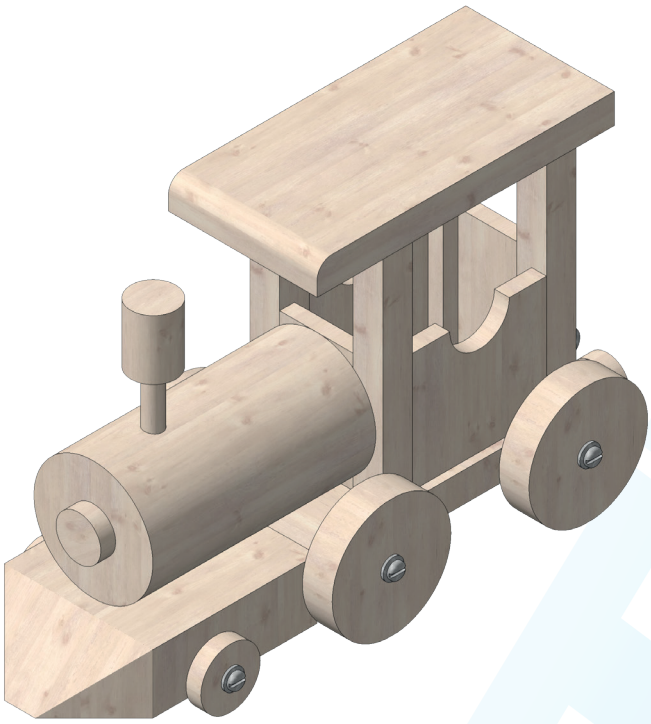
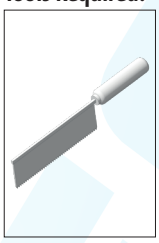
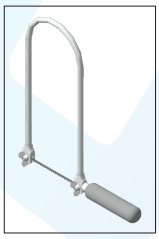
101.809

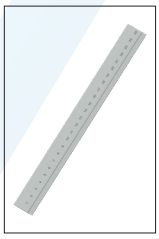
Western locomotive

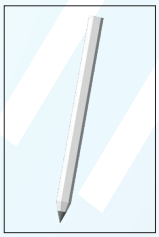


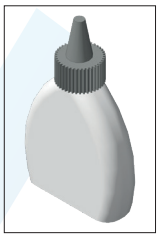
Tools Required:

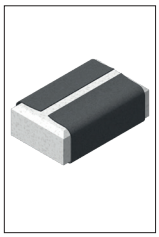

Miter saw

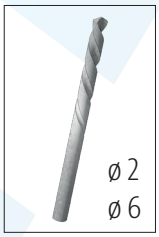

Fretsaw / scroll saw


Ruler

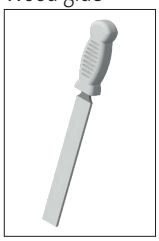

Pencil


Wood glue

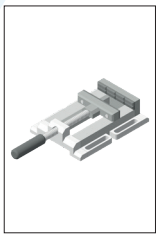

Sandpaper

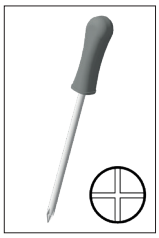


Drill


File


Clamp


Machine vice


Screwdriver


Pricker

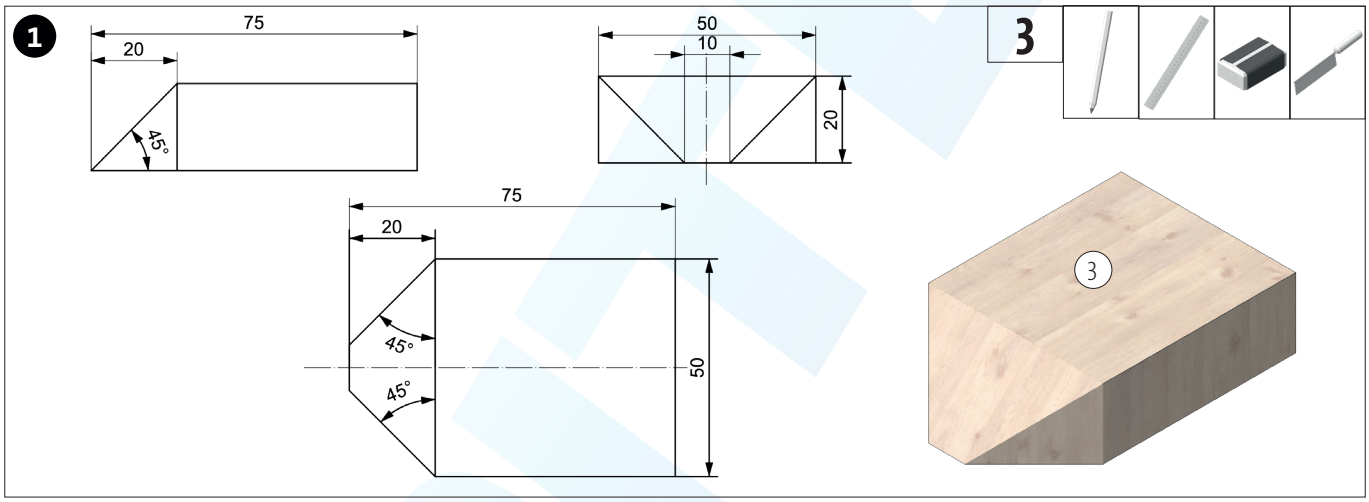
NOTE:

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!

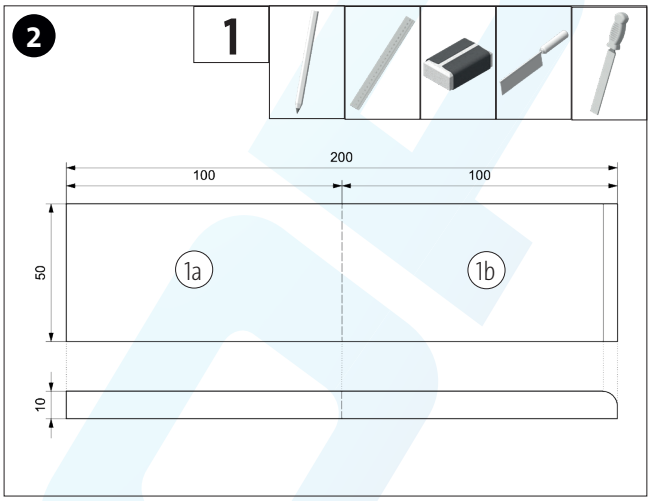
Part List	Quantity	Dimensions (mm)	Description	Part no.
Wooden strip	1	200x50x10	Base plate + roof	1
Wooden strip	1	250x40x5	Cab	2
Wooden strip	1	75x50x20	Base plate	3
Round rod	1	250x6	Fireplace	4
Round rod	1	ø 15x100	Fireplace	5
Round rod	1	75x40	Boiler	6
Wooden strip	2	150x10	Cab	7
Wooden wheel	4	ø40x10	Wooden wheel	8

