


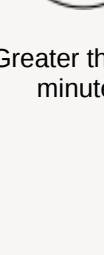
★★★★★

# Running Rabbit


Stem Activities



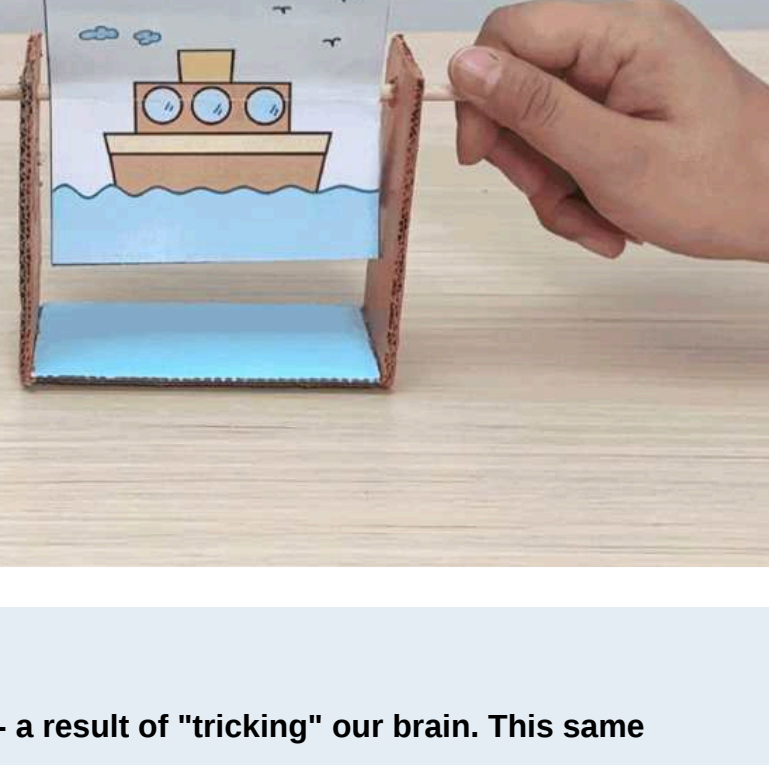
Ages: 6-8



Greater than 30 minutes



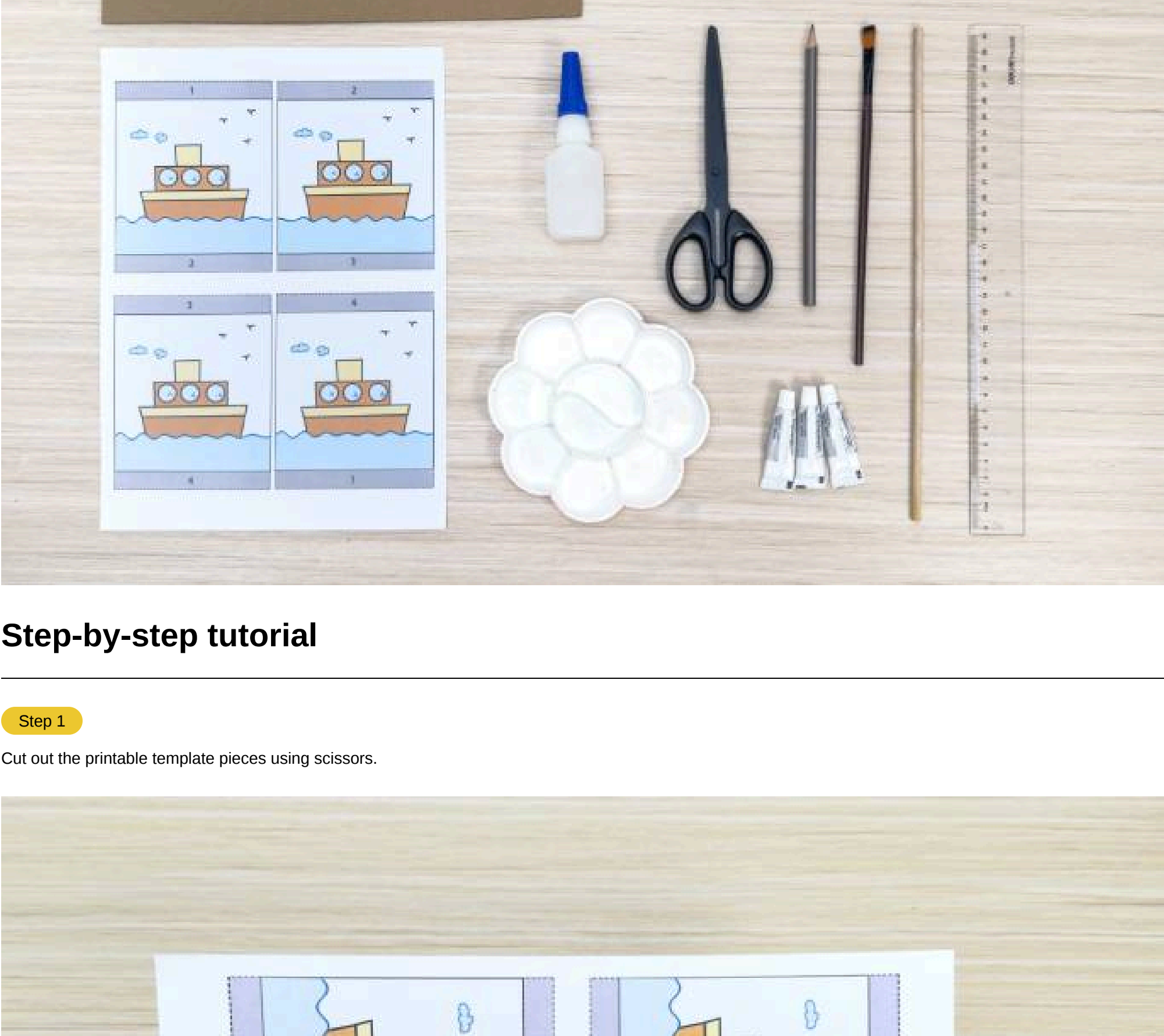
Grownup needed



How can static pictures create animation? This is actually an optical illusion - a result