

Rubber Band Racer



Have you ever played with a rubber band and tried to shoot it at one of your friends? If you have, you'll know that it is capable of storing energy – at least enough energy to sting when you hit someone! This time round, we'll be using that same energy to move a small cardboard car forward! Unleash your creativity and challenge your friends to a rubber band powered race by following the instructions below.

WHAT YOU WILL NEED

- | | |
|-------------------------|------------------------------|
| • Paper towel roll tube | • Scissors |
| • Cardboard | • Ruler |
| • 2 sharpened pencils | • Compass |
| • Rubber bands | • Paint and decoration items |



LET'S BUILD

Create the wheels

1. Using a compass, draw 4 circles of equal size on a piece of thick cardboard.
2. Cut each one of them out with scissors
3. Use a sharpened pencil to carefully poke a hole through the centre of each one.

Prepare the car body

1. At one end of the cardboard roll, mark 2 holes opposite each other.
2. With the help of an adult, create the holes using a sharp pencil or scissors. The holes shouldn't be too wide – they should be just big enough to slide the pencil through and allow it to rotate freely.
3. Repeat at the other end of the cardboard roll.
4. Thread the pencils through the holes in the cardboard roll and fit the wheels at each end.
5. Paint and decorate the car as you wish.

Launch mechanism

1. Cut two slits close to each other at one end of the cardboard roll.
2. Link a couple of rubber bands together as shown in the image below.
3. Attach one end of the rubber band chain to the slits.
4. Pass the rest of the chain through the cardboard tube to the other end. Turn the pencil to wind the rubber band chain around the pencil while stretching it out. When turning, overlap the rubber band turns to secure it in place.
5. When you're ready to race, let go. Watch your racer go!

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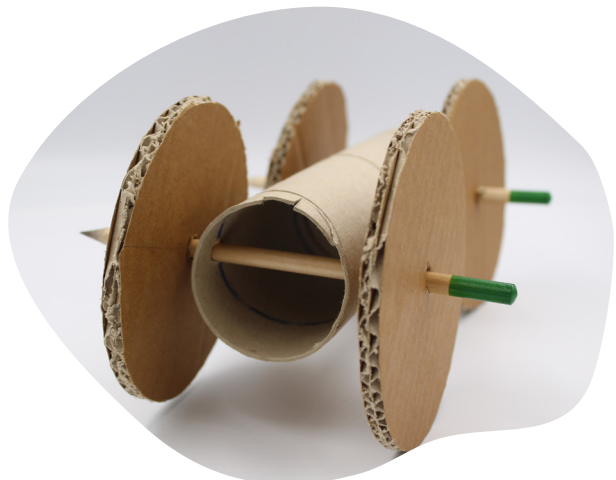
Cut and prepare 4 wheels



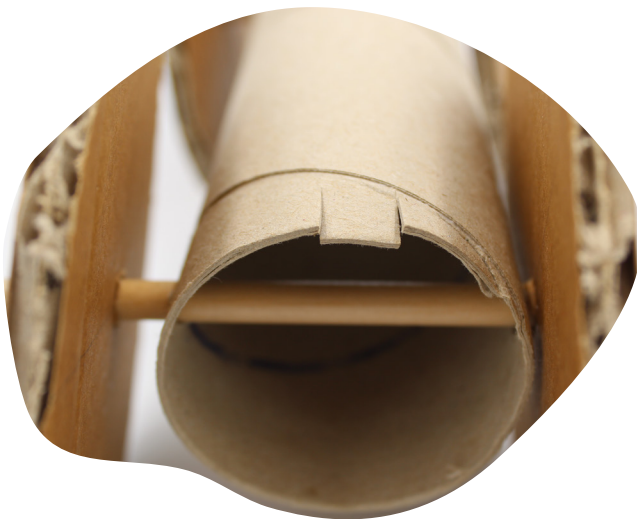
Punch holes on both sides of the cardboard roll



Rubber band chain - made by linking together rubber bands



Finished car body



Cut the slits in cardboard tube



Attach the rubber band chain to the slit and pass it through the tube to the pencil on the other side

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At Esplora



Challenge a friend to a solar-powered car race in our Eco-life gallery and see energy changes in action. Can you point out each energy transformation that is happening in this exhibit?

