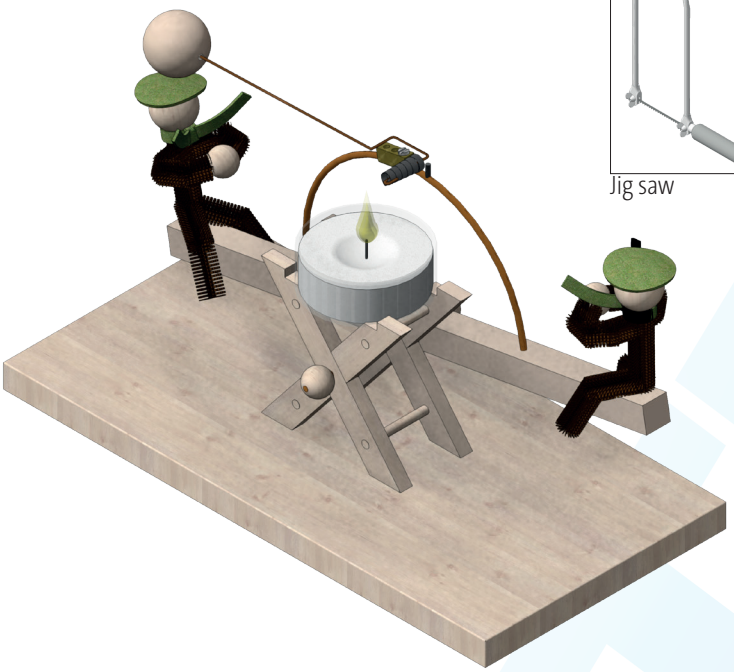
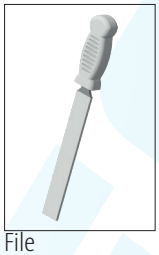
104.689

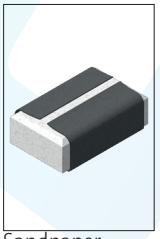
Thermo Seesaw



Tools Required:

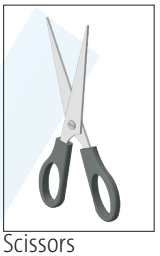
Jig saw

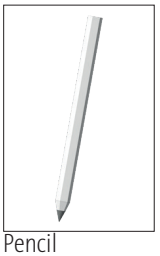

File

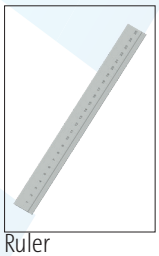

Sandpaper


Pliers

Drill

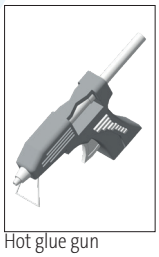

Scissors

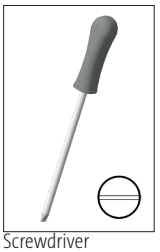

Pencil


Ruler


Wood glue


Metal saw


Hot glue gun


Screwdriver


Pricker

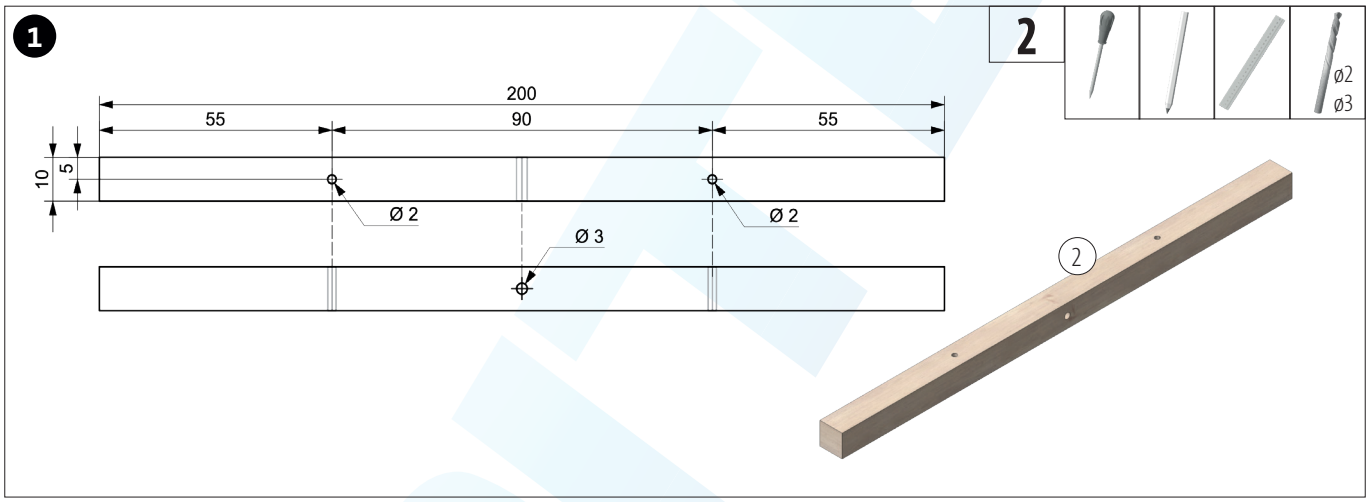
NOTE:

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!

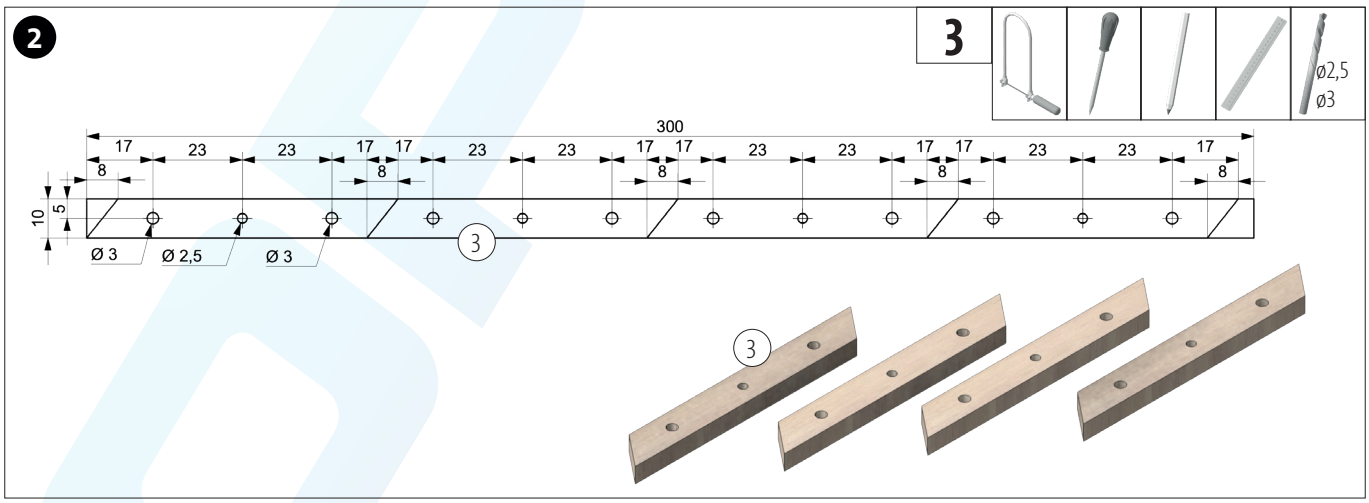
Part List	Quantity	Dimensions (mm)	Description	Part no.
Wooden board	1	200x100x10	Base plate	1
Wooden strip	1	200x10x10	Rocker	2
Wooden strip	1	300x10x5	Rocker	3
Wooden round stick	1	ø3x150	Rocker	4
Welding wire	1	ø2x250	Rocking mechanism	5
Welding wire	1	ø1x200	Rocking mechanism	6
Thermobimetallic spring	1	approx. ø5x13	Rocking mechanism	7
Wooden Balls	1	ø20/18	Rocking mechanism	8
Washer	1	ø7/3,2	Rocking mechanism	9
Luster Clamp Insert with Cross Hole	1		Rocking mechanism	10

