Infinite Loop Toy

Stem Activities

Ages: 9-12

Greater than 30 minutes

Grownup needed

Give children a simple yet challenging game to immerse themselves in! This infinite loop creative toy tests children's hand-eye coordination and reaction skills while introducing basic concepts of physical motion through play.

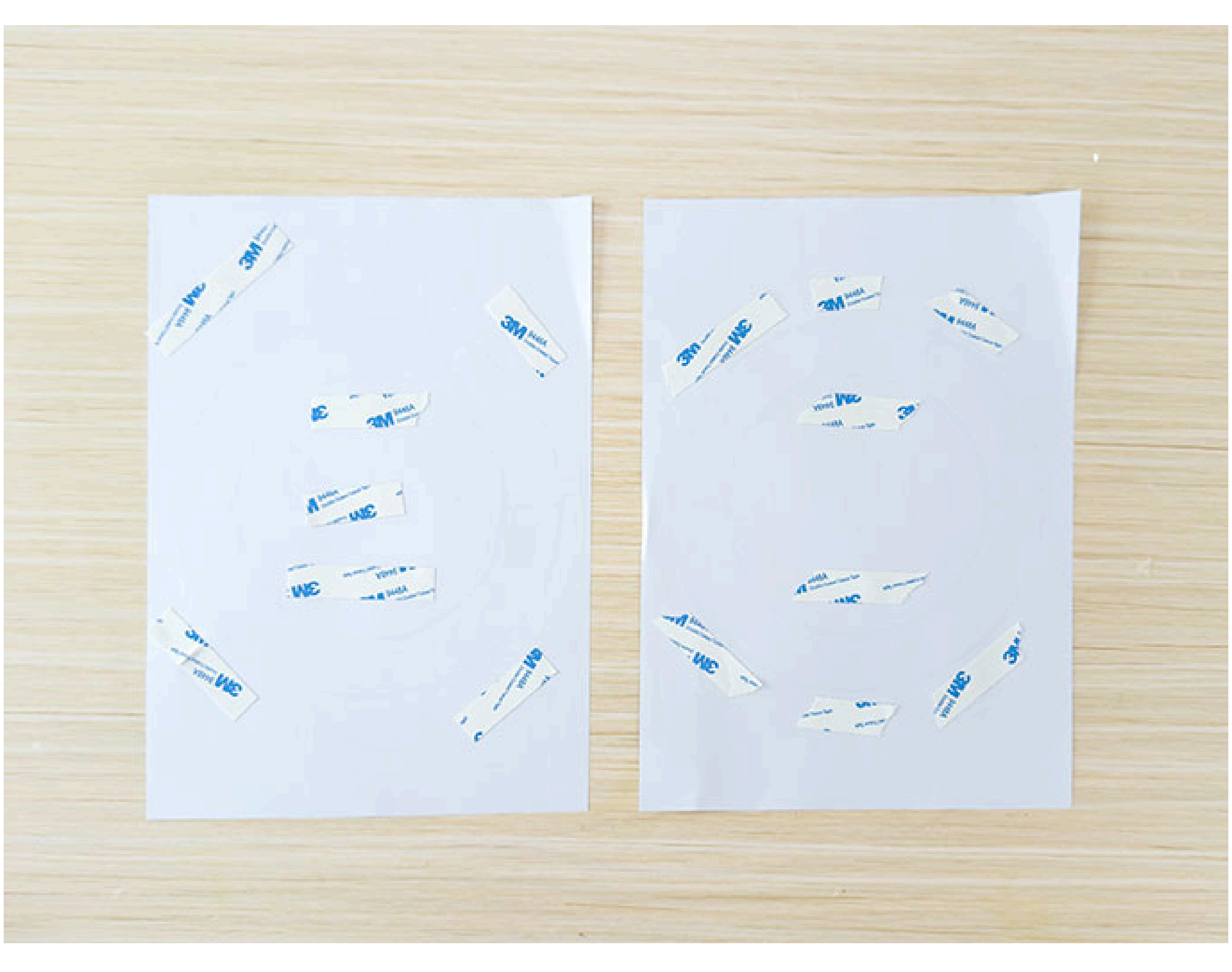
Materials Needed

- Printable template
- Card paper
- 35cm x 25cm cardboard
- Hot glue
- Small ball
- Split pins
- Double-sided tape
- Pencil
- Ruler
- Scissors
- Craft knife

