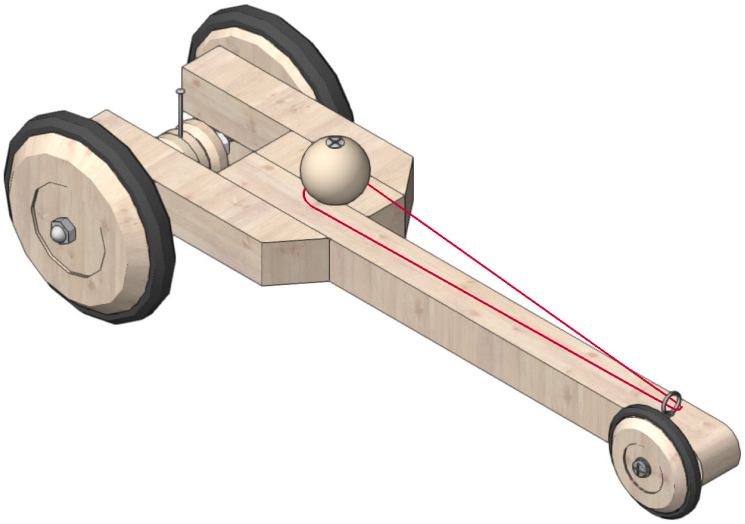
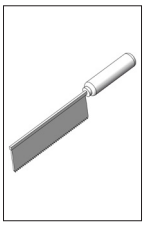
114.675

