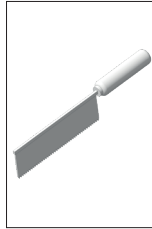


127.555

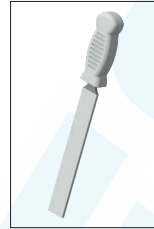
Hourglass



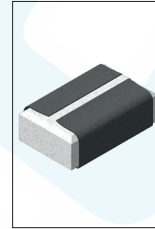
Tools required:



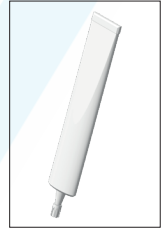
Miter saw



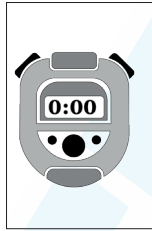
File



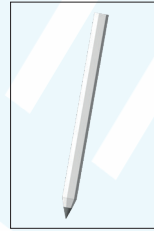
Sandpaper



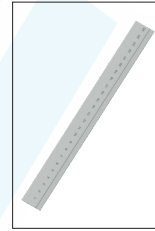
Superglue



Stopwatch



Pencil



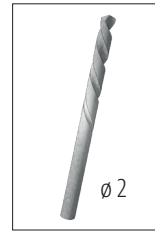
Ruler



Wood glue



Round file



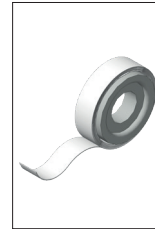
Drill



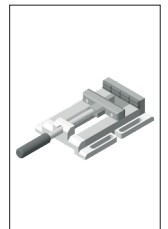
Scissors



Water Resistant