Step-by-step tutorial

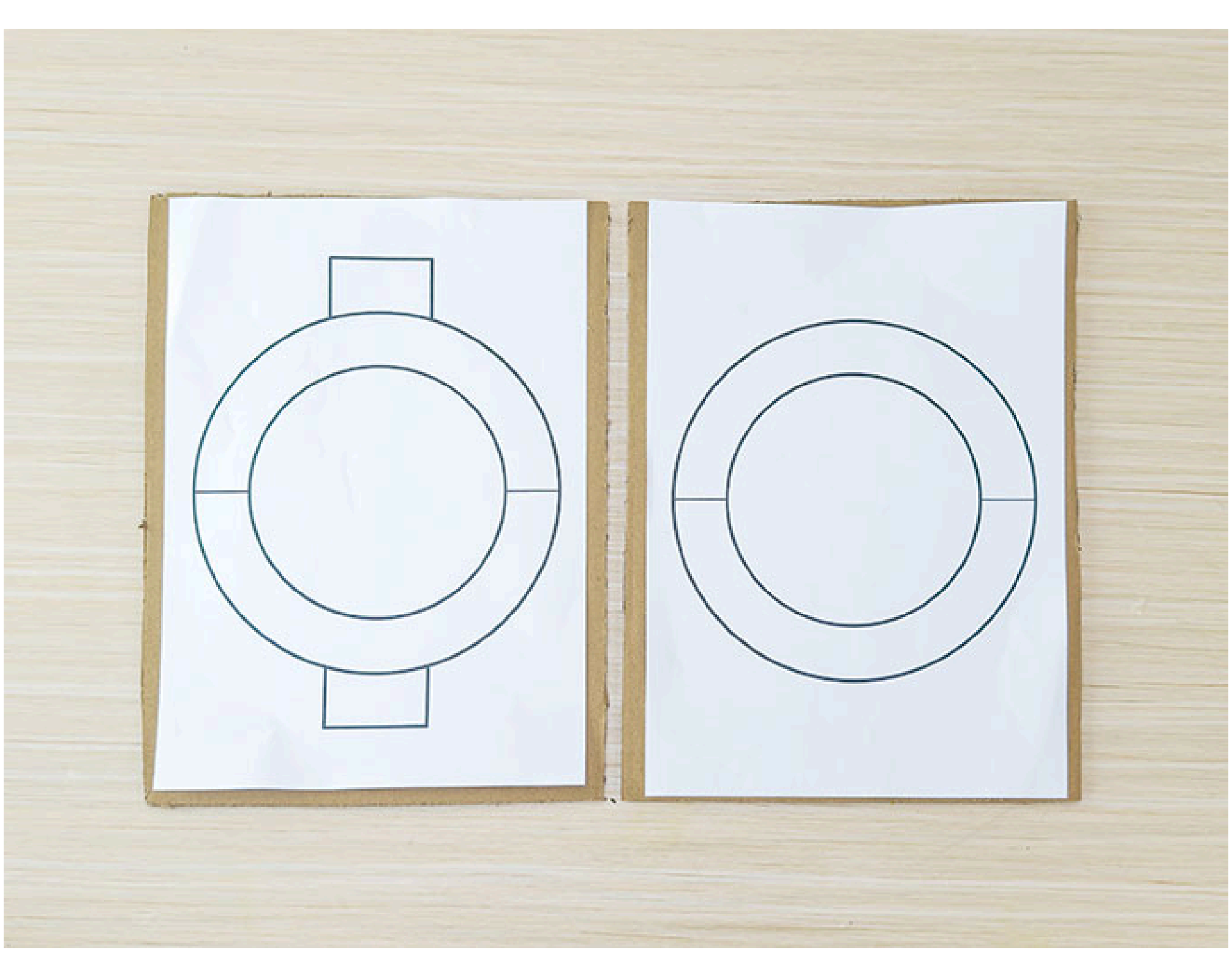
Step 1

Apply double-sided tape to the back of the printed template.