OPITEC

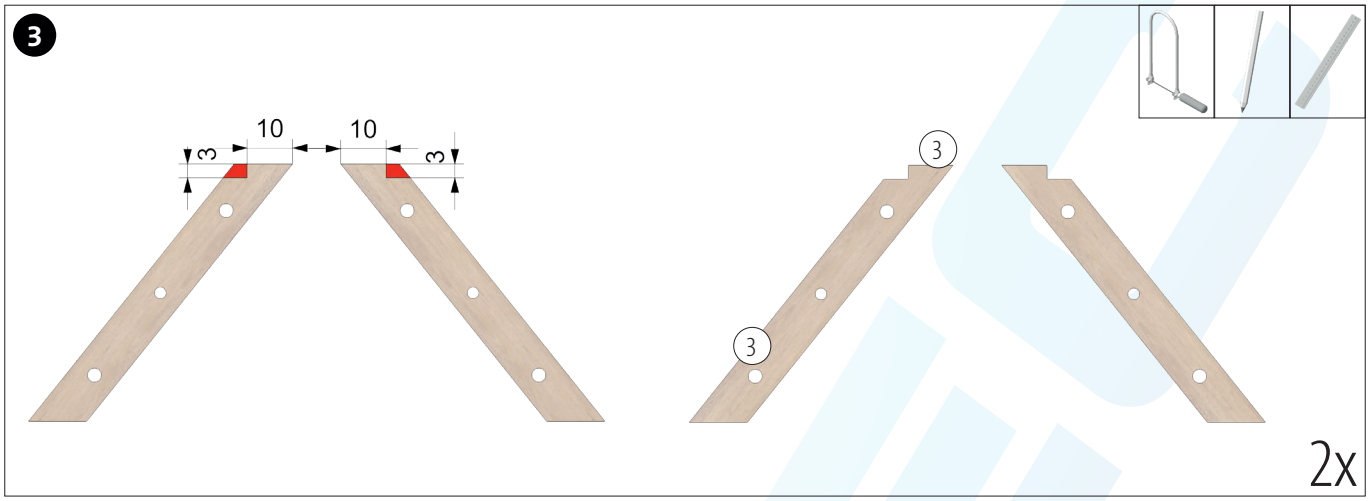
Part List	Quantity	Dimensions (mm)	Description	Part no.
Tealights with Metal Casing	1	ø38	Tea light	11
Wooden Balls	2	ø 15	Figure head	12
Wooden Balls	4	ø 10	Figure arms/rocker	13
Bending plush brown	1	ø 8-10x300	Figures	14
Craft felt coloured	1	150x100x1	Figures	15



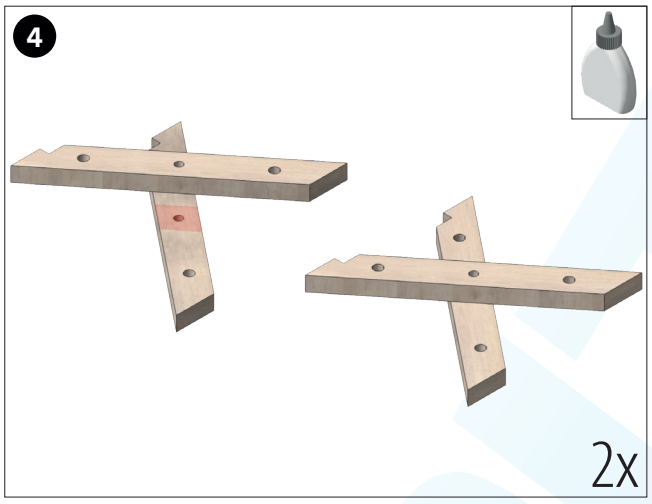
Mark the drill holes on the square wooden moulding (2) according to the dimensions and mark them with a pilot punch. Then drill through the two ø2mm holes and the ø3mm hole.



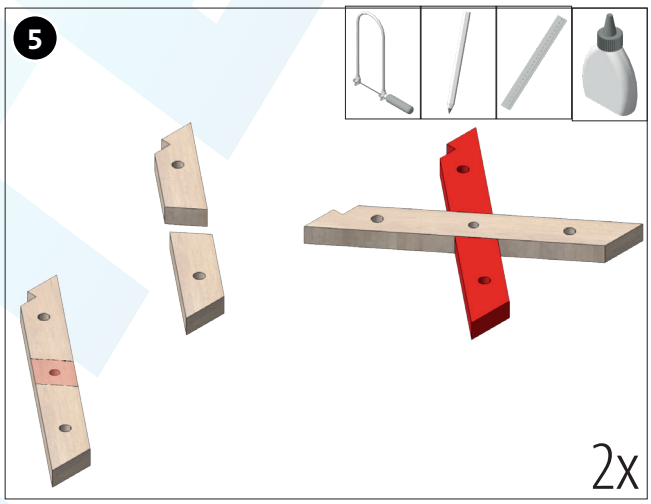
Transfer the 4 pieces of moulding for the candle crosses to the wooden moulding (3). Mark the holes (ø2.5, ø3), pre-pierce and drill through. Then cut the moulding pieces to length and clean the saw cuts.