of "tricking" our brain. This same principle makes animations and films possible. Let's explore!

## Materials Needed

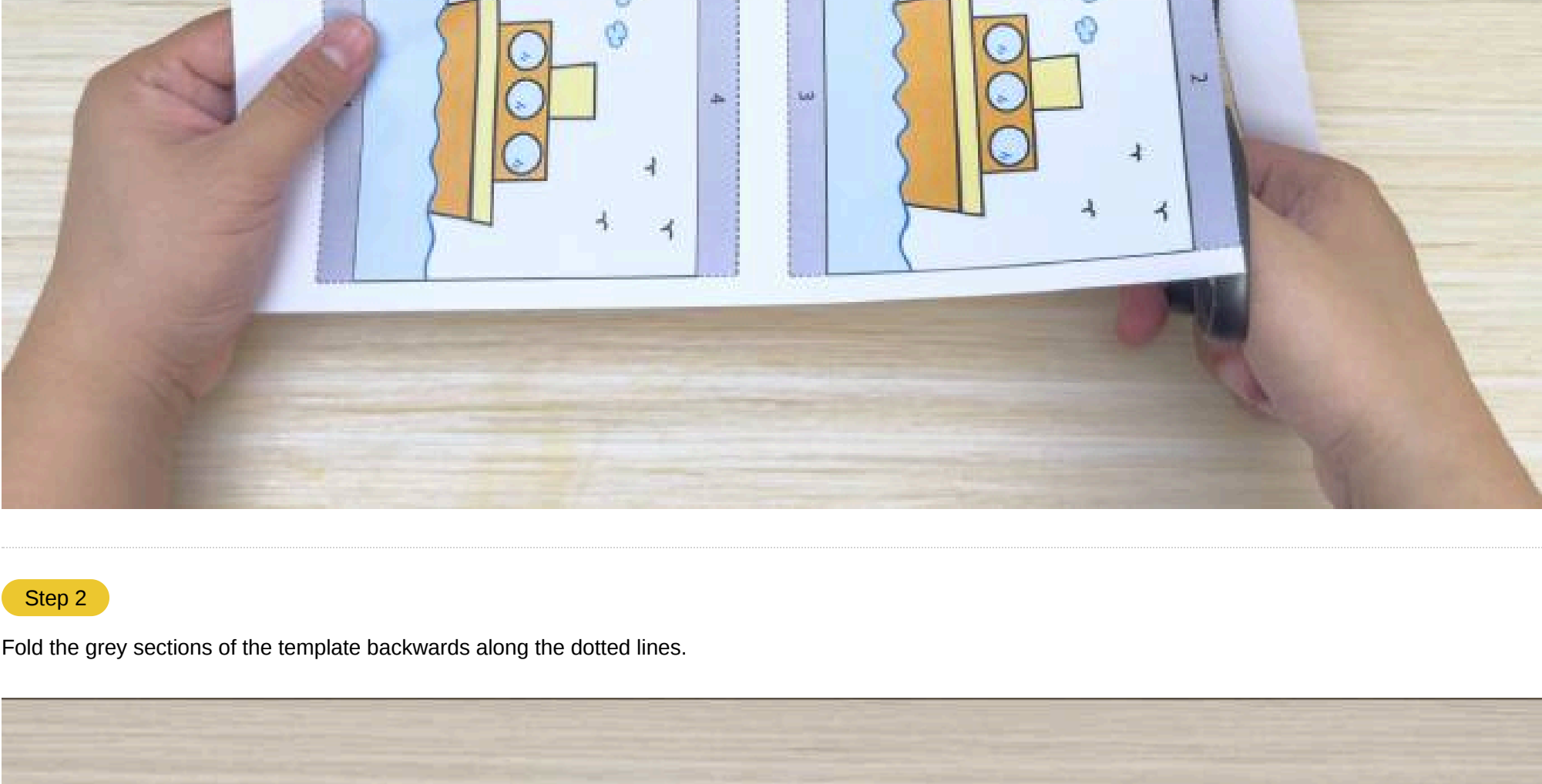
50cm x 30cm cardboard  
Printable template  
Strong glue  
Double-sided tape  
Scissors  
Paint palette  
Paint  
Pencil  
Paintbrush  
Wooden stick  
Ruler



