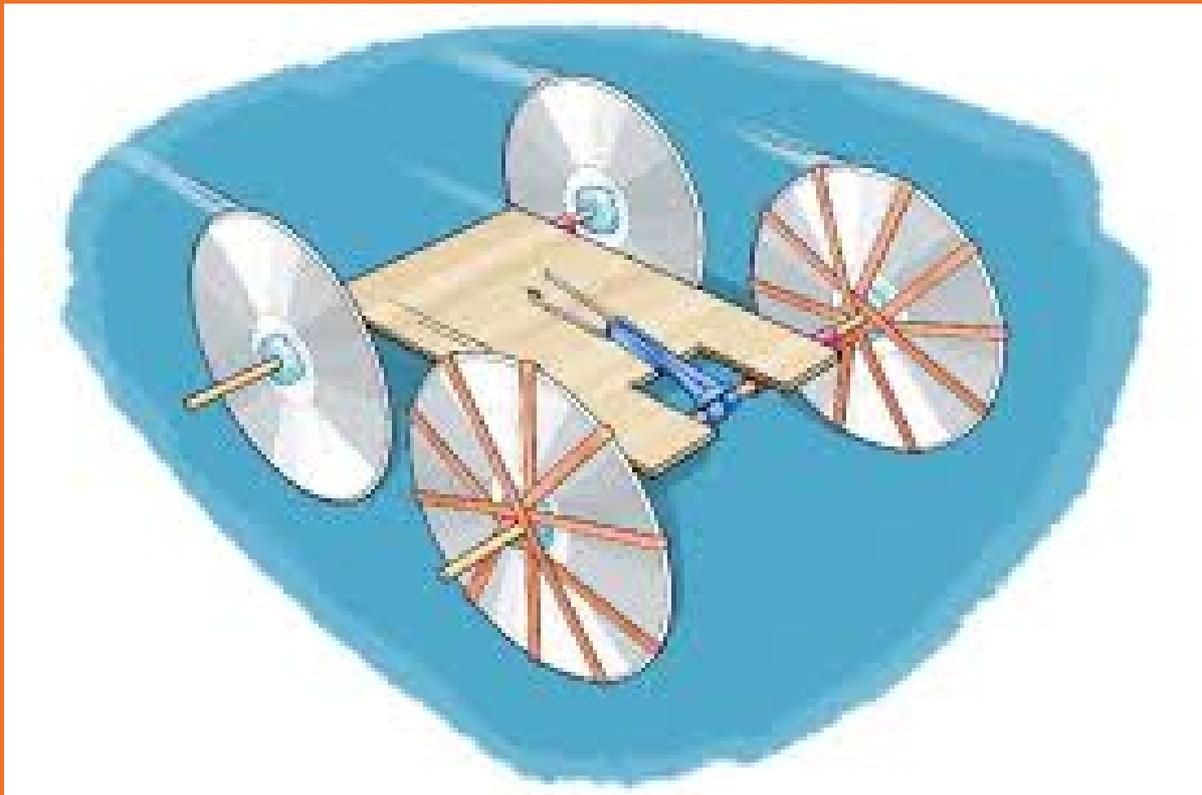


Step 3: Push the two skewers through the cardboard creating the axles.

Step 4: Find the center of the axle by the notch and wrap a small piece of tape around it to catch the rubber band.



Step 4: Attach the wheels. Take a washer for each wheel and connect the washer to the CD with poster putty. Do a really good job of attaching them together. Use some of the putty around the skewer to create a bump in the skewer to keep the wheel in place.



Step 5: Choose a rubber band and tape it to the cardboard opposite the notched out axle side. Stretch the rubber band to the other axle with the tape catch. Wrap the rubber band over the tape and begin to wind the axle up. The rubber band should get tighter and tighter around the axle. When you let it go the car should fly forward.

Step 6: If any of the parts don't work right. Things wobble, fall off, catch on each other  
PROBLEM SOLVE. How can you fix it?