Adhesive tape

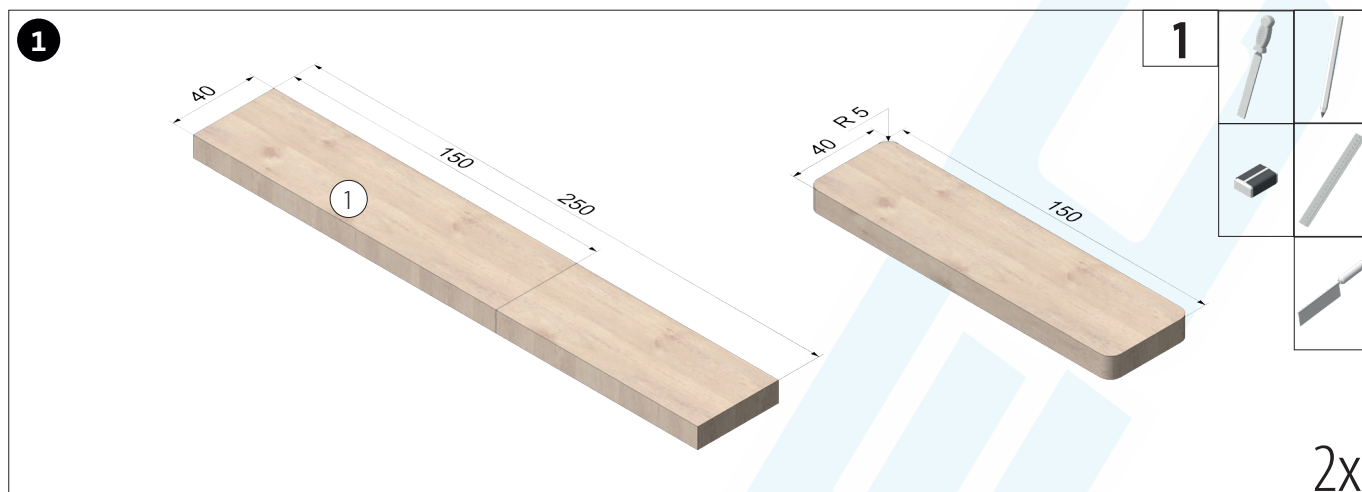


Machine vice

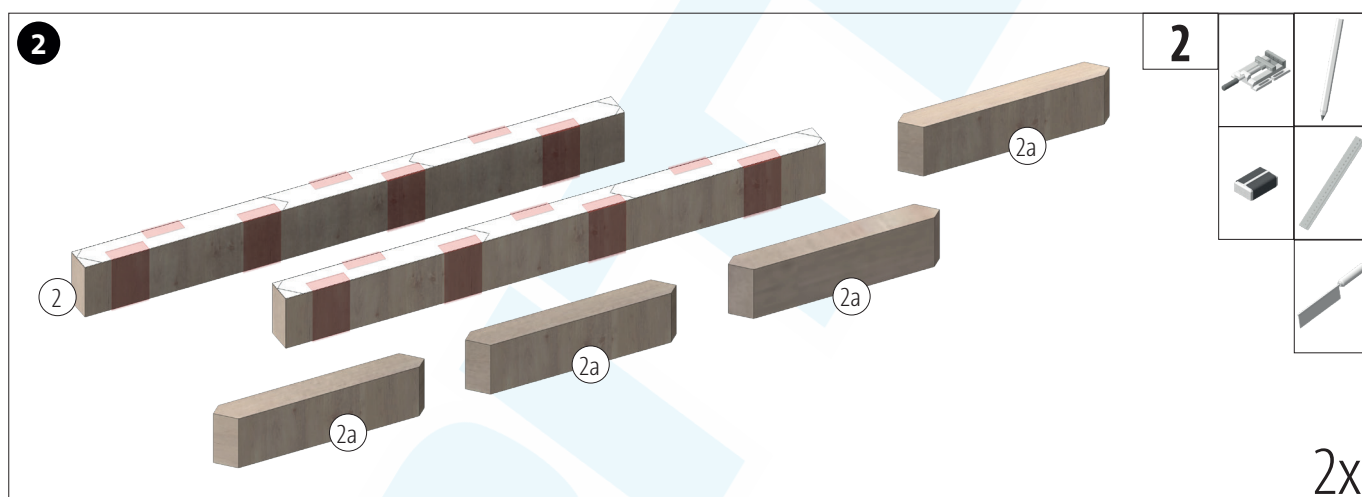
NOTE:

The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology. These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation! Not suitable for children under 36 months. Choking hazard!

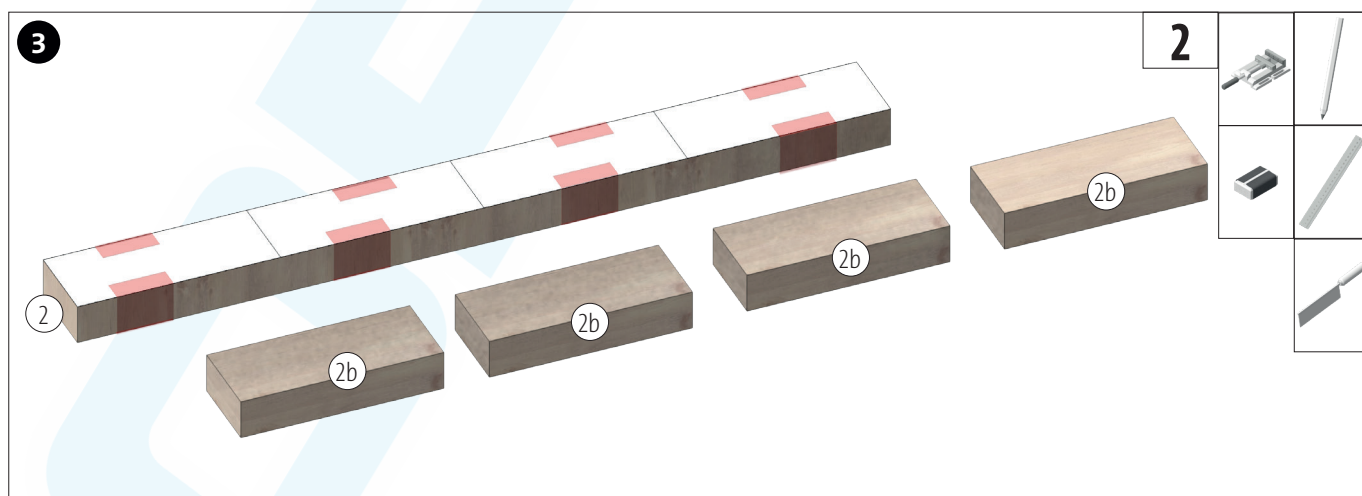
Part List	Quantity	Dimensions (mm)	Description	Part no.
Wooden strip	2	250x40x10	Base & Top plate	1
Wooden strip	3	200x20x10	Body	2
Wooden strip	4	150 × 5 × 5	Skirting boards	3
Thermoforming sheet	2	DIN A5	Protective Sheet	4
Bird sand	1	200g	Sand	5