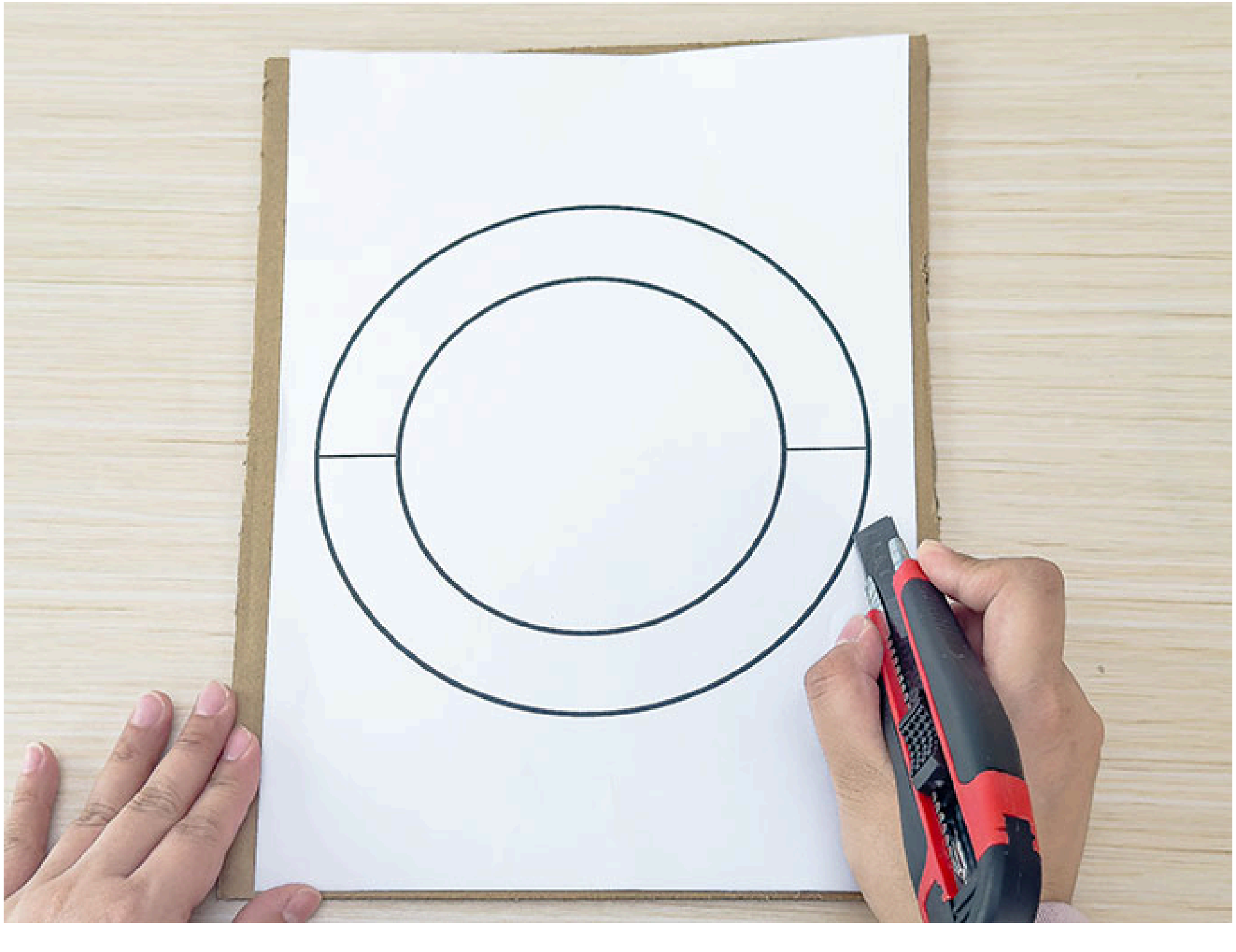
Step 2

Stick the template with double-sided tape onto the cardboard.



