



# 4-H Maker Challenge

## Mousetrap Cars

### Instructions for Building Your Car

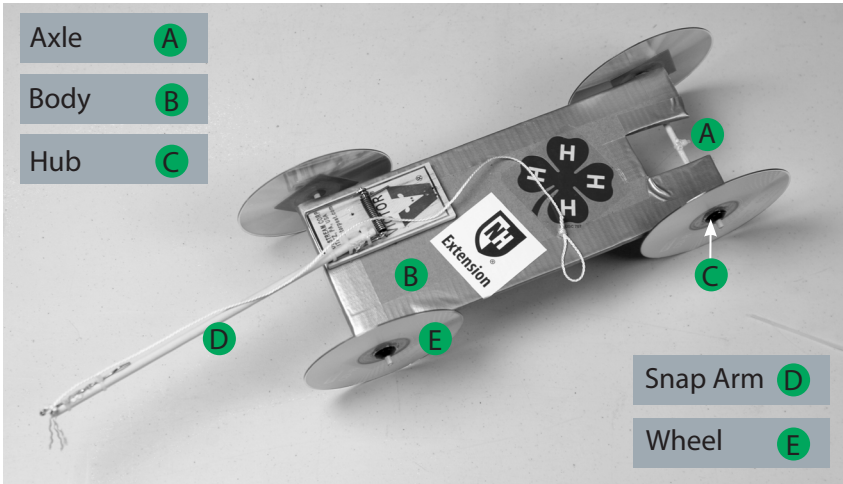


Figure 1. Basic car design

### Step 1

Cut a rectangular notch (about 1" x 2") on the short side of each

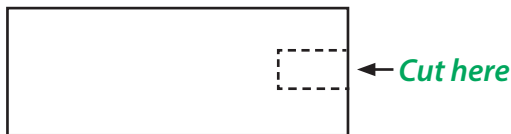


Figure 2. Cutting the cardboard pieces

### Step 2

Place the two pieces of cardboard on top of each other and tape them together to make a double thick piece of cardboard. Make sure the notches line up as in Figure 2.

### Step 3

Cut 3 sections of straw to fit on the body of the car as in the illustration below. Glue them in place using a glue gun (figure 3). Straws will be on the underside of the front and rear of the car.

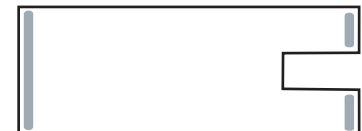


Figure 3. Attaching straws

### Lesson Materials

- 2 pieces of Cardboard 4 ½-6" wide and 10-12" long
- 4, DVD's (old used ones work great or new ones from an office supply store)
- 4, 1/4L (19/32") Beveled Faucet Washers (found at most hardware stores in the plumbing dept.)
- 2 axles 6" long -3/16" wooden dowel
- 1, ¼ inch dowel, 12" long
- 2 Straws
- Masking or DuctTape
- Zip ties (an assortment of 4" & 8" works well)
- String
- Hot Glue
- Scissors
- Something to cut wooden dowels



## Step 4

Glue the mousetrap in place on the topside of the car with the glue gun. Be sure the closed snap is facing away from the notch in the cardboard. Alternatively you can drill holes in the mousetrap and use zip ties to attach it allowing you to try different placement options.

## Step 5

Use two zip ties to secure the 1/4 inch dowel to the snap arm and reinforce with tape or hot glue.

## Step 6

Glue the faucet washers into the center of the DVD's. Be sure to use a generous bit of glue to make sure they hold.

## Step 7

Place the 3/16" dowels into the straws and press the wheels onto each end.

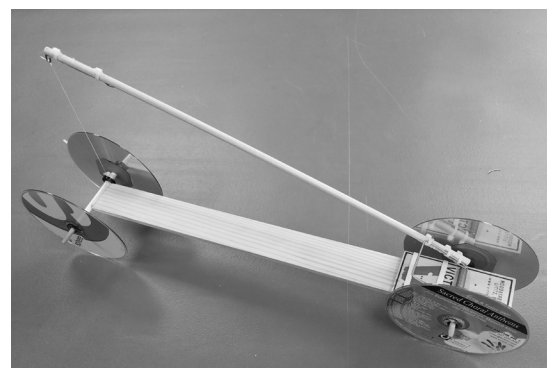
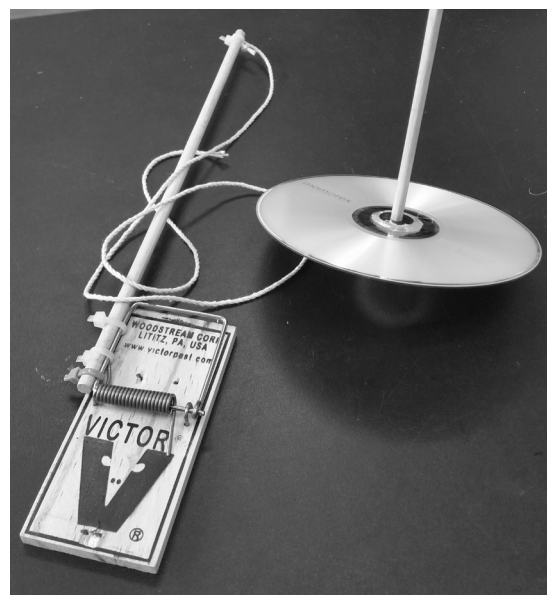
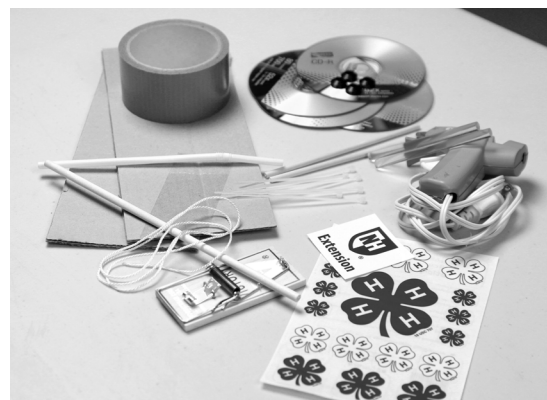
## Step 8

Attach a 4" zip tie to the center of the axle exposed by the notch in the cardboard, and cut it short, about 1/4 inch. This is the hook for the string. A dab of glue will help keep it in place.

## Step 9

Tape a piece of string to the end of the 1/4 inch dowel. On the other end tie a small loop. It should be long enough to reach the hook on the rear axle.

Your car should look something like Figure 1. Hook the loop over the zip tie hook on the rear axle and wind the wheel up. Place the car on the floor and let it go. You will likely have to tinker a bit with it to make it run smoothly.



## Watch Us Build a Mousetrap Car!

Watch us build a Mousetrap Car from scratch in this Instructables video.

**Watch Here:**

[instructables.com/id/Build-a-Mousetrap-Car/](https://www.instructables.com/id/Build-a-Mousetrap-Car/)



**Extension**