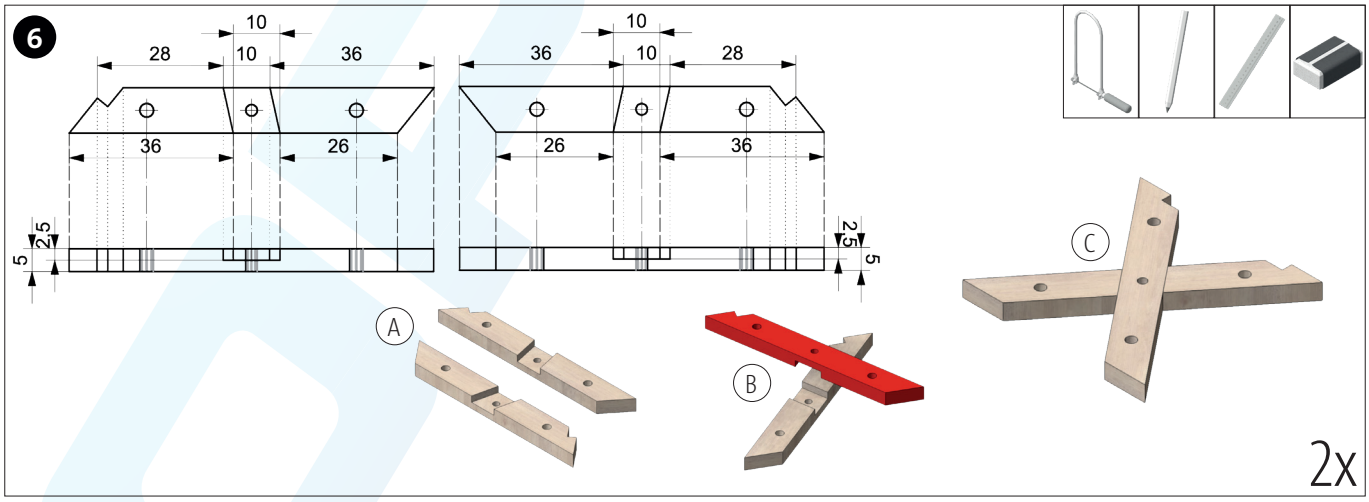
Lay two blanks next to each other as shown and mark the marked recess on the upper edge as shown and then saw off. Clean the saw cuts. Repeat the process with the two remaining moulding blanks.



Option 1: Glue 2 moulding blanks butt-jointed to each other.

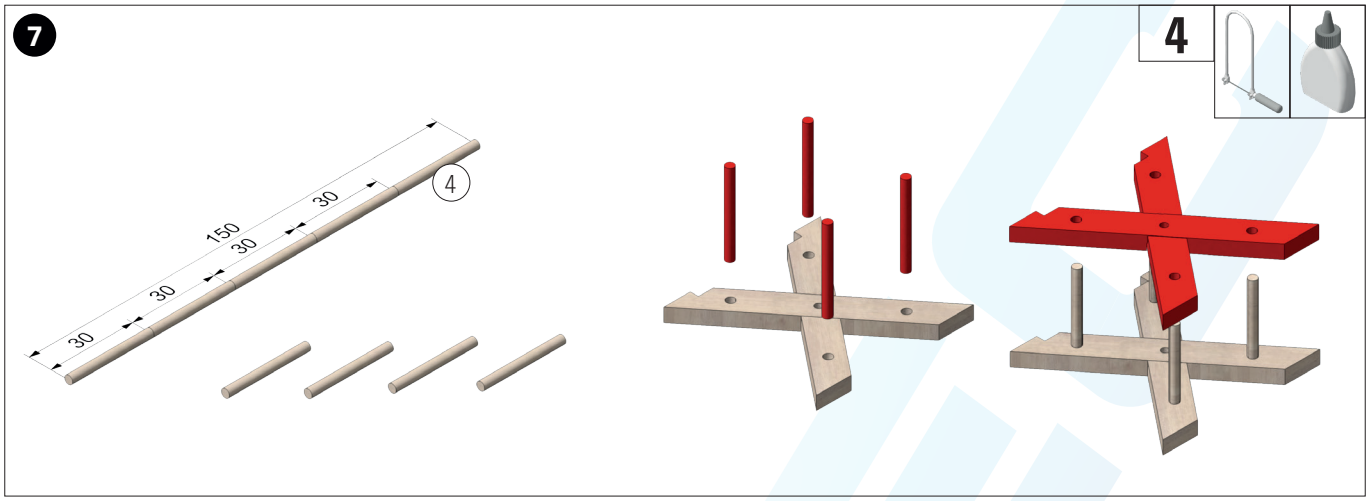


Option 2: Lay the slats on top of each other and mark the cut surface. Saw the cut surface out of the lower moulding and glue the mouldings together as shown.