## Step-by-step tutorial

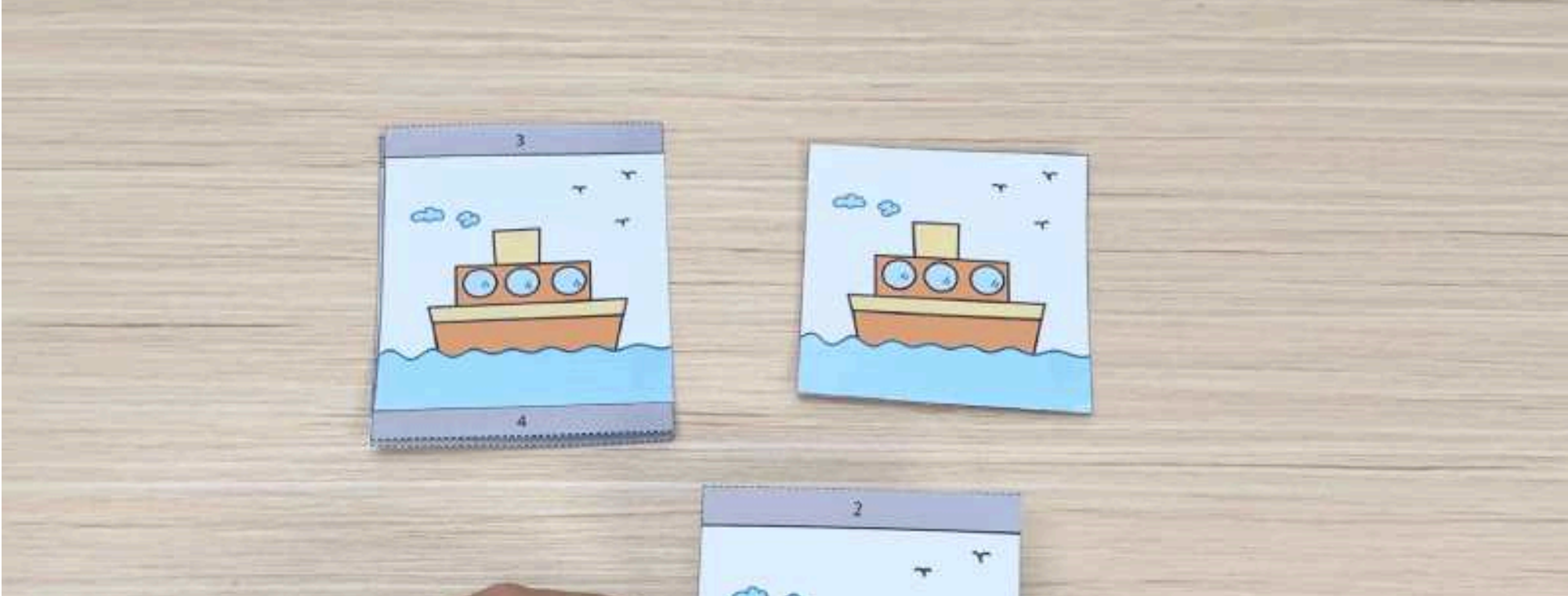
### Step 1

Cut out the printable template pieces using scissors.



