DIYs » Stem Activities » Marvelous Mechanics Motion » Age 6 - 8 » Jumping Rabbit



3, 2, 1, Hop! Easter isn't just about finding eggs - it's a perfect opportunity to let creativity and joy "hop" together! Make your own jumping rabbit, explore energy transformation, and dance joyfully to welcome spring!

## **Materials Needed**

White card Paper cups Scissors Double-sided tape Pencil Rubber bands Marker pens Ruler

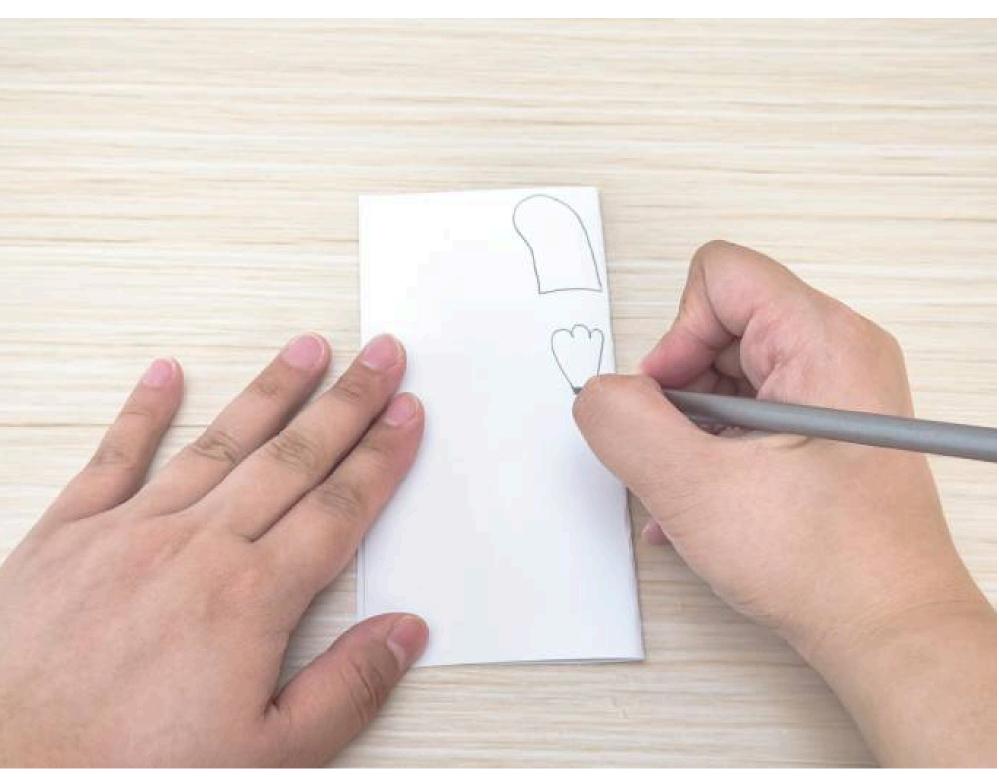


# Step-by-step tutorial

Step 1 Fold the card in half.



Step 2Using a pencil, draw rabbit ears and feet on the folded card.



Step 3

Cut out the rabbit ears and feet. You will get 2 sets of ears and feet.