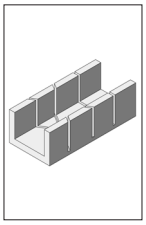
Dragster with rubber motor



Necessary tools

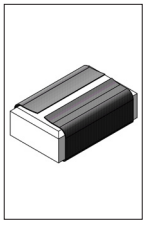


Fretsaw

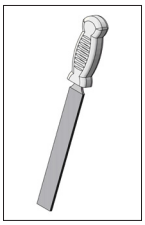


Cutting board

Screwdriver

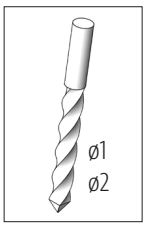


Sandpaper

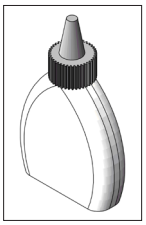


Workshop file

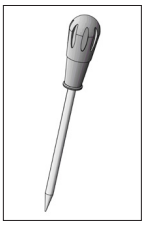
Open-ended wrench



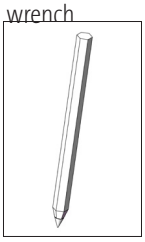
drill



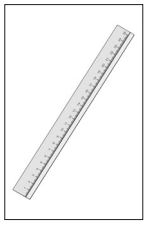
Wood glue



Pricker



pencil



ruler

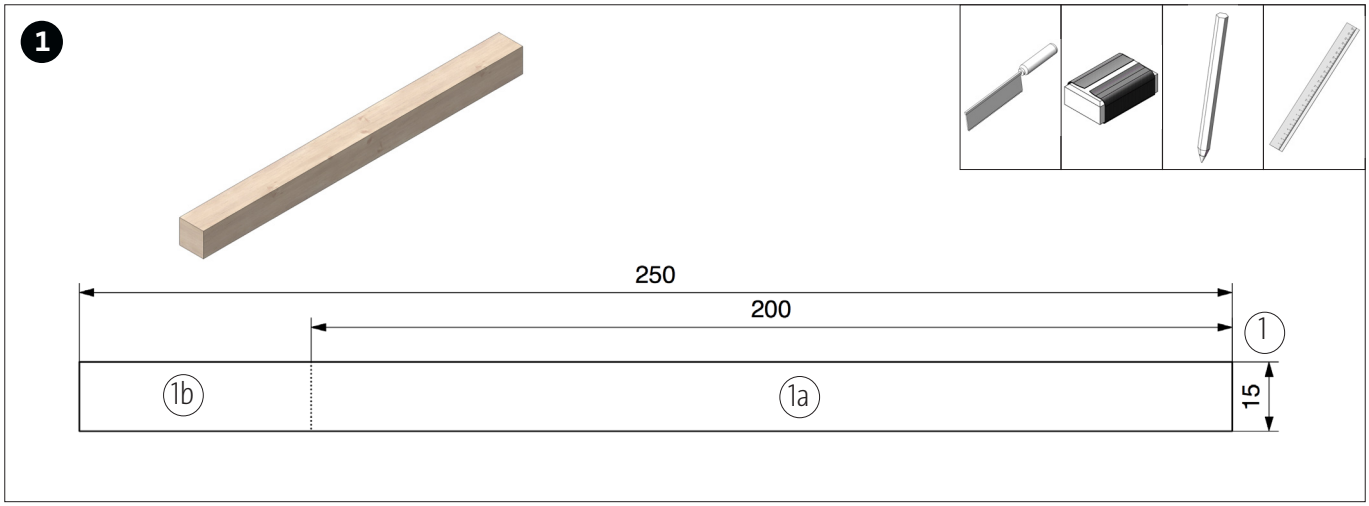
hammer

Please Note

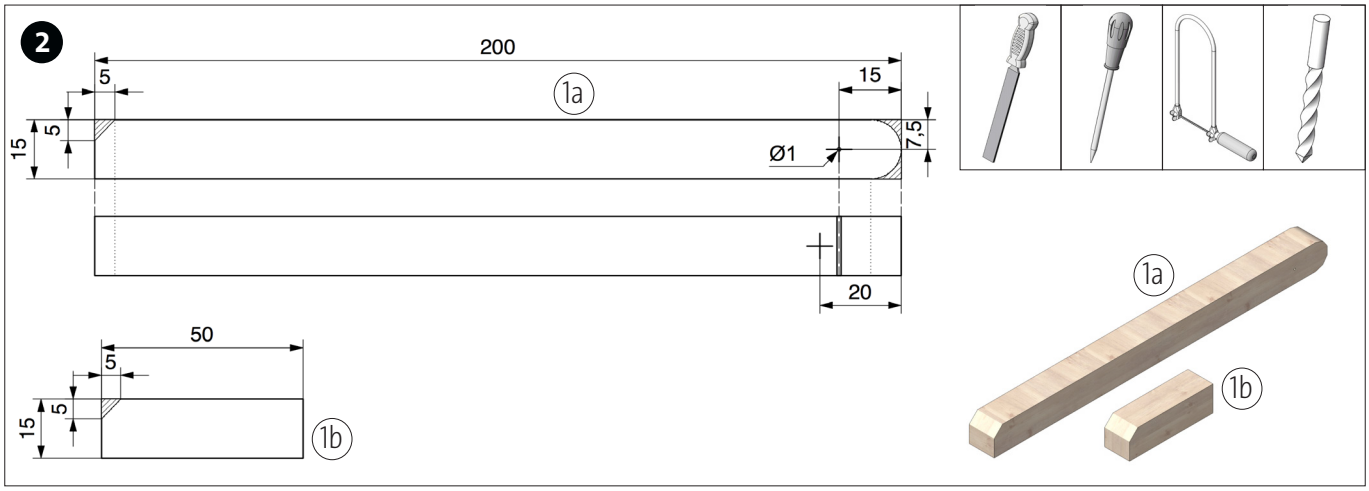
The OPITEC range of projects is not intended as play toys for young children.They are teaching aids for young people learning the skills of Craft, Design and Technolo- gy.These projects should only be undertaken and tested with the guidance of a fully qualified adult.The finished projects are not suitable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

Part List	Part	Size (mm)	Description	Part-N°
Wood strip	1	250x15x15	Base-chassis	1
Wood strip	2	100x15x15	Sides	2
Wooden wheel with tyre	2	ø53	Rear wheels	3
Wooden wheel with tyre	1	ø33	Front wheel	4
Threaded rod	1	100x4	Rear axle	5
Crosshead screws	1	20x3	Fixng, front wheel	6
Chipboard screws	1	30x3	Fixing drive house	7
Nuts	10	M4	Fixing rear axle	8
Domed nuts	2	M4	Fixing rear wheels	9
Washer	2	7x3,2	Fixing front wheel	10
Washer	10	9x4,3	Fixing,rear wheels	11
Nails	1	15x1,0	Rubber,bearing	12
Screw eyes	3	12	Axle bearing + Rubber band fixing	13
Rubber band	1	700x1,5x1	Drive	14
Pulley	2	ø30x4	Rubber tensioner	15
Wooden ball	1	ø20	Drivers helmet	16
Brass sleeve	1	8x4	Bearing,front wheel	17