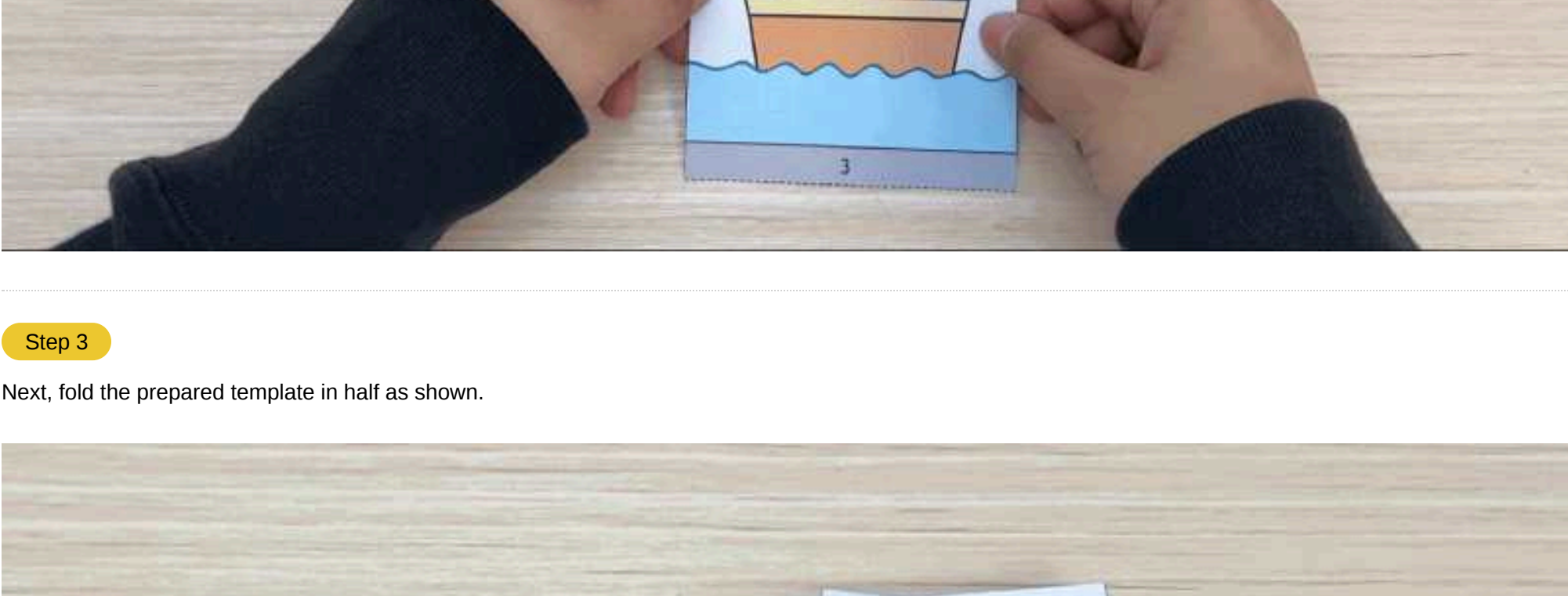
### Step 2

Fold the grey sections of the template backwards along the dotted lines.



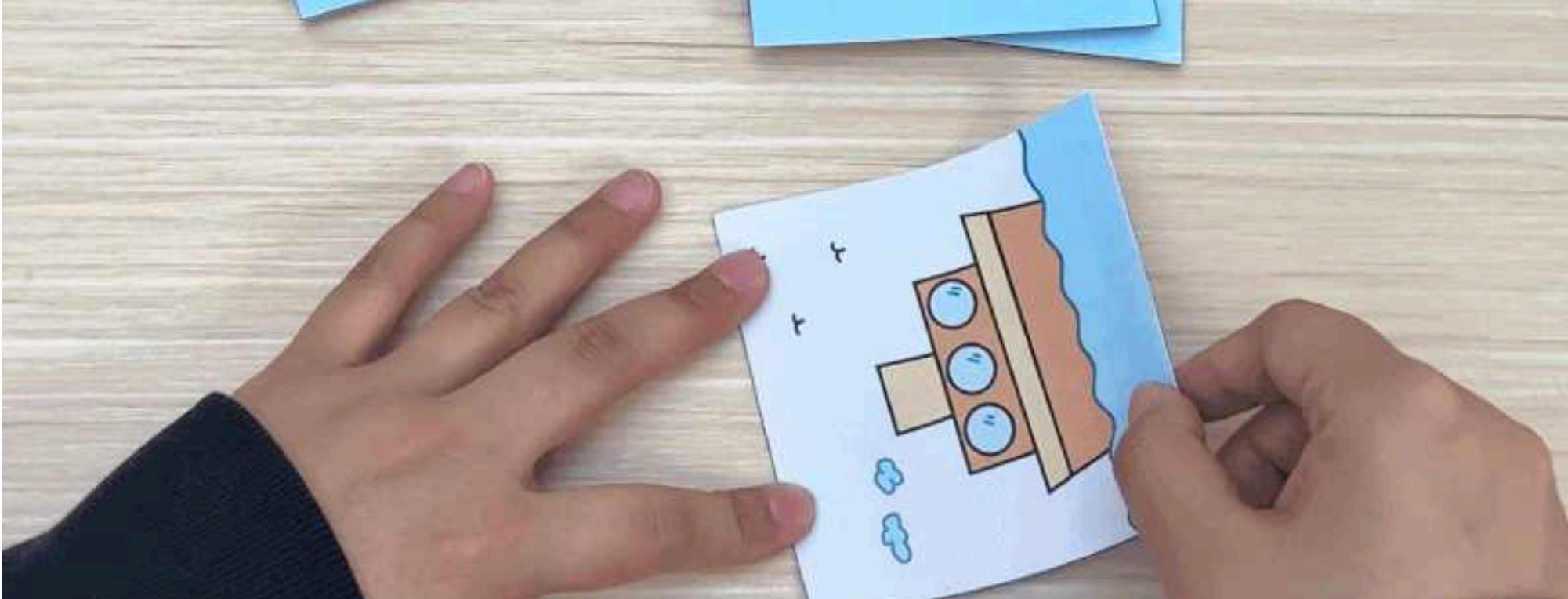
### Step 3

Next, fold the prepared template in half as shown.