OPITEC

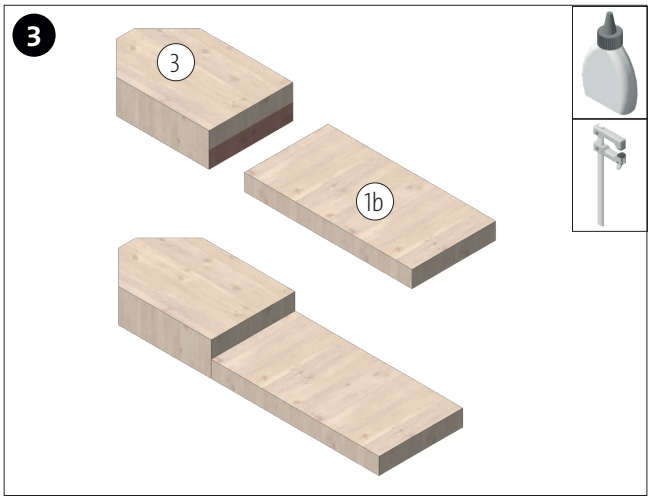
Part List	Quantity	Dimensions (mm)	Description	Part no.
Wooden wheel	2	ø20x6	Wooden wheel	9
Ring Screw	1	12	Clutch	10
Screw Hooks	1	20	Clutch	11
Washer	20	9/4.3	Washer	12
Screw	6	2,9x25	Mounting wheel	13



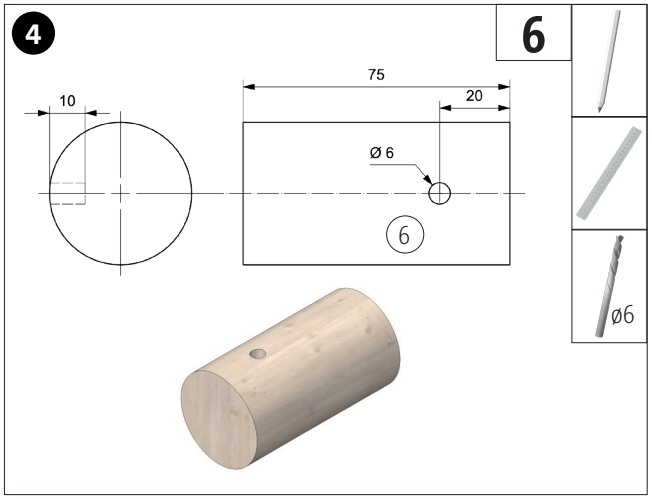
Transfer the dimensions to the wooden moulding (3) and saw off with the fine saw. Clean the saw cuts with sandpaper.



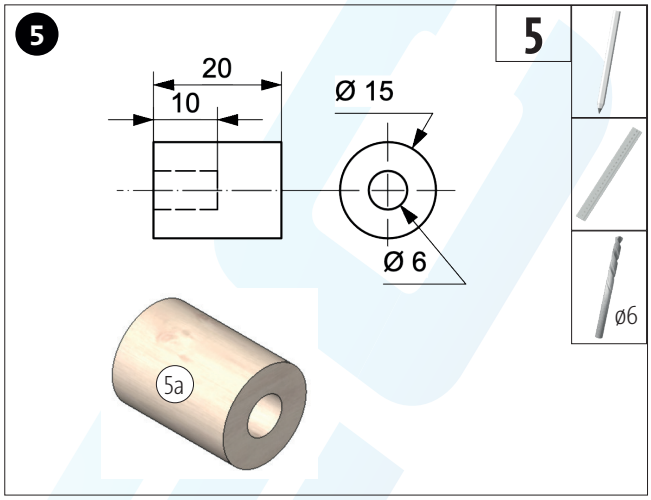
Cut the wooden moulding (1) in half as shown. Round off part (1b) on one of the short edges with the workshop file. Clean the saw cuts with sandpaper.



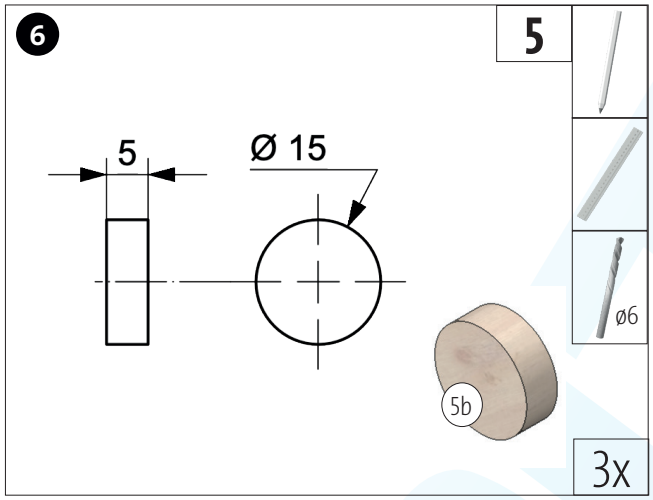
Glue the two parts (1a) and (3) together as shown. Fix with screw clamps until the glue is dry.