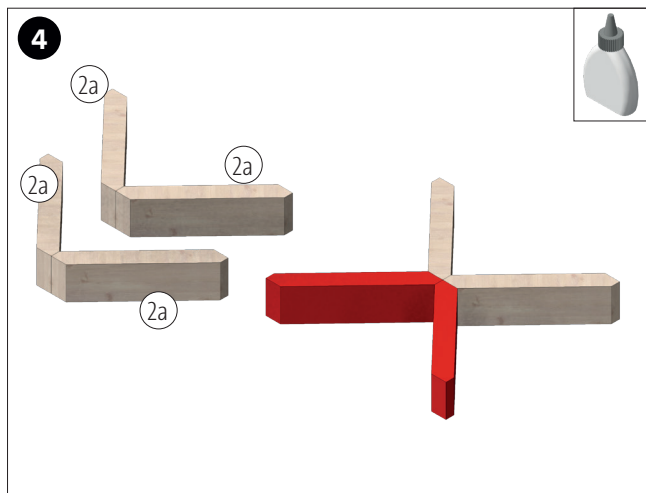
Cut both wooden strips (1) to a length of 150 mm, as specified, and clean up the saw cut. Then file all four corners to a rounded shape (approx. R 5 mm).



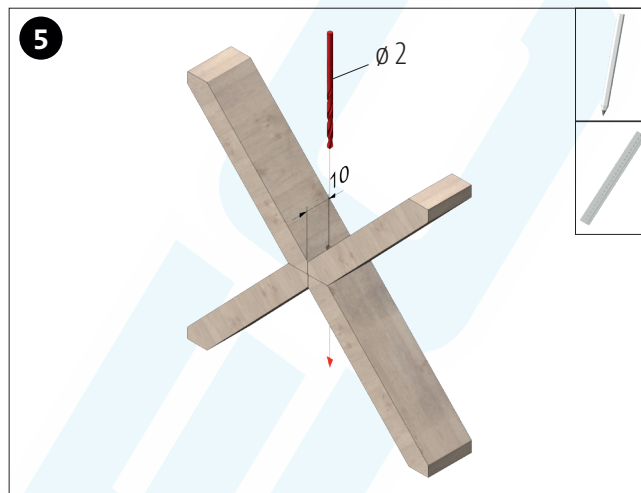
Transfer the template (A) onto the narrow sides of two wooden strips (2). Clamp it into a machine vice when cutting to length to ensure an accurate, straight cut. Then smooth the saw cuts with sandpaper.



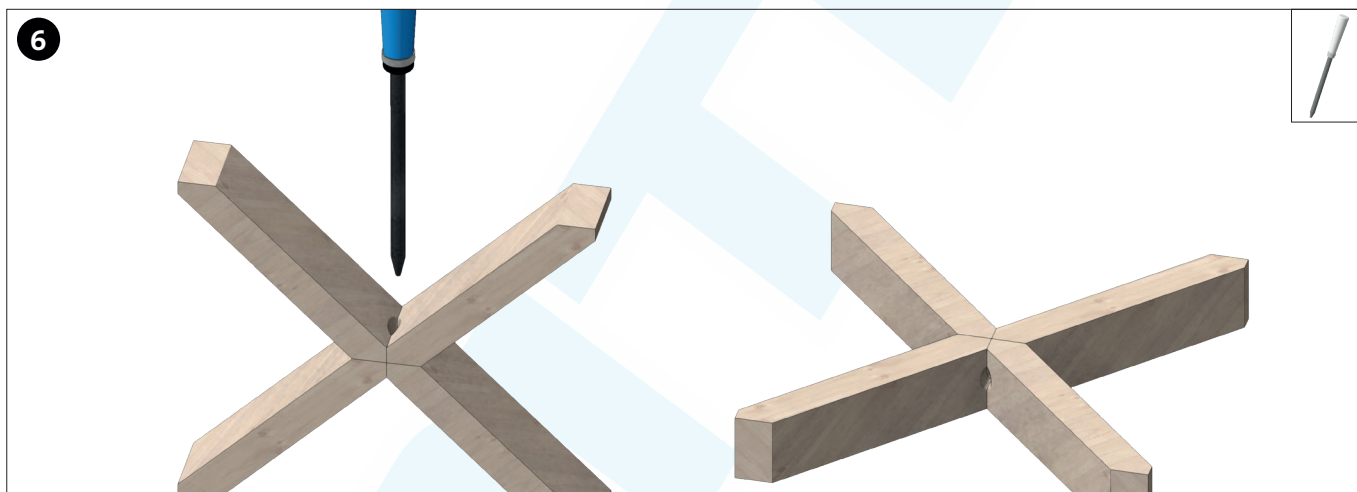
Transfer template (B) onto the remaining wooden strip (2). Cut the wooden strips (2b) to length and clean up the saw cuts.



