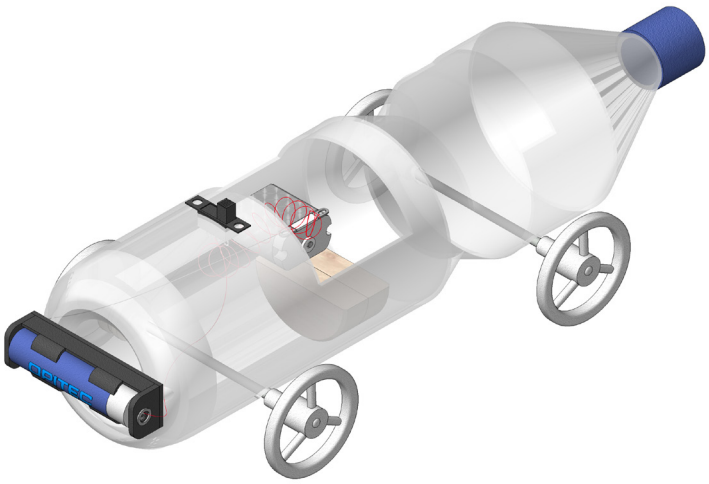
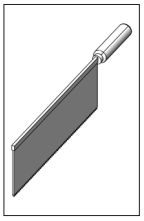
115.268

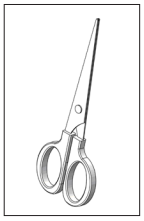
Recycling Car with Belt Drive



Tools required:

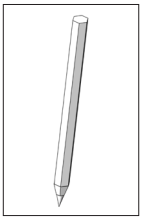


Dovetail Saw

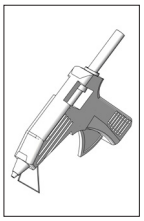


Silhouette-scissors

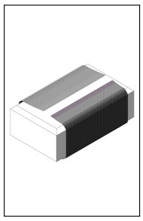
Craft Knife



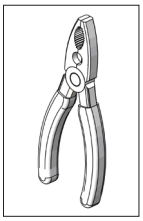
Pencil
Edding Marker



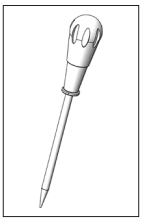
Hot Glue Gun



Sandpaper



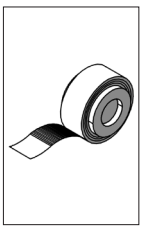
Wire Stripper



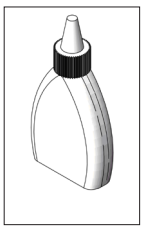
Pricking Awl

Please note:

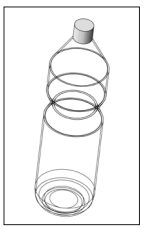
The OPITEC handicraft packs are not toys in a typical off-the-shelf sense, but rather additional teaching and learning material for educational purposes. This craft pack may only be constructed by children and adolescents under the guidance and supervision of experienced adults. Not suitable for children under 36 months. Choking hazard!



Adhesive Tape



Wood Glue



Plastic Bottle
0,5l

Stocklist	Quantity	Size (mm):	Description	Part-No.
Battery Holder	1		Battery Holder	1
Motor	1		Propulsion	2
Micro Sliding Switch	1	19x6	Switch	3
Jumper Wire, red	1	500	Wiring	4
Metal Axle	2	95x3	Axle	5
Rubber Ring	1	ø40	Belt Drive	6
Wooden Wheel	1	ø40	Motor Mount	7
Wheel	1	ø15	Propulsion	8
Reducer	1	3/2	Propulsion	9
Reducer	1	4/3	Reduction for Wheel	10
Steering Wheel	4	ø37	Wheels	11
PVC Tube	1	4/6	Axle Positioning	12