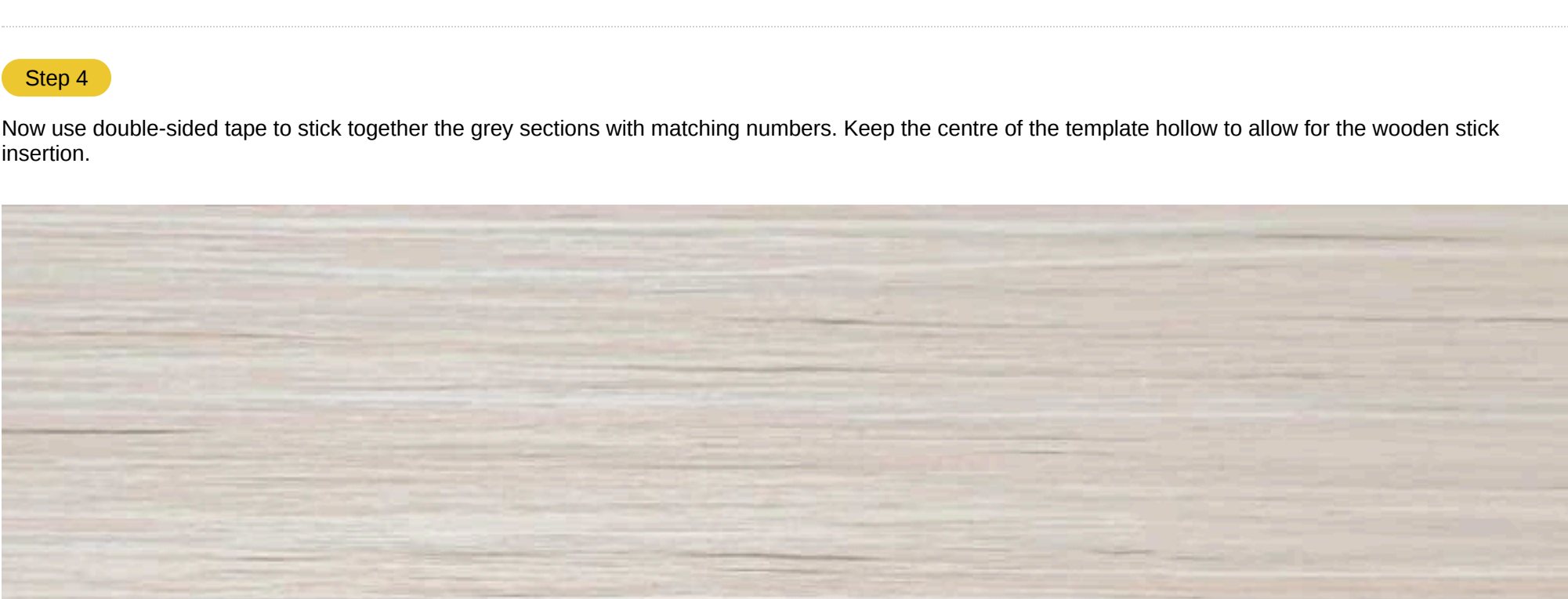
### Step 4

Now use double-sided tape to stick together the grey sections with matching numbers. Keep the centre of the template hollow to allow for the wooden stick insertion.



### Step 5

Cut a 16cm length from the wooden stick using scissors.