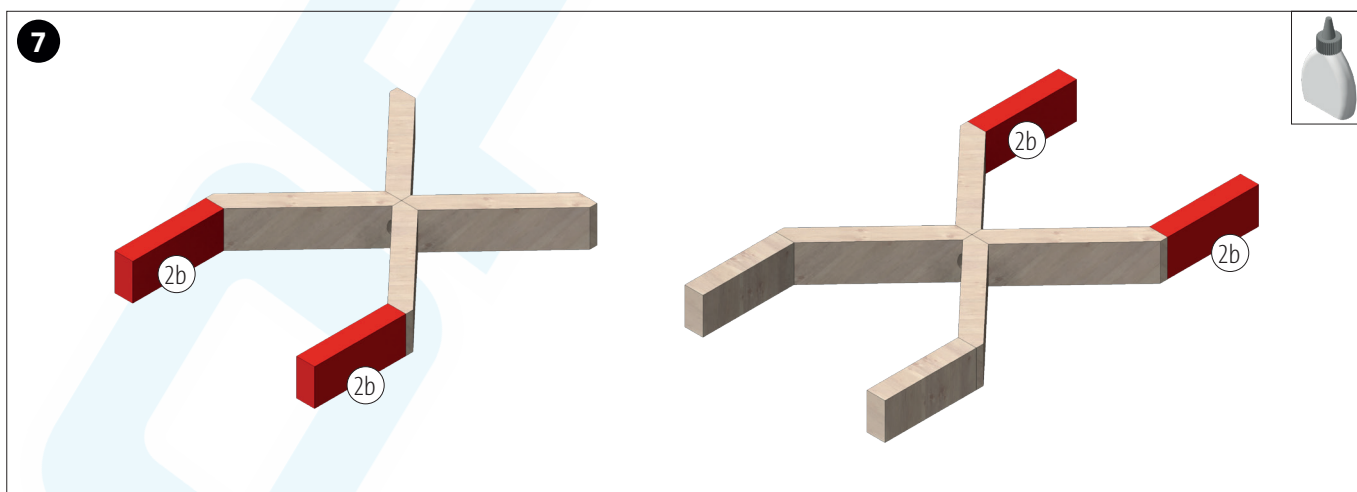
Glue 2 parts (2a) together as shown. Once the glue has dried, glue the two parts together in a cross shape



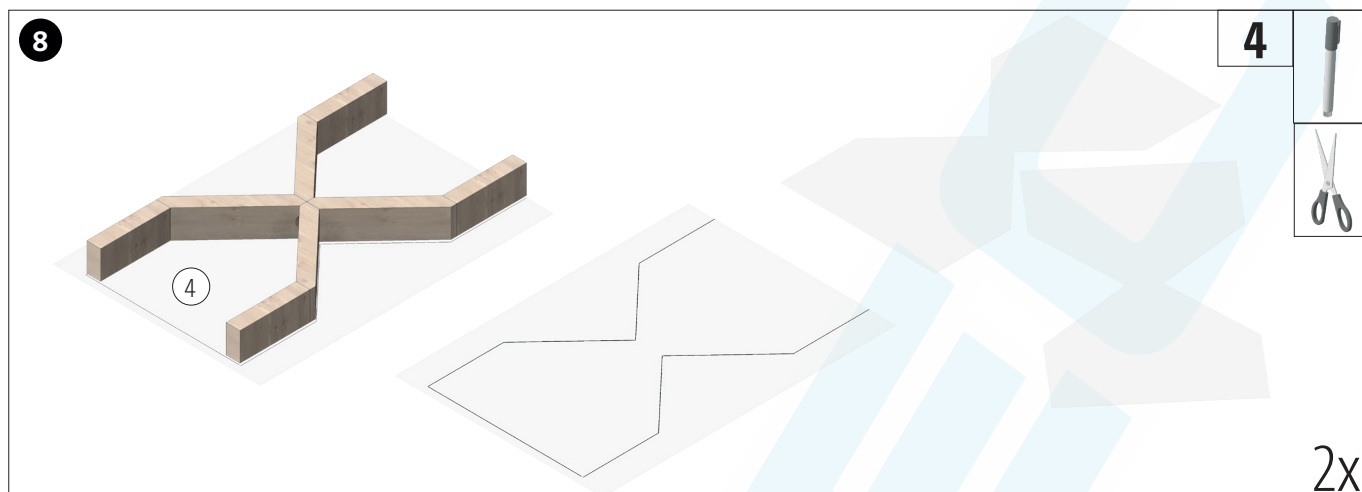
Measure and mark the centre of the cross. Then drill a 2 mm diameter hole.