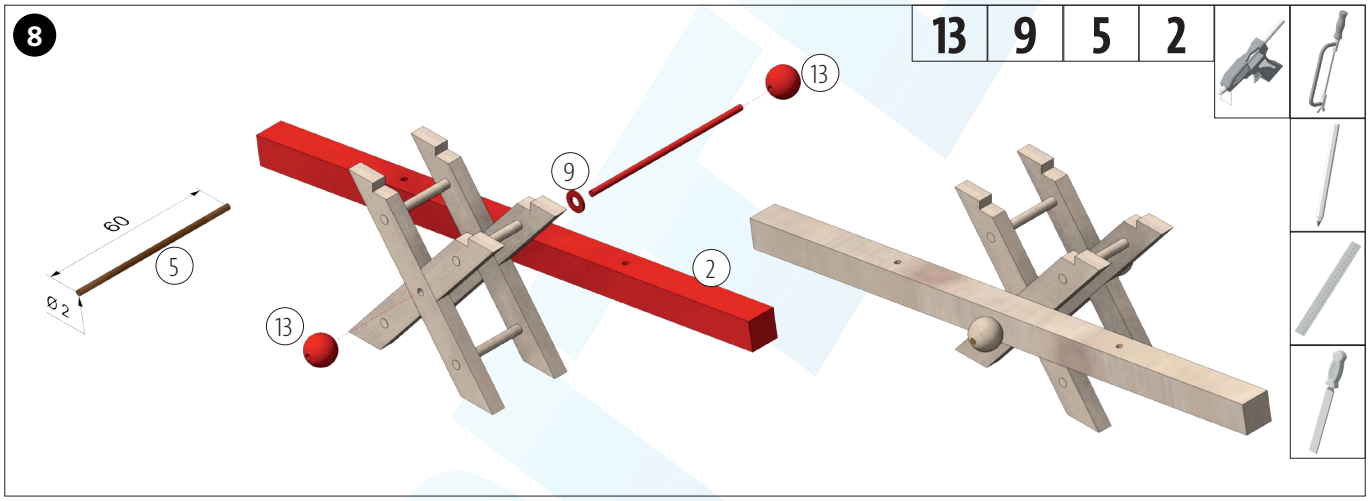
Option 3: Overplating
To do this, cut out the recess from 2 mirrored mouldings according to the dimensions and then glue them together (see step A-C). Repeat with the remaining two blanks.

7



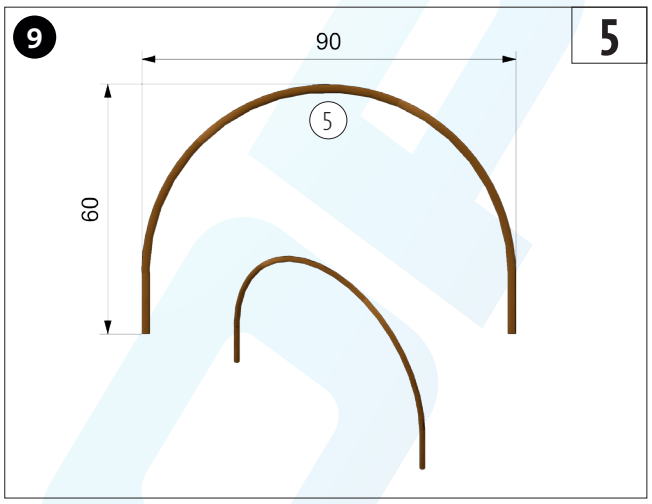
Cut 4 pieces of 30 mm length from the wooden round bar (4). Glue the round rod pieces into the holes in one of the candle block crosses. Attach the second candle block cross from above and glue it in place.