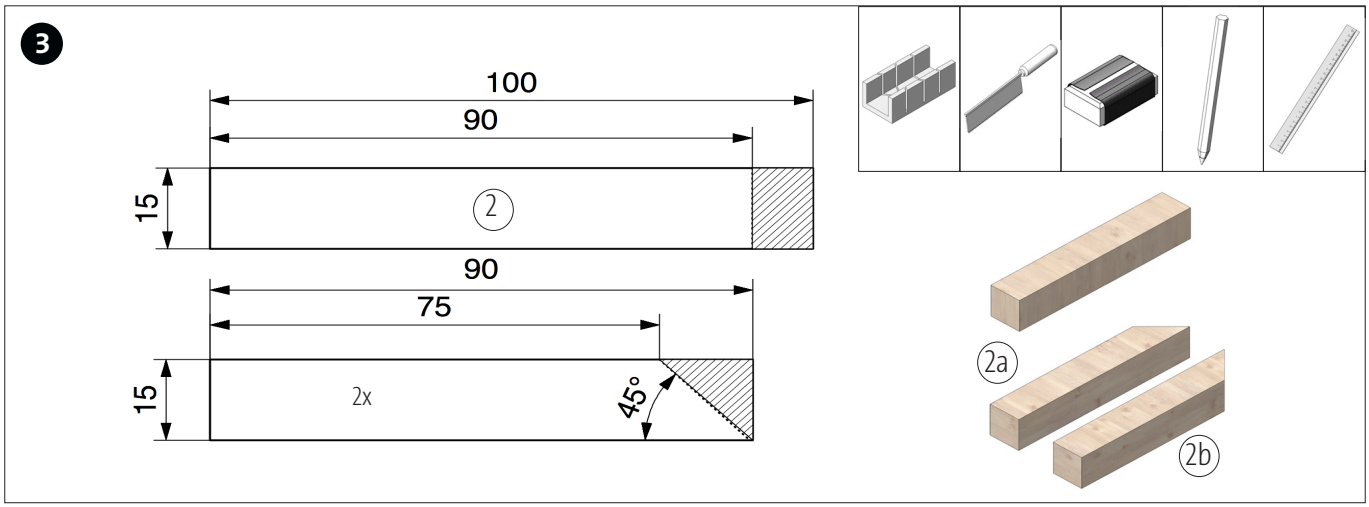
OPITEC



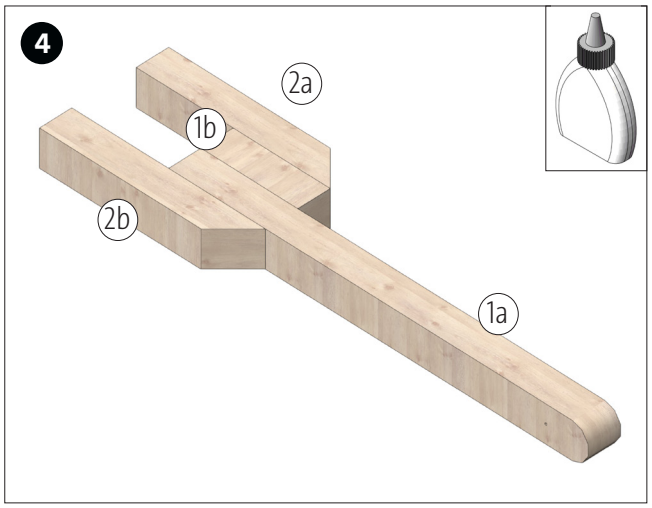
Take the wood strip (1)and mark it out as shown, saw to length as in the plan.Sand to finish.