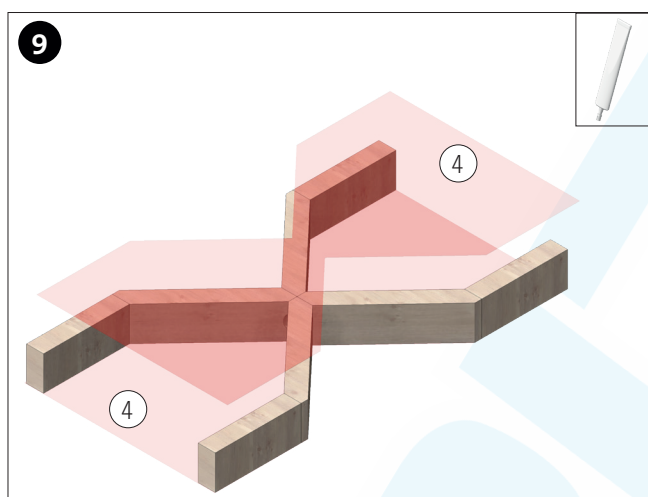
Use a round file to grind the hole into a funnel shape from both sides, so that the sand can flow freely through the opening later on.



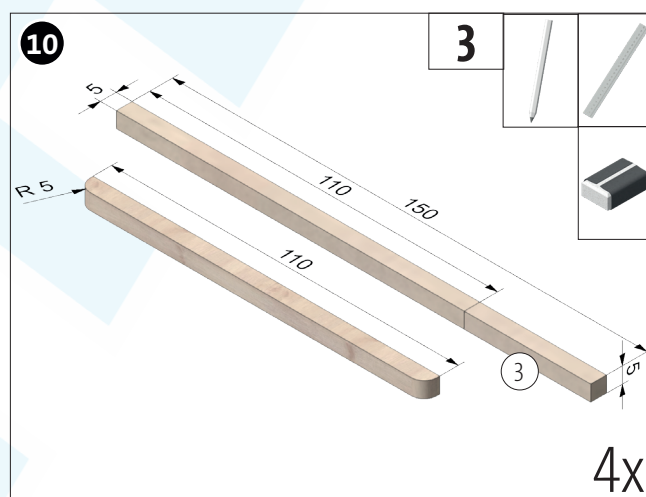
Glue the strips (2b) in place from both sides, as shown in the illustration. Allow glue to dry well.



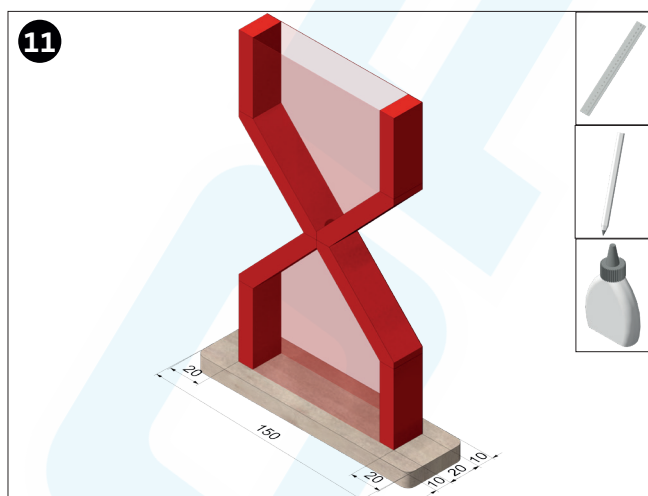
Place the finished body, as shown, onto the thermoforming film (4) and trace the outlines using a waterproof pen. Then cut out the shape. With the 2nd... Repeat the slide.