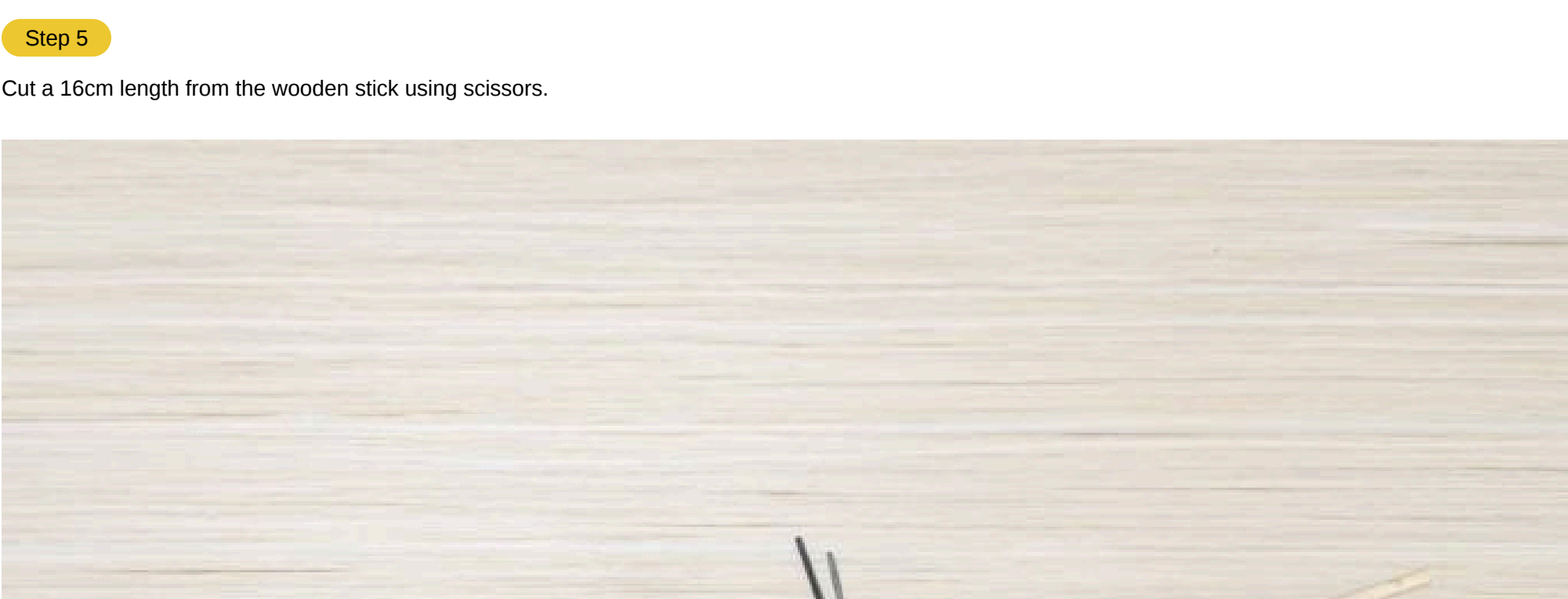
### Step 6

Thread the wooden stick through the middle of the assembled template!



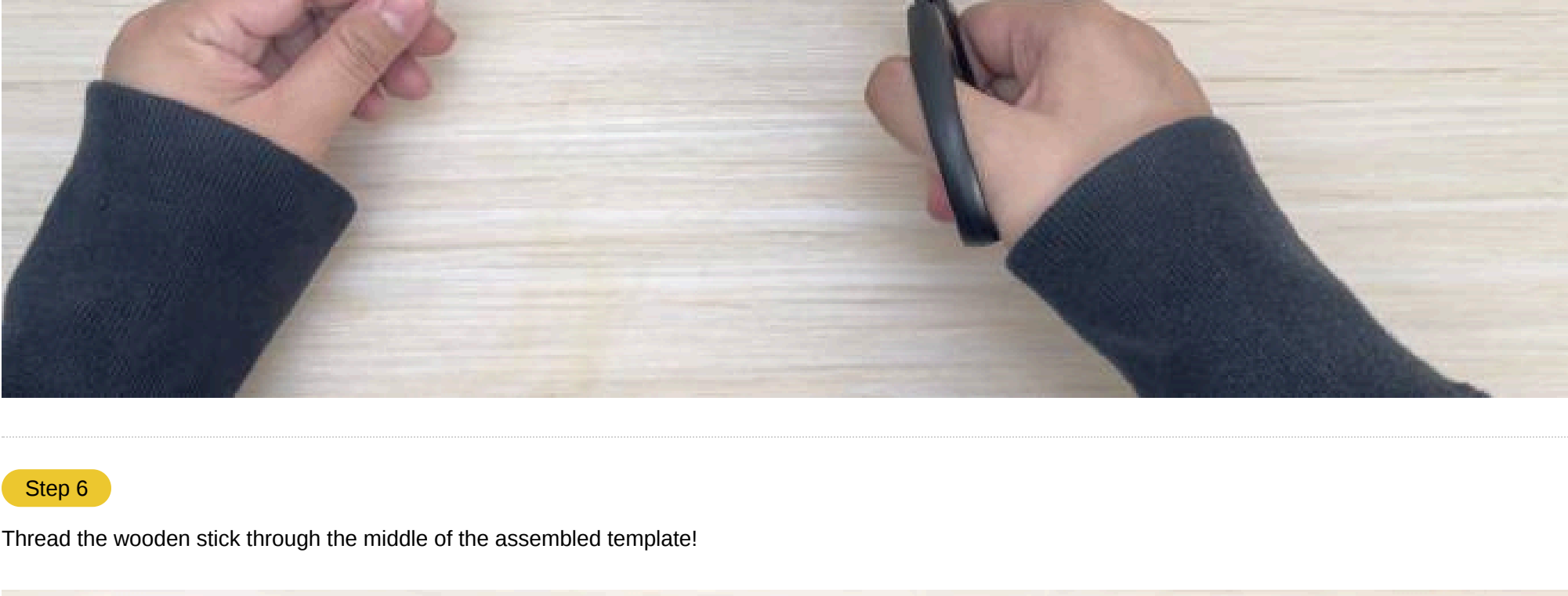
### Step 7

Take the 50cm x 30cm cardboard and draw two 6cm x 9cm rectangles and one 10cm x 6cm rectangle using the pencil and ruler. Cut out all three rectangles.



### Step 8

On the 6cm wide edge of each 6cm x 9cm cardboard piece, mark a dot 3cm along and 0.5cm in from the edge. Make holes at these marks with a pencil, ensuring the wooden stick can pass through. Repeat for both 6cm x 9cm pieces.