8



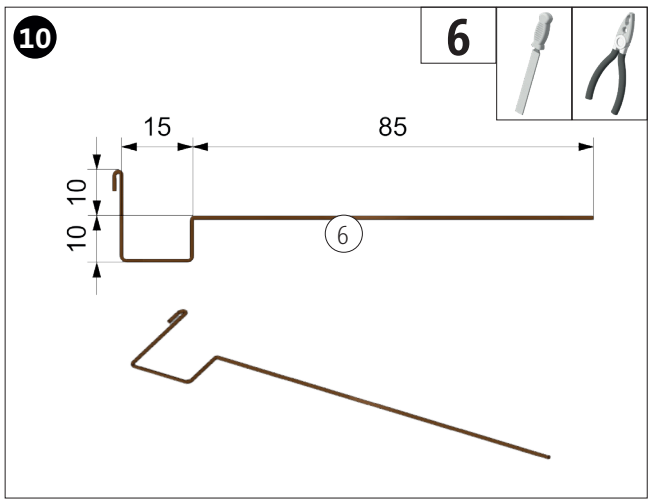
Cut an approx. 60 mm piece of the welding rod (5) to length and deburr. Insert the welding rod (5) through the centre hole of the square bar (2) and through the centre hole of the candle cross block. Place a washer (9) on the square moulding side and glue a wooden ball (13) on both sides to secure it. NOTE: The square bar must remain freely rotatable.

9

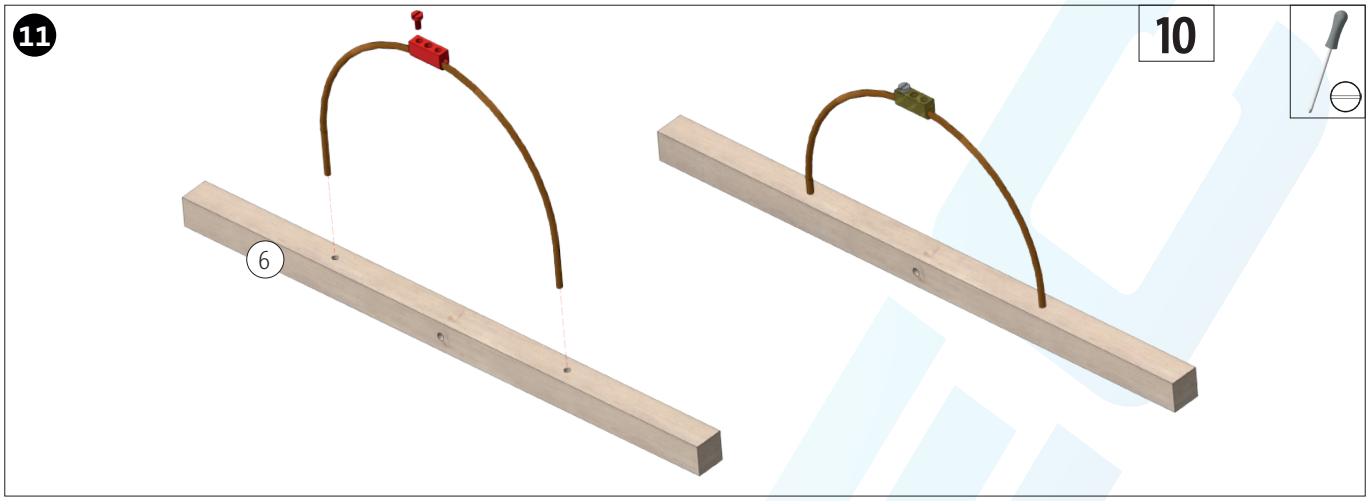


Bend the remaining welding rod (5) according to the bending template (page 7). Use a waste water pipe approx. ø90mm or a drinking bottle as a bending aid.