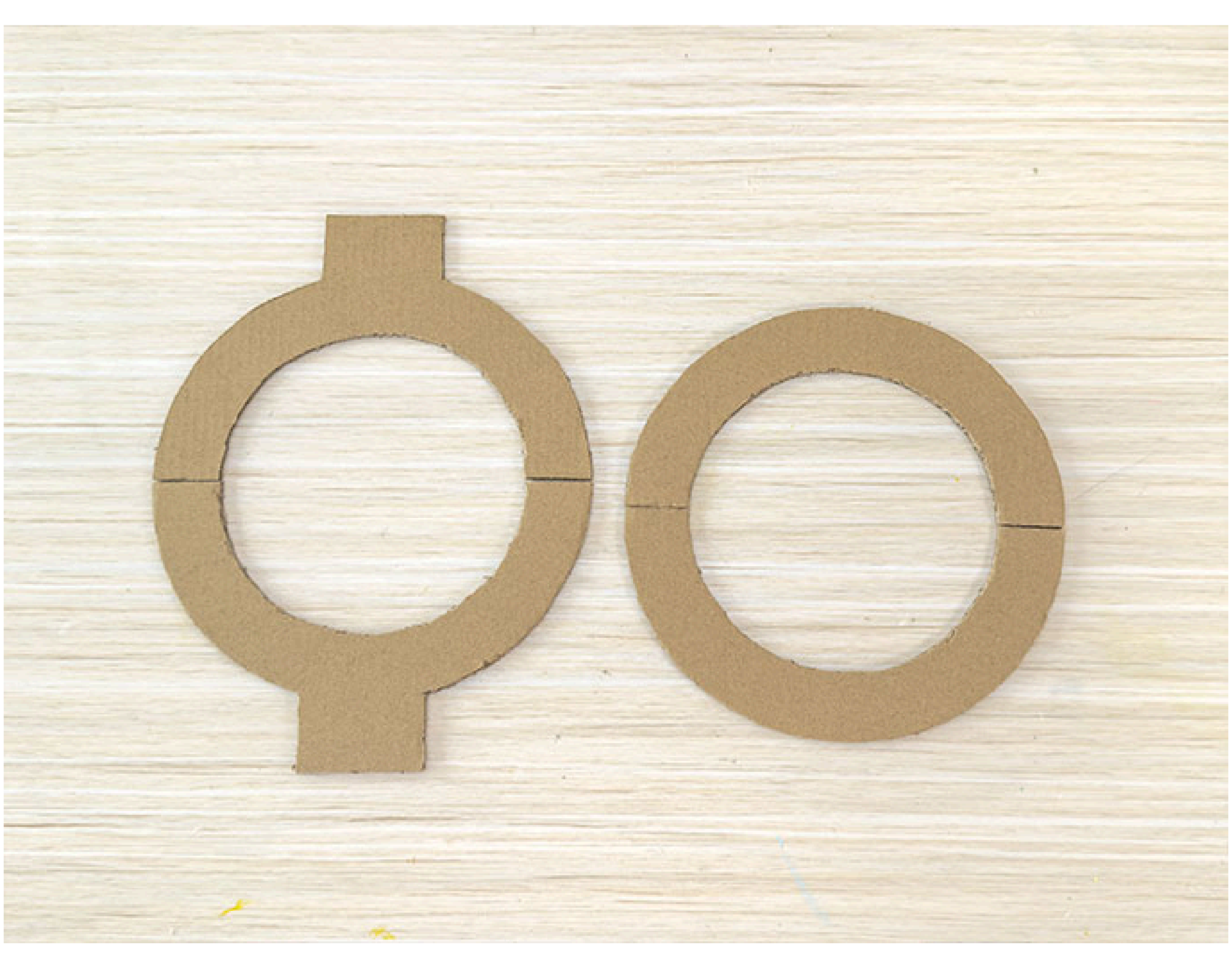
Step 3

Using the craft knife, carefully cut along the black edge lines through both template and cardboard.