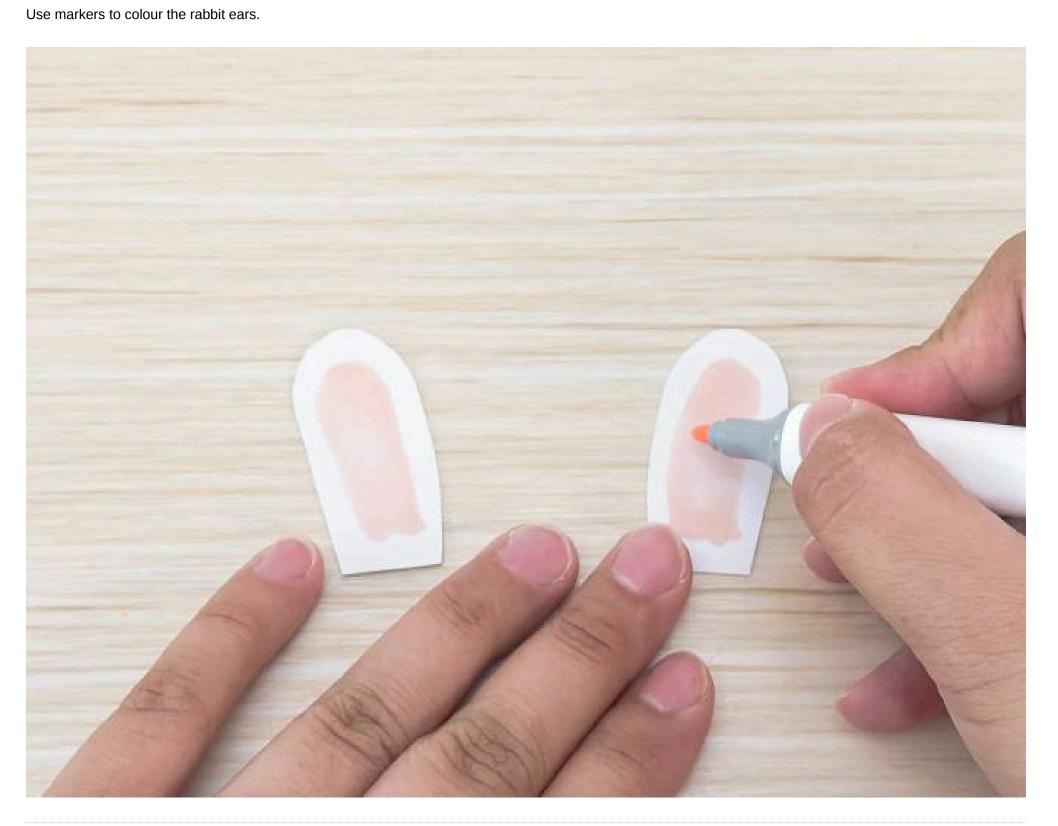


#### Step 4

Fold the bottom of the rabbit ears inward by 0.5cm.



## Step 5



#### Step 6

Take a paper cup and place it upside down. Draw the rabbit's face on the cup using markers.



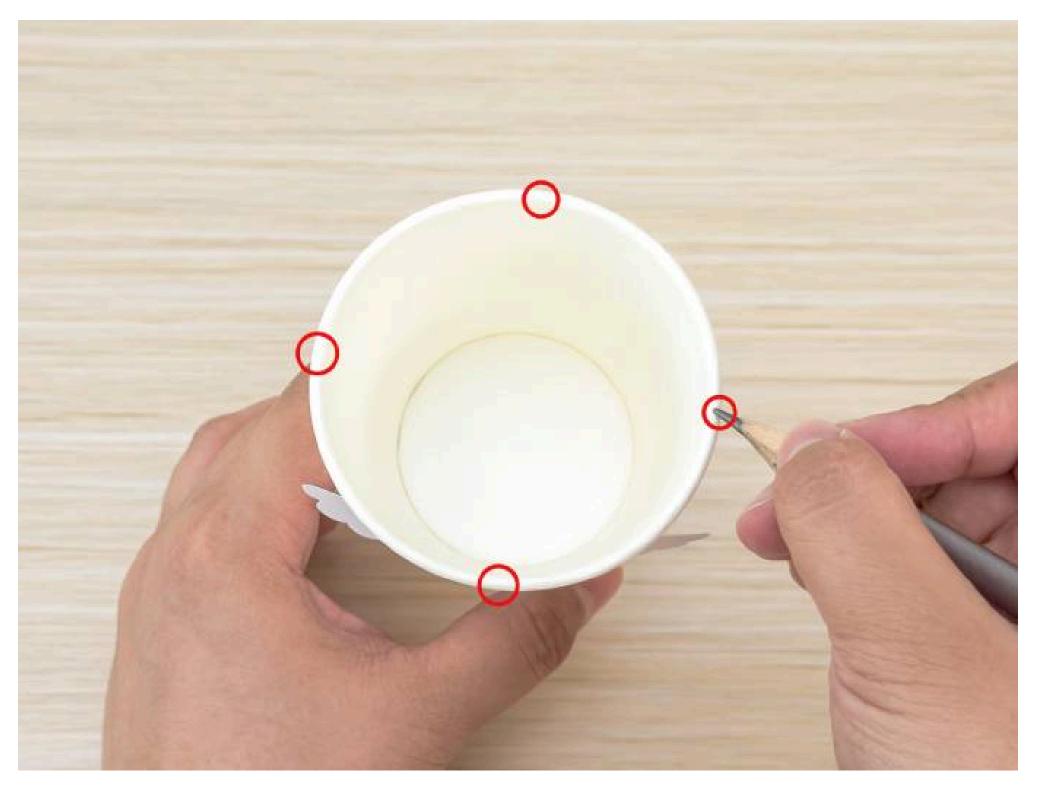
### Step 7

Apply double-sided tape to the folded sections of the ears and attach them to the cup's top. Then stick the feet to the bottom of the cup.