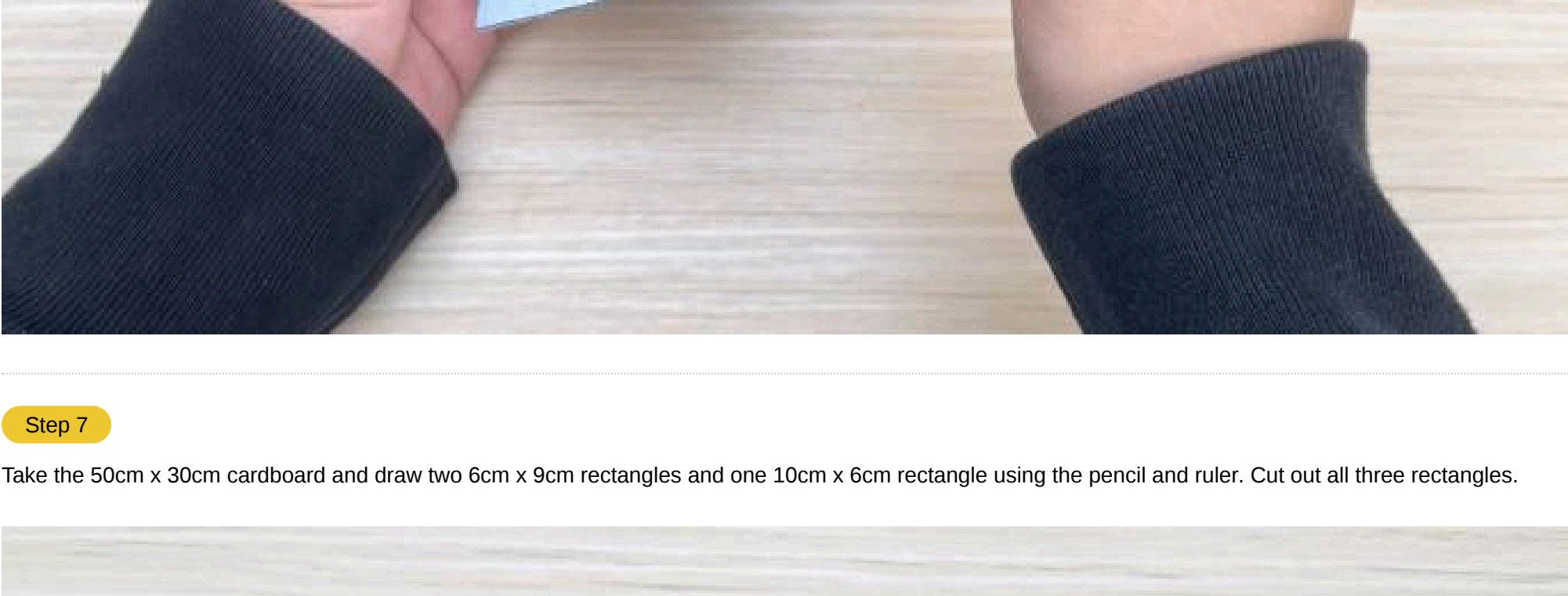
### Step 9

Paint the three template pieces in your favourite colours.