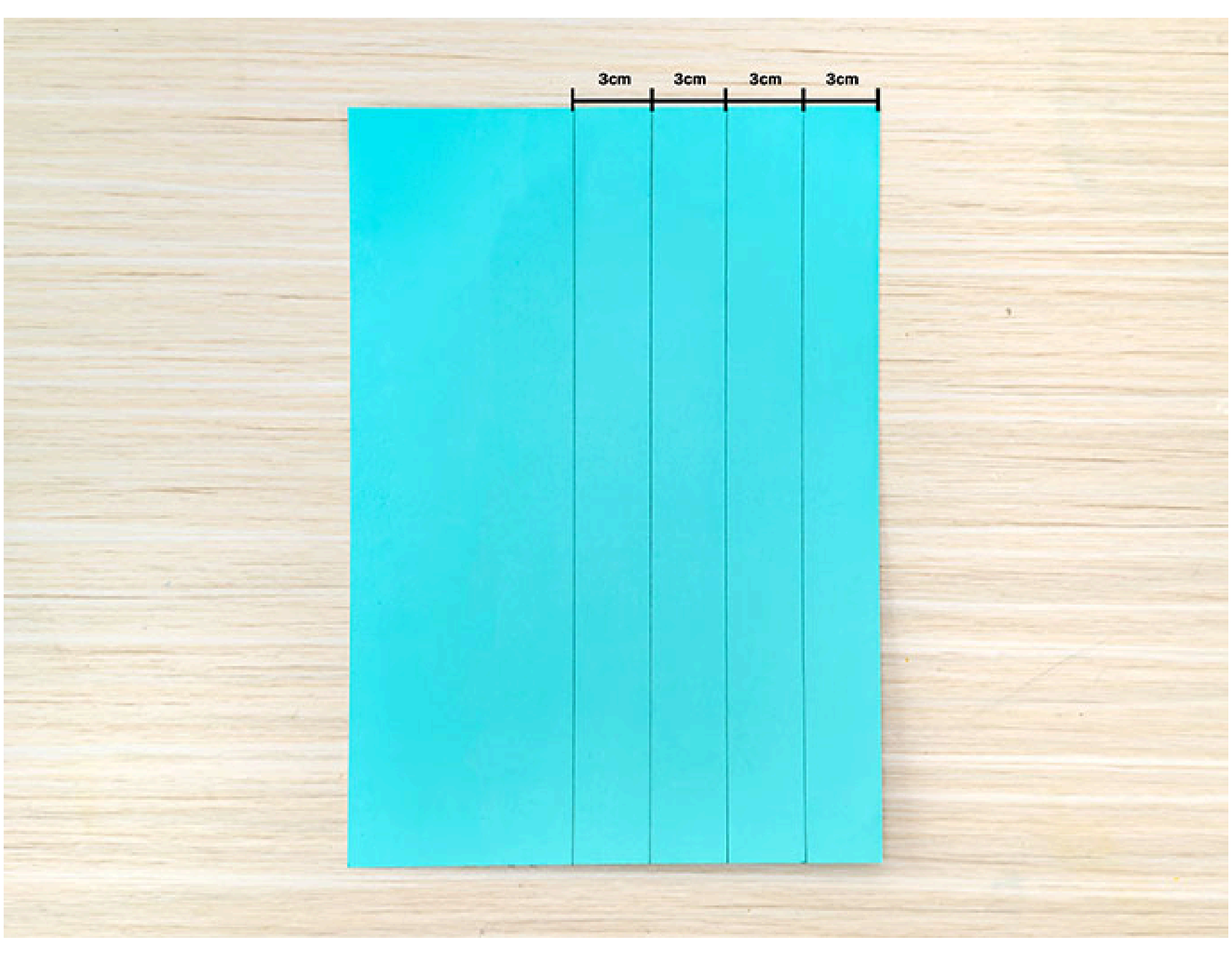
Step 4

After cutting, peel the template off the cardboard.