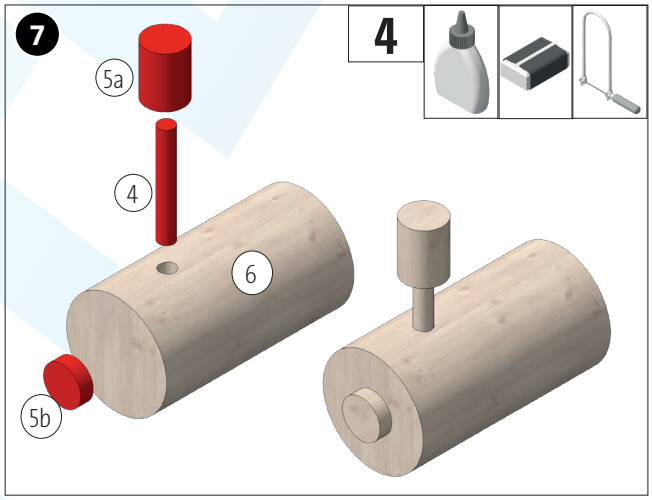
Measure the hole spacing on the round bar (6) and then drill the ø6mm hole to a depth of approx. 10mm.



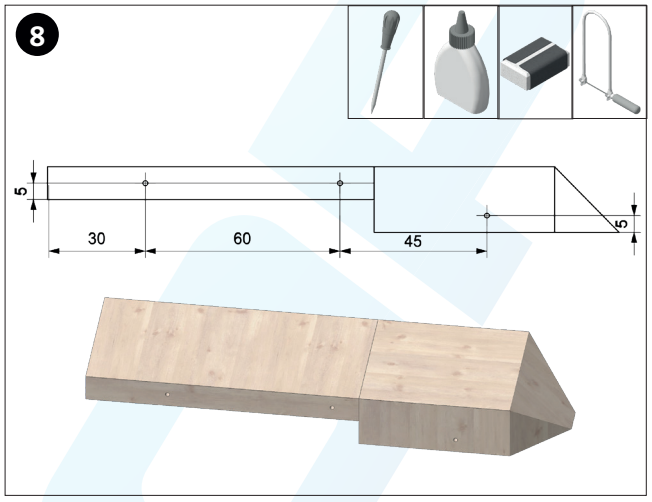
Saw off a piece approx. 20 mm long (5a) from the round bar (5) and clean the saw cut. Mark the centre point and drill approx. 10 mm deep using a ø 6 mm drill bit.



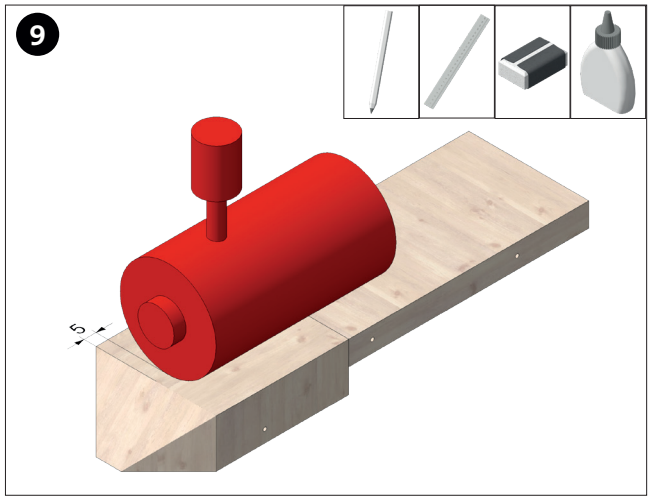
Cut three 5 mm pieces (5b) to length from the round bar (5).