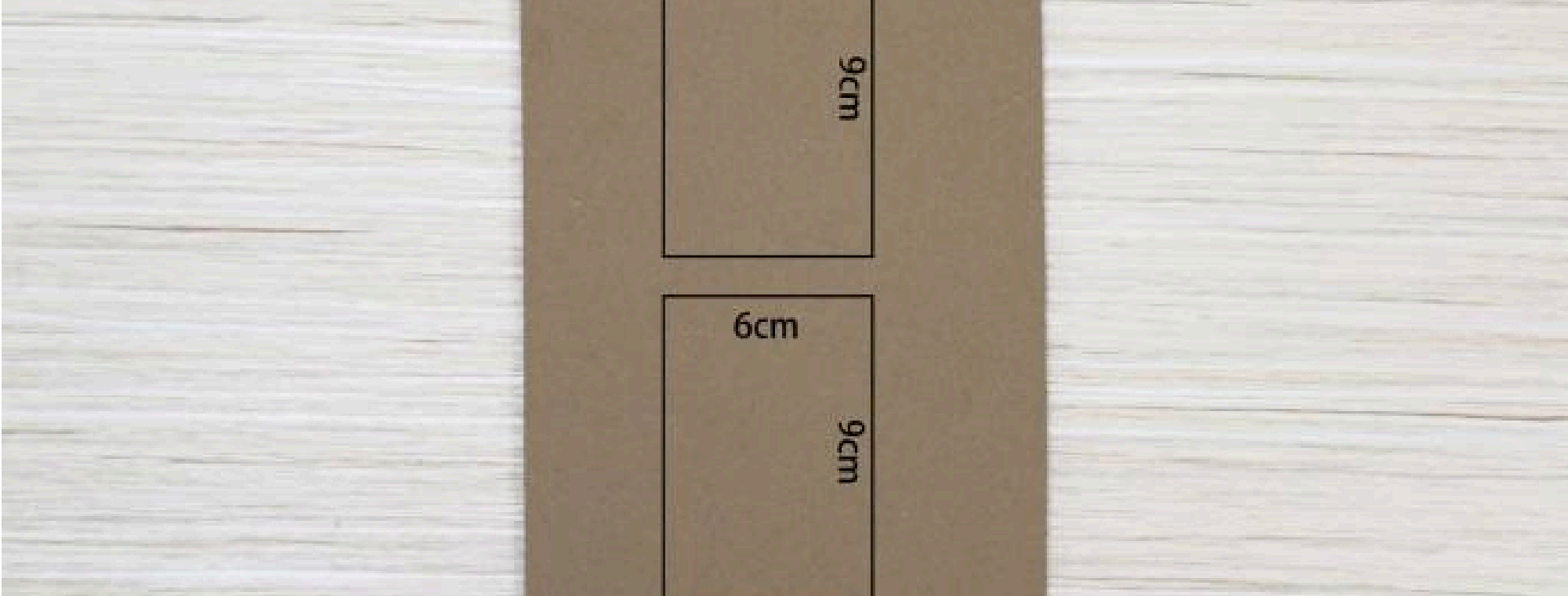
### Step 10

Using strong glue, attach the three cardboard pieces together as shown to create your stand.



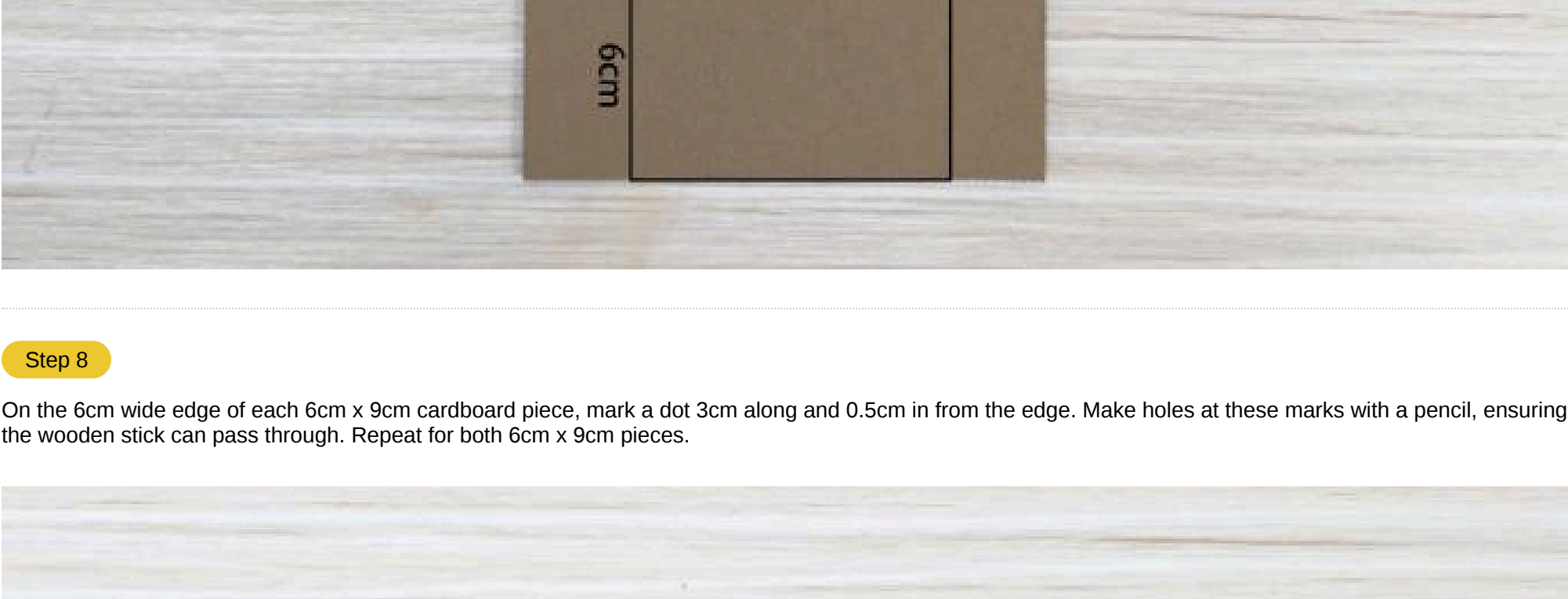
### Step 11

Insert the wooden stick with the template through the holes in the stand.



### Step 12

Now try spinning the wooden stick and observe what happens when the paper spins quickly.



## The Science Behind It:

When we flip through images quickly, our eyes retain each still image for a fraction of a second (called persistence of vision).

Our brain tends to "fill in" the gaps between these static images, making them appear continuous and fluid, like one continuous motion. This illusion is the principle behind animation. Early cartoons used this technique, creating moving stories by shooting consecutive frames one at a time!