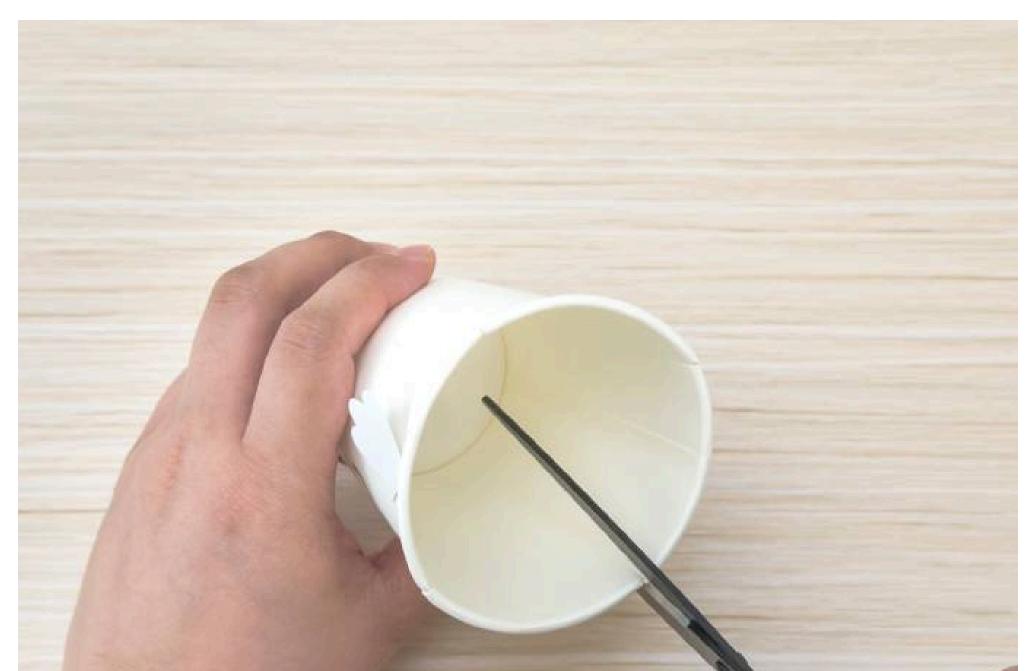
### Step 8

Next, turn the cup right side up. Use a pencil to mark 4 points around the cup's rim as shown.

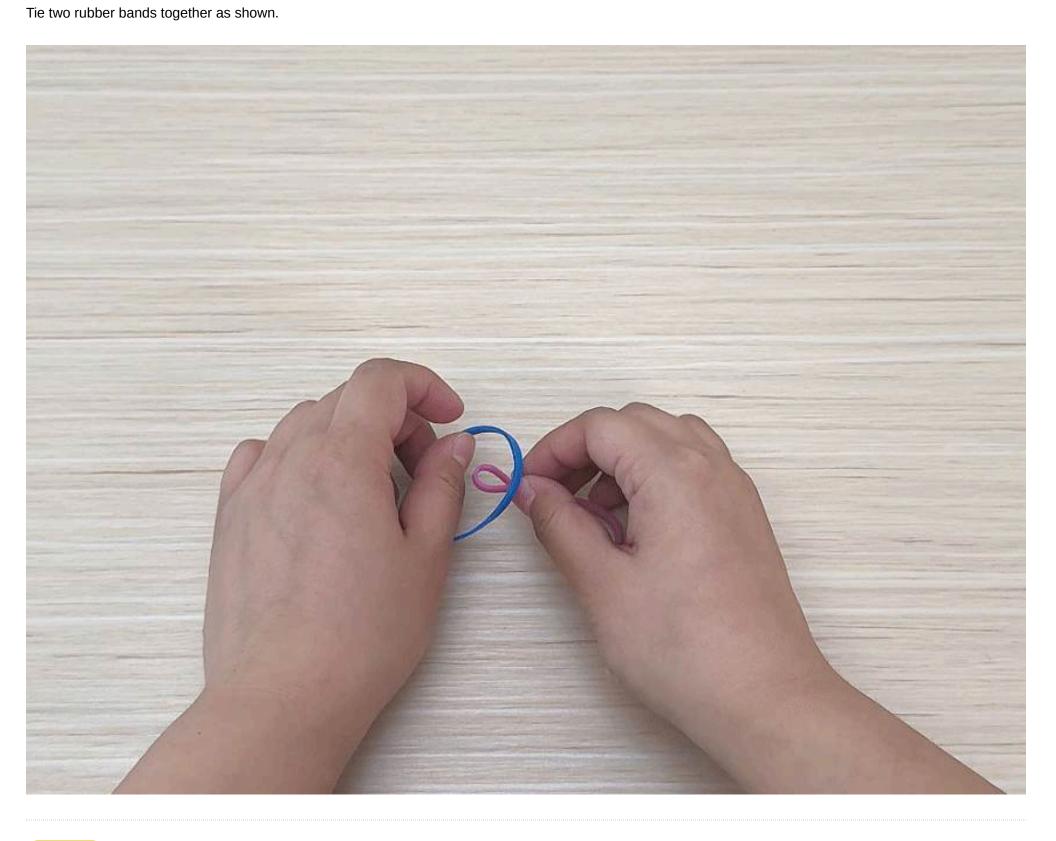


#### Step 9

Using scissors, cut 0.3cm notches inward at the marked points.



#### Step 10



#### Step 11

Then, secure the rubber bands into the notches you cut in the cup.



#### Step 12

Take another paper cup as a base and place it upside down. Put the rabbit cup on the base, press down and release - watch your rabbit jump!



## The Science Behind It:

The rabbit's jumping involves the conversion between elastic potential energy and kinetic energy. When rubber bands are stretched, their molecular chains elongate, storing elastic potential energy. When released, the rubber bands quickly return to their original length, converting the stored elastic potential energy into kinetic energy, which propels the object upward.

The speed and distance of the launched object directly correlates with how far the rubber bands are stretched—the further the stretch, the more elastic potential energy is stored, resulting in more energy being released and the object flying further or faster.