

# Drag Racing Cups



## Materials needed:

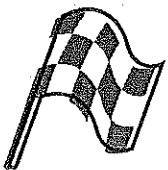
Two disposable coffee cups with lids  
3-4 rubber bands  
Pony bead  
Paper clip  
Washer  
Scissors  
Tape

## Directions:

1. Cut out the circle traced on to the bottom of both cups.
2. Tape the paper cups together, bottom to bottom, using a strip of tape. The holes in the bottom should line up.
3. Link several rubber bands together to make a chain that is close to the length of the cups. To link the rubber bands, lay two on top of each other and pull them through each other in opposite directions.
4. Run the rubber band chain through the middle of the cups
5. Push one end of the rubber band chain through the hole in one disposable lid. Attach a paper clip to the end of the rubber band chain to hold the rubber band in place and push the lid onto the cup.
6. Push the opposite end of your rubber band chain through the hole in the other lid and push the lid onto the cup. Now thread the rubber band through the middle of the washer and the bead. Put the straw through the middle of the rubber band so that about two inches are on the short side of the straw.

## How to use it:

Wind your racer by holding the cups in place and spinning the straw around the bead. Set the racer down and watch it go!

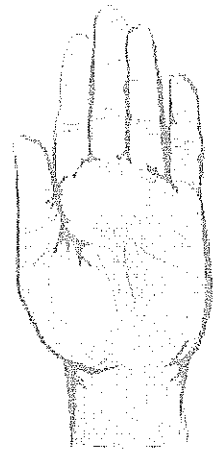


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# Fingers of the Hand



## Supplies needed for One Finger:

1 straw  
1 craft stick  
2 beads

3 small straw pieces  
3 craft stick pieces  
tape

1 large straw piece  
1 piece of string

## Directions:

1. Tape a small straw piece to a piece of a craft stick, repeat with two more for a total of 3 of these.
2. Tape all three segments in a straight line on the end of a straw. Make sure to leave a small space between each segment! This will make it possible for each joint to bend.
3. Tape the large straw piece (not the full length straw) to the top of the full length craft stick.
4. Now, you will combine the two pieces you just created by taping the full length craft stick to the full length straw. Make sure to line up the straw segments so they are in a straight line and only leave a small space between the top of the craft stick and the first segment.
5. At this point you should have one long piece with the craft stick sandwiched between the straws.
6. Tie a bead to one end of the string and pull the string through all the straw pieces, **not** the full length straw. Then, tie a bead to the other end of the string.
7. Now, pre-bend the finger at each joint. You just finished one finger!
8. You should be able to hold the long stick and pull the string to make the finger bend!
9. Now you can build three more fingers and a thumb to have a complete hand. Remember that the thumb has one less segment than the other fingers!

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Modified from directions in *Stomp rockets, catapults, and kaleidoscopes : 30+ amazing science projects you can build for less than \$1* by Curt Gabrielson p. 124

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# Thaumatrope

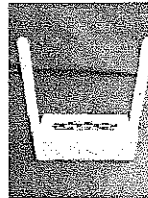
## Supplies:

Kleenex box  
Rubber band  
Cardboard  
Tape  
Glue

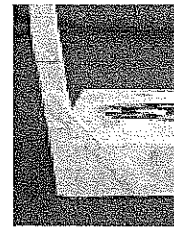
2 long craft sticks  
2 small craft sticks  
2 sheets of white paper  
scissors

## Directions:

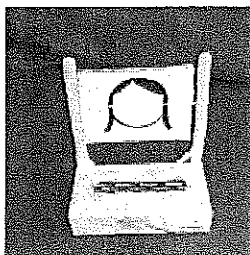
- Tape the long craft sticks to the side of the Kleenex box so they look like goal posts.



- Tape the small craft sticks to the bottom of the same side making triangles for braces.



- Cut two sheets of white paper to the same size as your piece of cardboard. Draw half of a picture on one of the sheets of white paper. Then draw the other half of the picture on the other sheet of white paper. For example, you could draw a head with hair on one piece of paper and draw the eyes, nose, and mouth on another piece. Do this carefully to make sure the two pieces of the picture will fit together.
- Glue one picture to each side of the cardboard. The back side should be upside down if you look at it without flipping over the cardboard.
- Staple a rubber band to the middle of the cardboard.
- Stretch the rubber band from one craft stick to the other so that your picture is in the middle between the sticks.
- Twist the picture around and double check that both sides of your picture are right-side up when you look at them. If they are, wind the picture up and let it go!



Modified from *Stomp Rockets, Catapults, and kaleidoscopes : 30+ amazing science projects you can build for less than \$1* by Curt Gabrielson

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