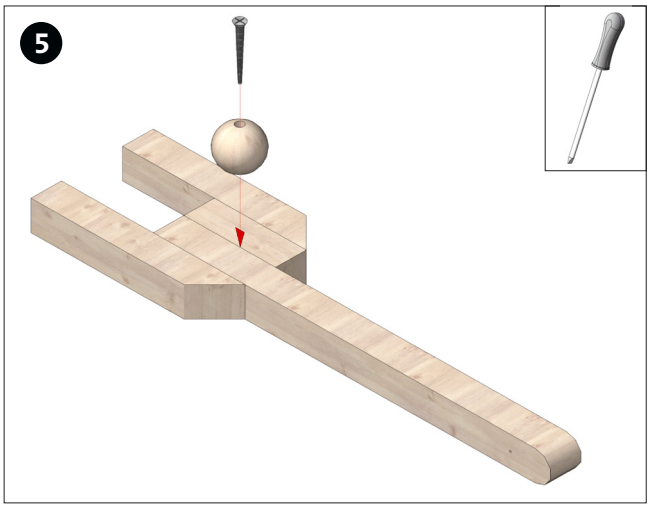
On the 200mm strip (1a) mark out 15mm in from the front edge, and drill a 1mm diameter hole in the middle. On the rear of the strip (1a) make a 45 degree angle. Take the strip (1a) turn it through 90degrees and make a hole (bradwawl) 20mm in The front is rounded with a file
Take the wood strip (1b) and file the end at 45 degrees (see diagram)



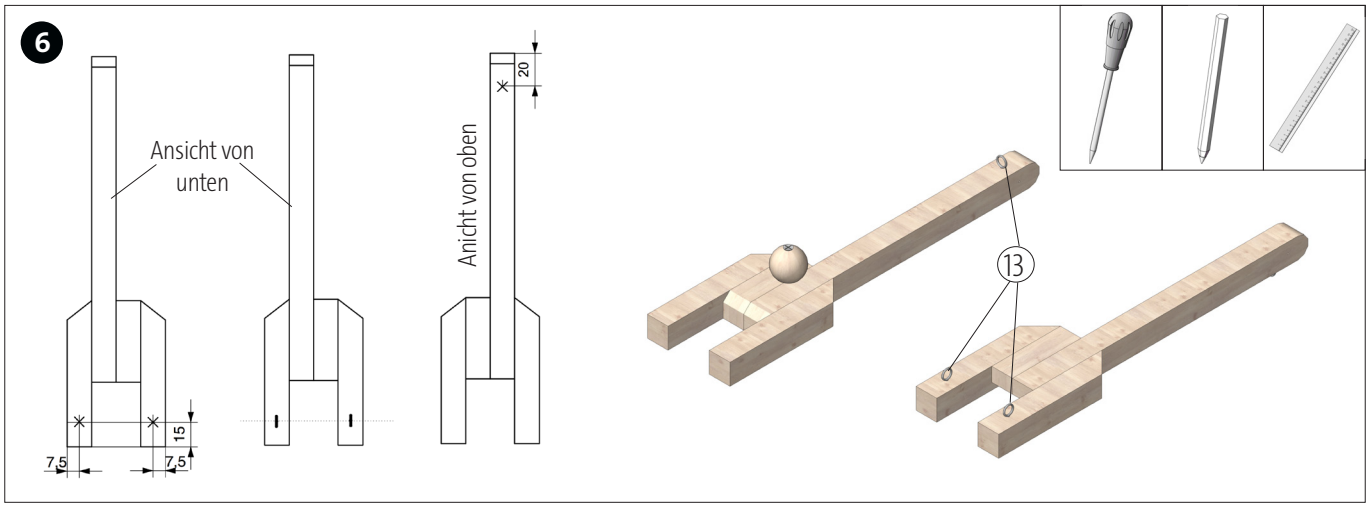
Take the wood strip (2) and saw to 90mm, sand to finish. Sand to finish both strips(2a+2b) measure 75mm abmessen. Saw the ends at 45 degrees.