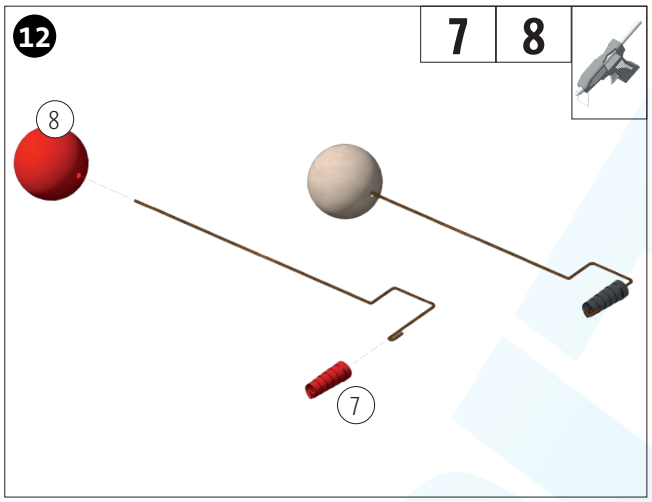
10



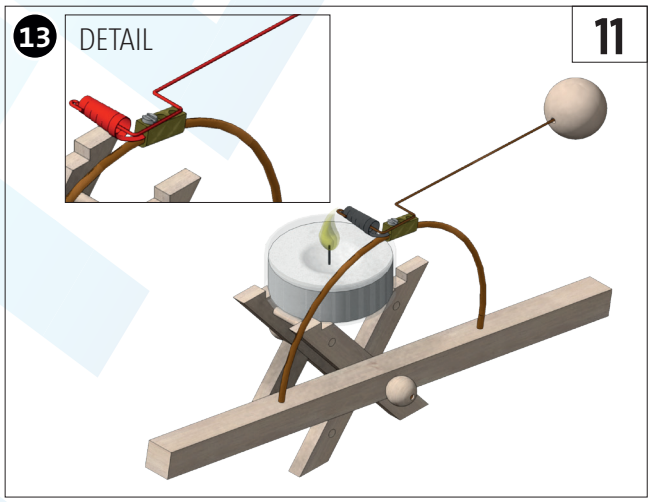
Bend the welding rod (6) into a stirrup according to the bending template (page 7). Cut off protrusions and deburr ends.



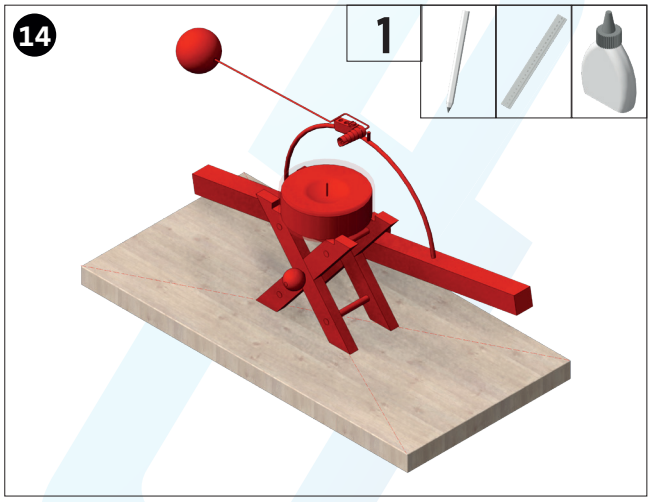
Place the lustre terminal strip (10) on the wire bend as shown and screw in the corresponding screw.



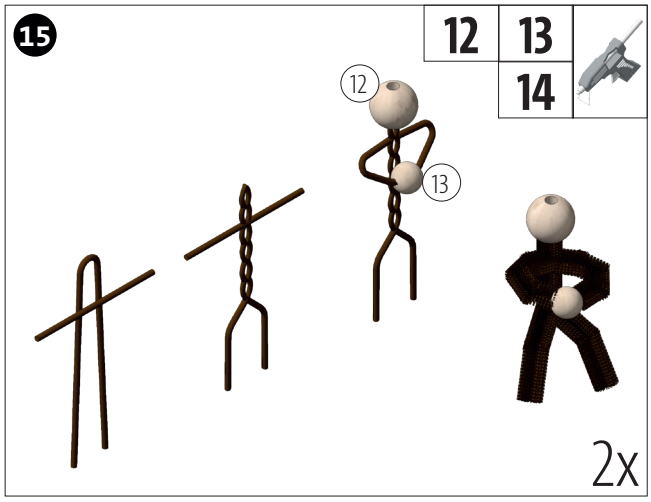
Glue the wooden ball (8) onto the wire bracket (6). Attach the thermo-bimetallic spring (7) and fix in place with the end hook.



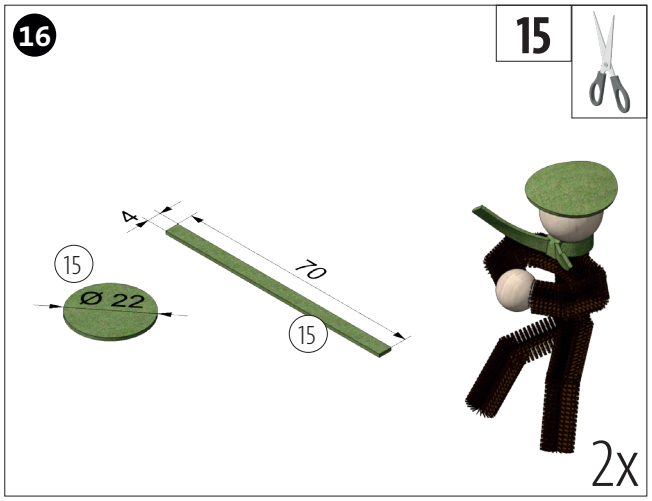
Insert the fixing bar of the bimetallic spring (7) into the lustre terminal strip and secure with the screw. Check function! To do this, light the candle (11). After a short time, the bimetallic spring stretches and the rocker tilts to the other side. When cooling down, the rocker tilts back to its original position.