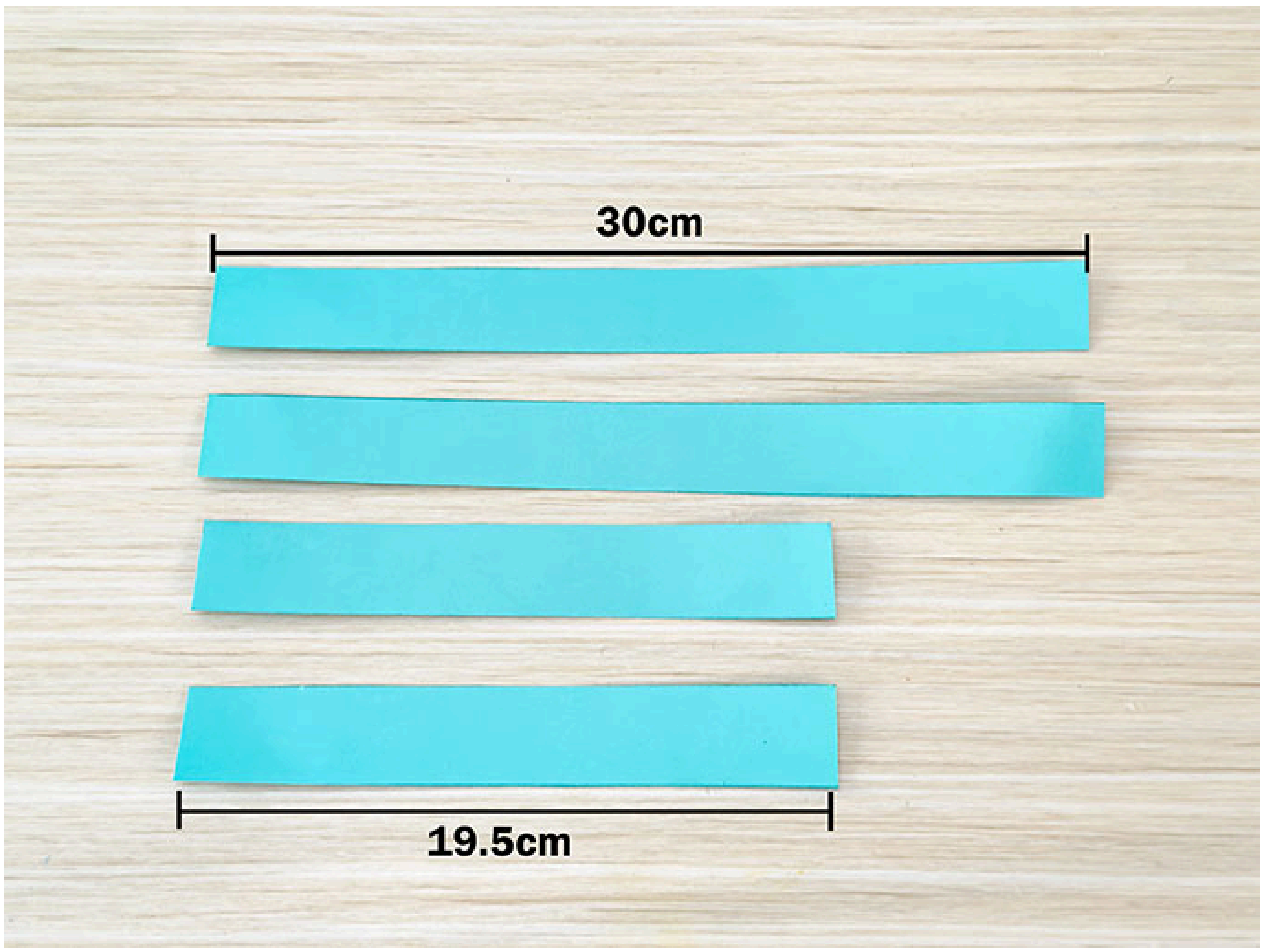
Step 5

On the wide edge of the card paper, mark points at 3cm, 6cm, 9cm, and 12cm, then draw vertical guide lines as shown.



Step 6

Cut the card paper along the guide lines using scissors. Then cut two pairs of strips to 30cm and 19.5cm lengths respectively.