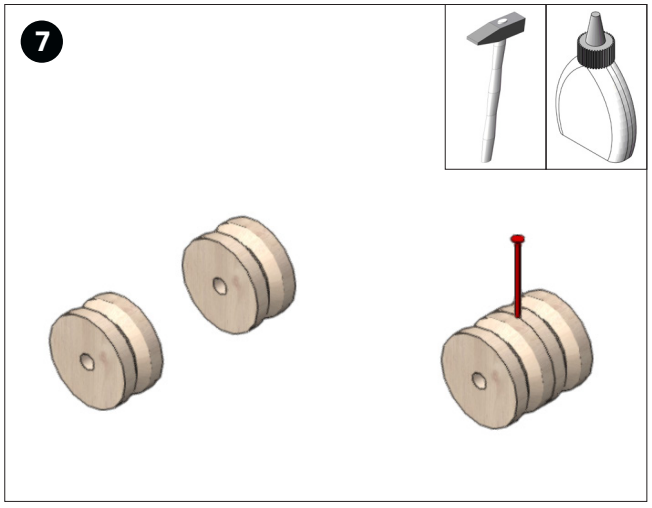
Take the wooden strips 1a, 1b, 2a and 2b and glue them together as shown. We recommend clamping the strips together wilst the glue is drying.



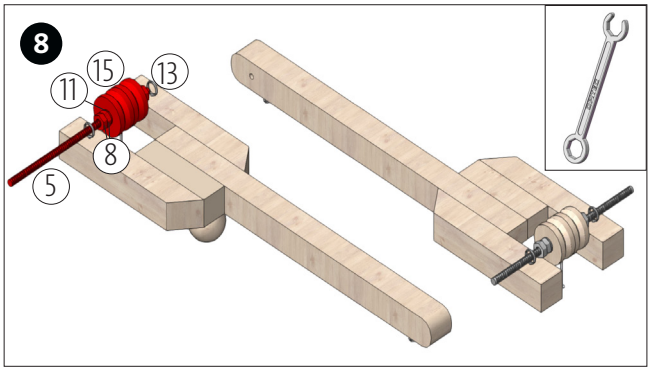
Once the strips are dry fix the the wooden ball (16) with a screw (7) as shown.



On the the (bradawl)mark on the top of strip (1a) insert a screw eye (13).
Turn the chassis with the wooden ball (helmet) over on its back and on both pieces (2a,2b) measure 15mm .Use a bradwal to make a hole on each mark. Check that the marks are parallel with each other , otherwise the vehicle will not run straight, as the axle will not be straight .
As soon as you are sure that the marking out is accurate, insert a screw eye (13) into each mark. (see diagram!)



Glue the pulley arrangement together as shown (15) and leave to dry. Finally insert a nail (12) carefully in the middle as shown, leaving 10mm stands proud as shown.



Assemble the pulleys (15) with the nail (12) on the threaded rod (5) add a washer (11) from each side, then two nuts (8) leave them a loose fit. Insert one end of the threaded rod (5) in a screw eye (13) Now add the nuts (8) on the ends of the threaded rod (5) Arrange the rod with the nuts so that it is equal on both sides. The pulley arrangement must lay in the middle of the two screw eyes (13).Once this is correct contra tighten the nuts