Cut a piece approx. 40 mm long from the round bar (4) and clean the saw cut. Then glue the parts (5a, 4, 5b and 6) together as shown.



After measuring the base frame, pre-cut the markings for the wheels and pre-drill with a ø2mm drill.



Flatten the underside of the bowl slightly with sandpaper to create a larger gluing surface. Then glue the boiler onto the base plate as shown.

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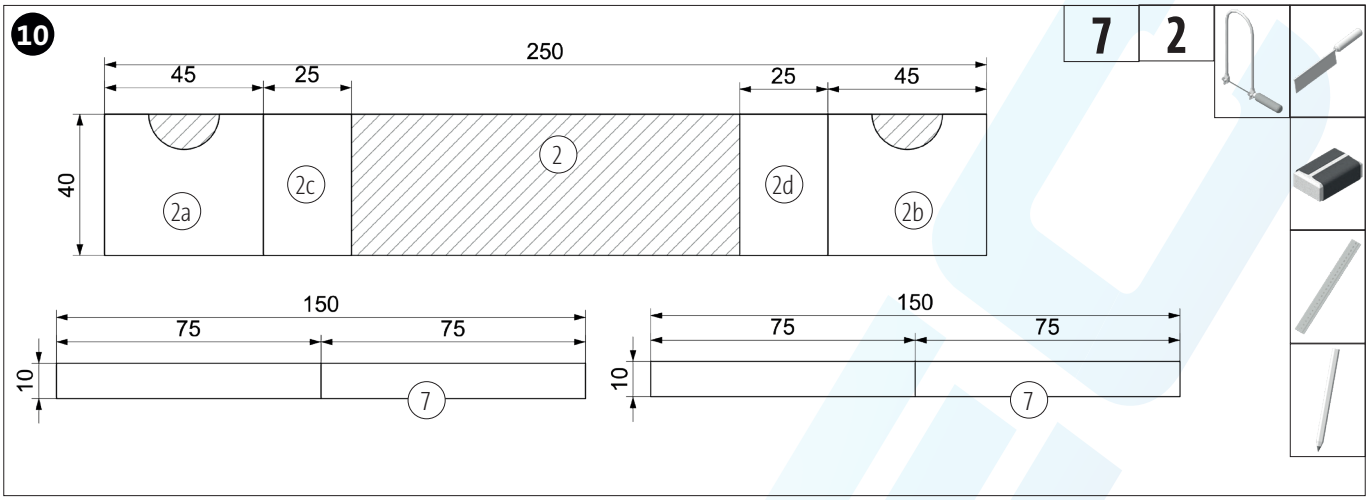
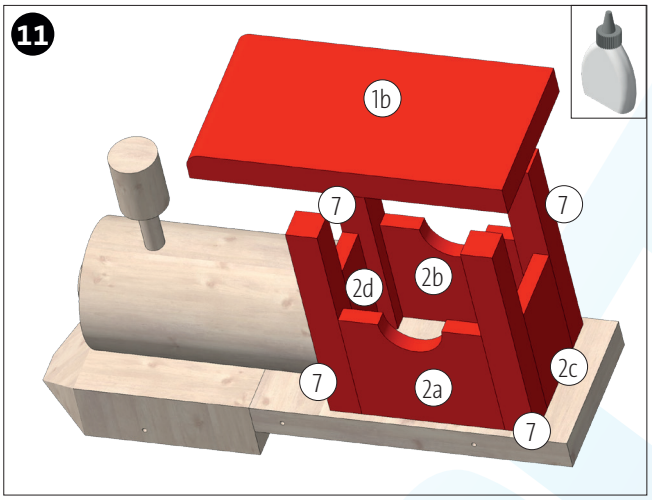
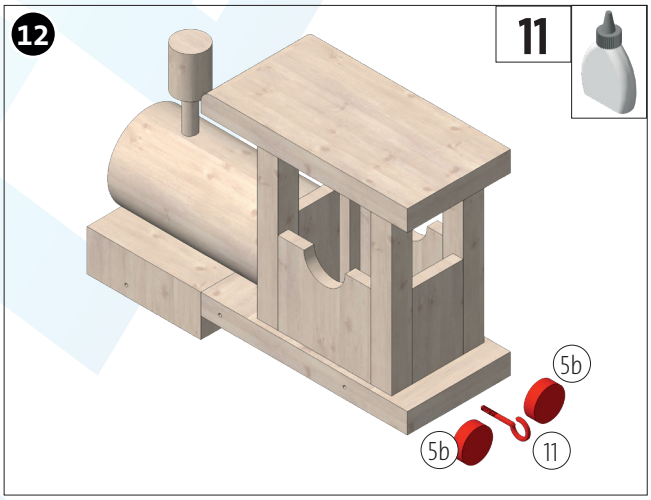