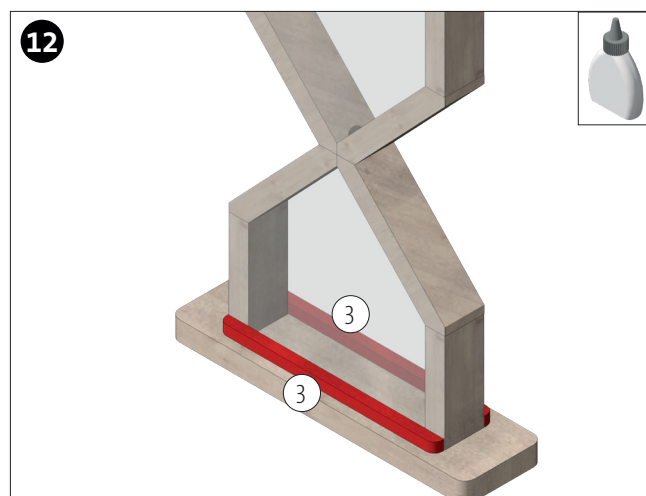
Glue the cut-to-size sheets (4) onto the body using superglue, ensuring they are flush with the top and bottom edges on both sides.



Cut the 4 wooden strips (3) to a length of 110 mm and clean up the saw cuts. Next, round off the two outer corners as shown.



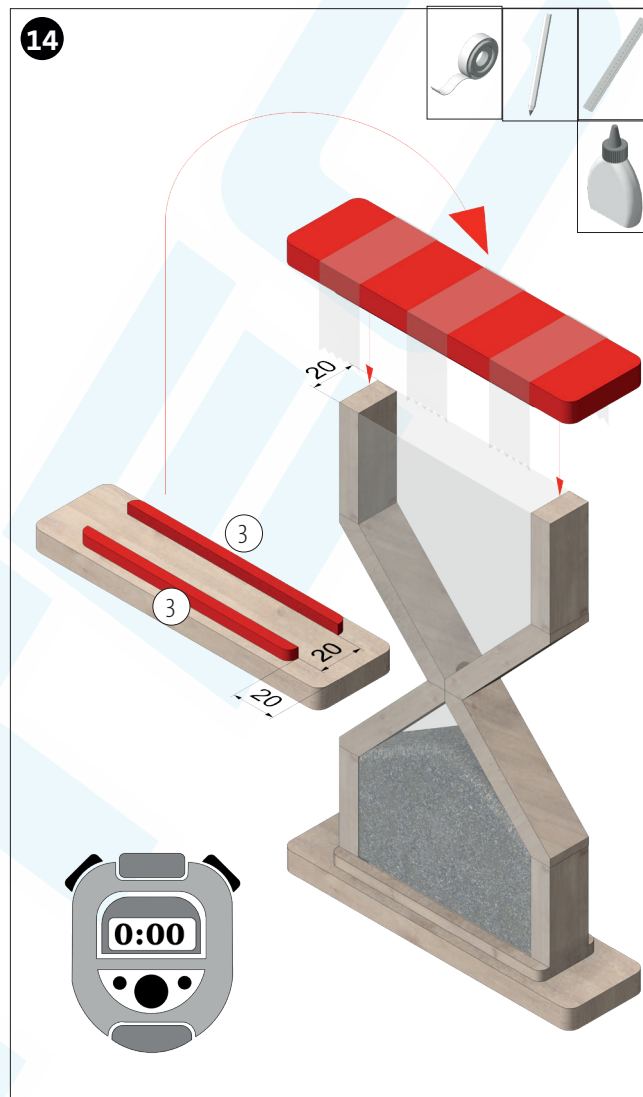
Mark the position for the body on one of the wooden strips (1), in accordance with the dimensions. Then stick the body in place.



Glue one strip (3) onto each side. Allow glue to dry well.



Pour in the sand supplied in the package. This is enough for about 1.5–2 minutes.



Measure the width at the top end of the body. Next, glue the two remaining strips (3) in place, measuring the width of the cabinet and positioning them 20 mm from the outer edge. Place the cover onto the body and secure it with adhesive tape.

Setting the time:

Setting the duration requires a bit of finesse and patience. Turn the hourglass over and use a stopwatch to measure the time it takes for the sand to flow from the top half to the bottom half. To achieve the most accurate results, you always need to remove or add a little sand. The more thorough the preparatory work, the more accurately this hourglass can be set. Only once the trickle time has been set to a satisfactory level can the top cover also be glued into place.