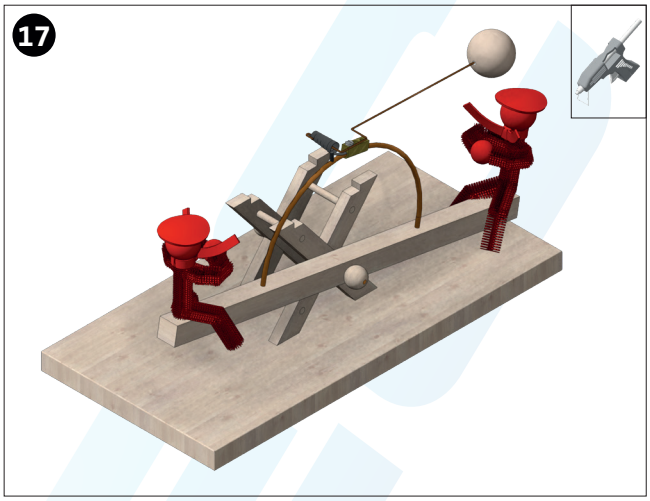
Mark the centre on the base plate (1) and glue on the finished rocker.



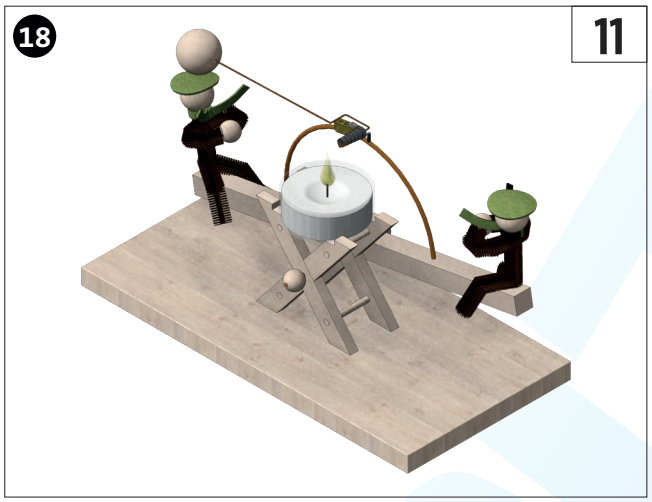
Cut 2 pieces (150mm) and 2 pieces (50mm) from the bending plush (14). Bend the blanks as shown and connect them by twisting. Glue or attach the wooden balls (12/13).



Cut out two strips (70mm) and two circles (ø22) from the craft felt (15) and glue them to the two little men as shown.

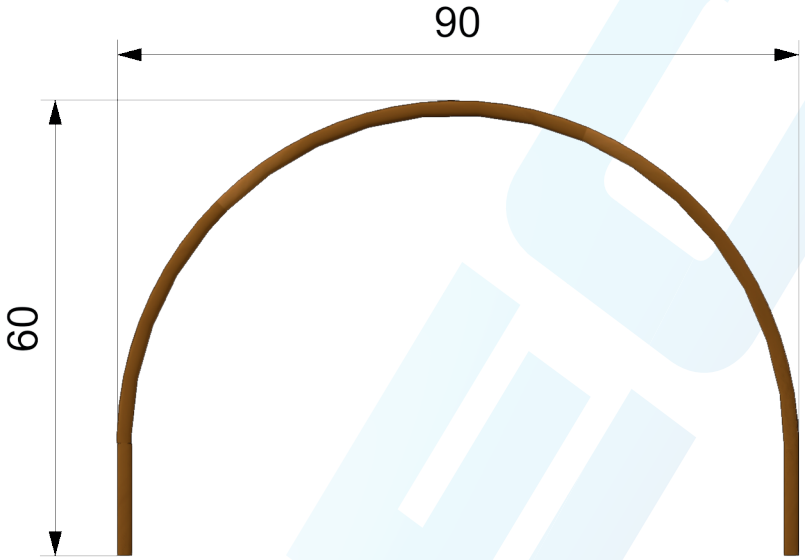


Glue the two finished little men onto the two ends of the square moulding (rocker).



Place the tea light (11) and light it. Done!

Bending template Wire bend
SCALE 1:1



Bending template bracket
SCALE 1:1