Step 7

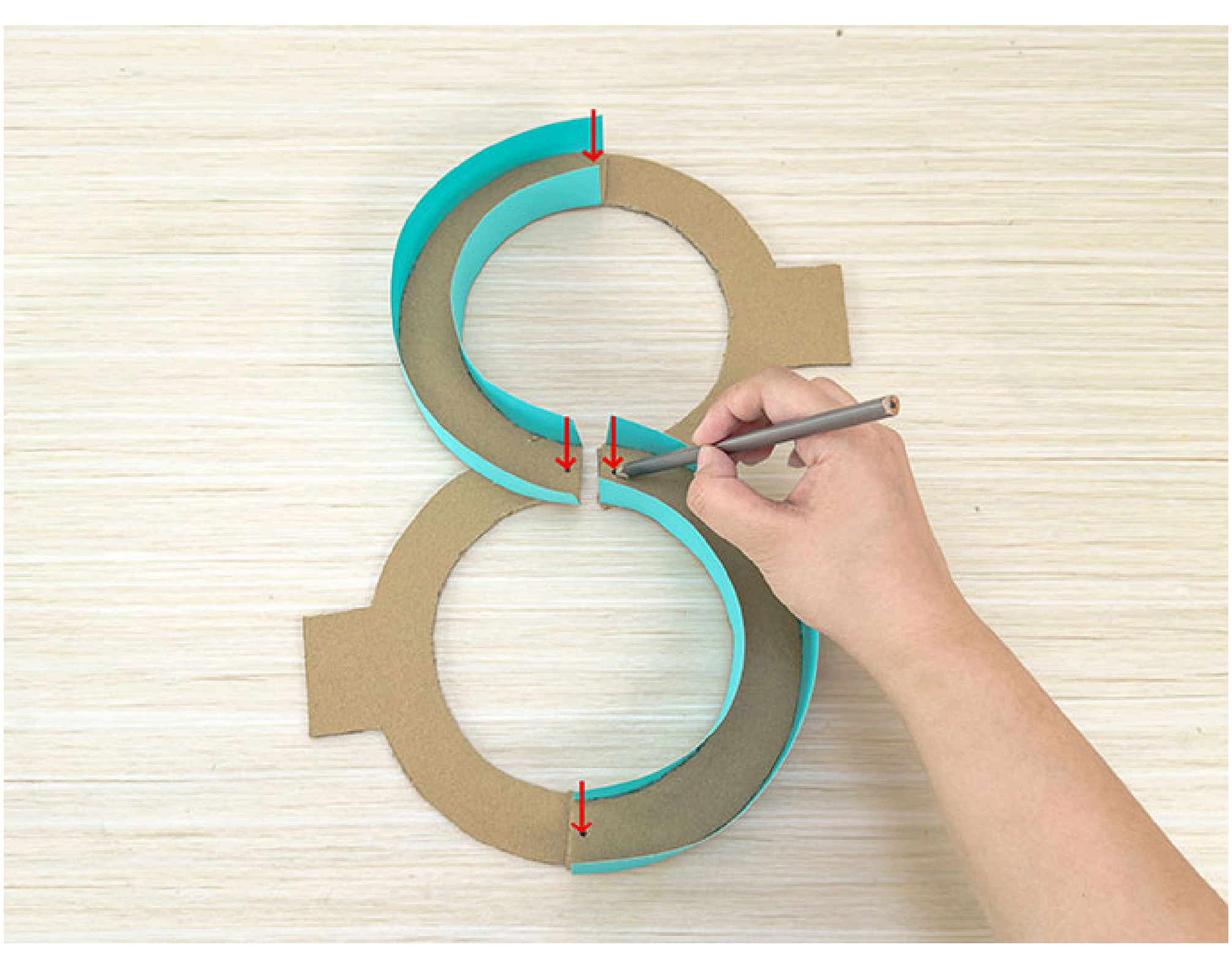
Take the circular cardboard piece without handles and use hot glue to secure the card strips along its edges. Ensure the 30cm strips are attached to the outer circle and the 19.5cm strips to the inner circle.

Step 8

Position the assembled cardboard piece as shown.

Step 9

Using the pencil, make eight small holes along the edge of the semicircular cardboard as shown.



Step 10

Insert split pins through the corresponding top and bottom holes and secure them.

Step 11

Now, place the small ball into the card strip track and pull the handle up and down as shown. See how many loops you can get the ball to complete!

The Science Behind It:

When the ball moves along the track, gravity becomes the main force driving its motion. As the ball rolls down from a height, gravitational potential energy converts to kinetic energy, allowing the ball to maintain its movement.