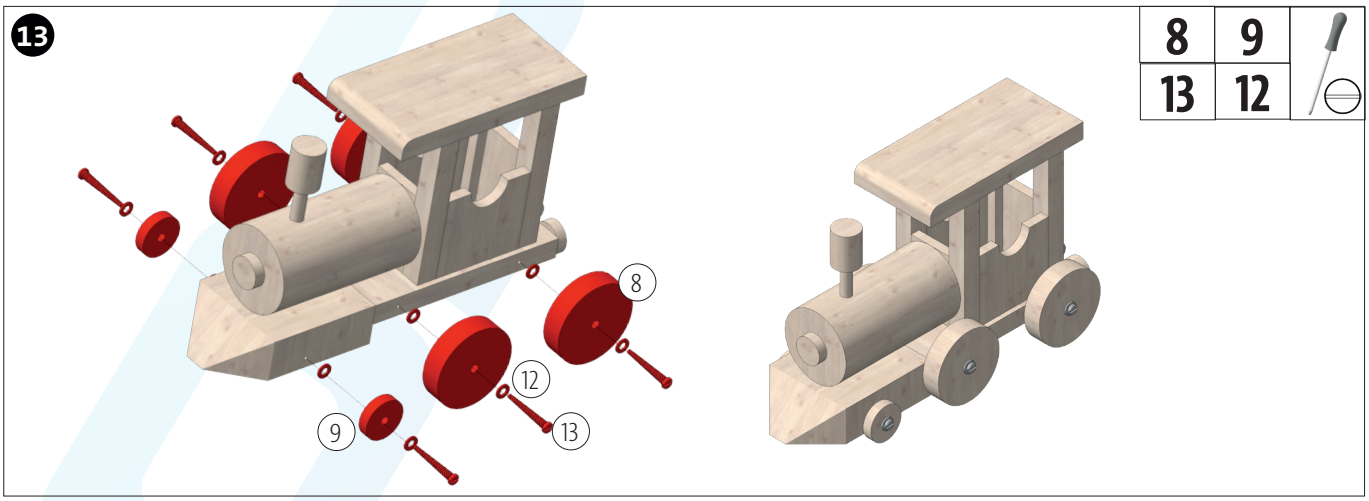
Mark the parts for the driver's cab (2a-2d) on the wooden moulding (2) and saw them out. Cut the wooden moulding (7) in half and clean the saw cuts.



Glue the driver's cab, as shown, centred on the base frame, flush with the boiler



Glue the two remaining round rod pieces (5b) to the left and right rear of the base frame as buffers. Screw the screw hook (11) into the base plate, centred between the two buffers.



Fasten the wheels (8+9) with 2 washers (12) and a screw (13) as shown. Done!