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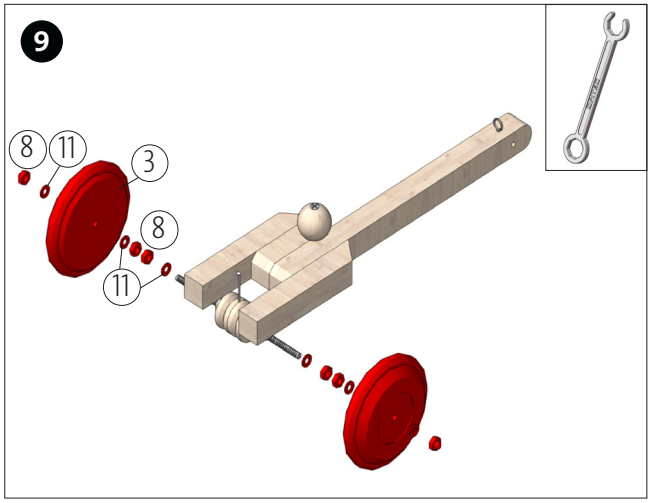
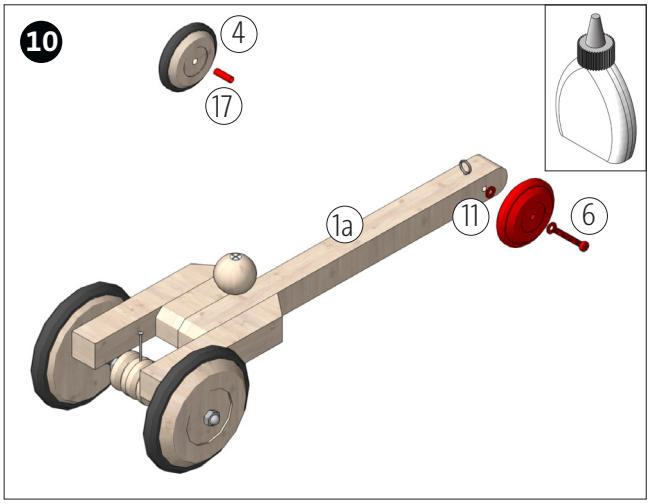
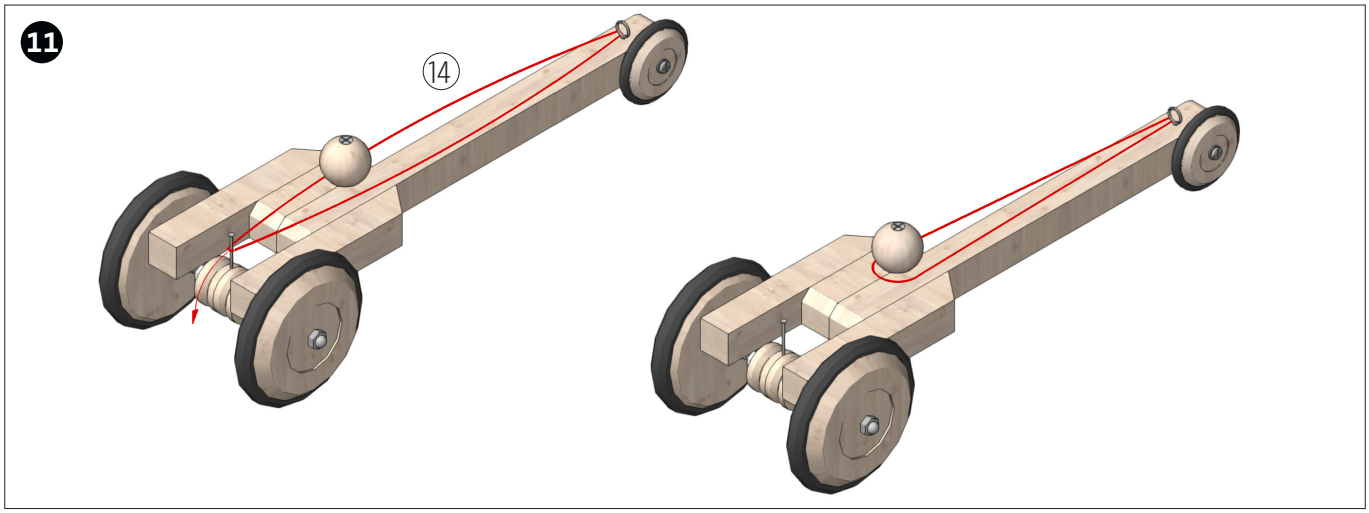


From both sides add a washer (11) on the threaded rod (5) slide them up to the screw eyes. Then add 2 nuts (8) from each side .Fix the nuts by contra tightening. Add another washer on each side (11) then add a wheel on each side . Finally add another washer (11) each side and and complete with a domed nut (9) each side to finish

Note:
If a wheel turns on one side on the axle while the other remains stationary the nuts must be checked for tightness. Go over them again with a spanner to make sure the are really tight



Insert the brass bearng sleeve (17) in the hole of the wooden wheel (4).Now mount the wheel insert with a screw (6) into the bradwal marking in the wood strip (1a) Don,t forget the spacer washer between the wheel and the wood strip!



Take both ends of the rubber band (14) and knot them on the screw eye (13) tighten, then pull the looped end to backwards to the nail in the pulley The by turning the rear wheel wind the rubber band tightly on to the pulley arragement. Place the dragster on the ground holdng the rear wheels,then let it run . The dragster is powered by the unwinding rubber band . The unwound rubber band should end up around the wooden ball head of the driver