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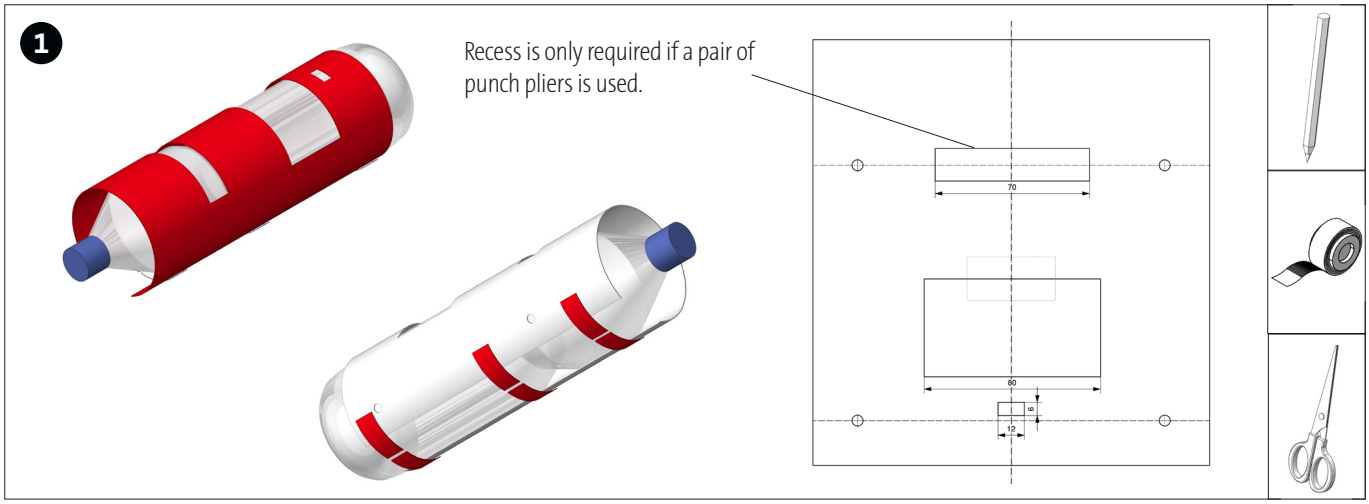
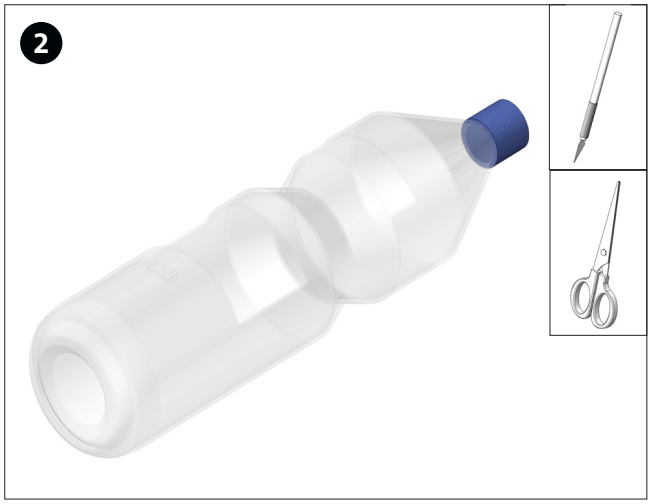
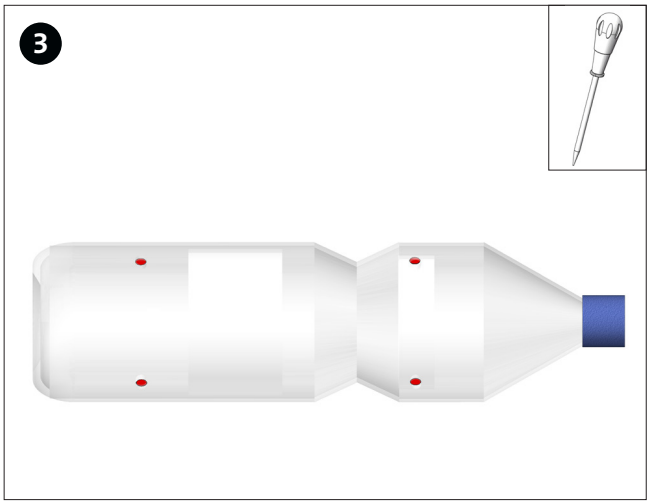


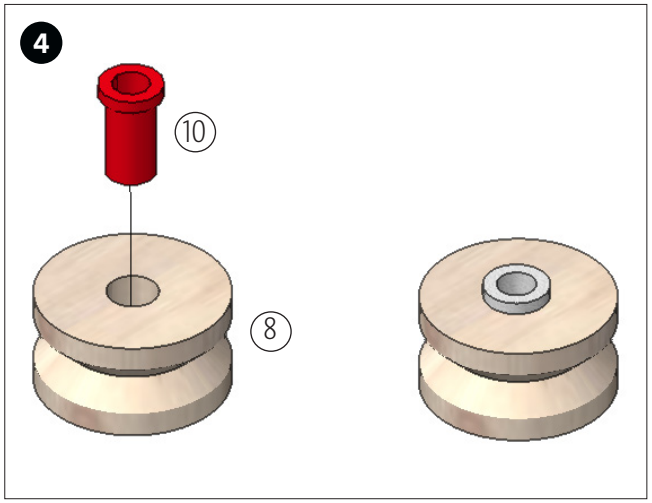
Copy the template (page 7) to a 0,5l plastic bottle. Put the template to the neck of the bootle, right beneath the screw top and fix it with glue. Mark the recesses and holes for the axles with a pen.
Please note: Template only works for a 0,5l bottle. If you use other bottles, please make sure to adjust the height of the axles.



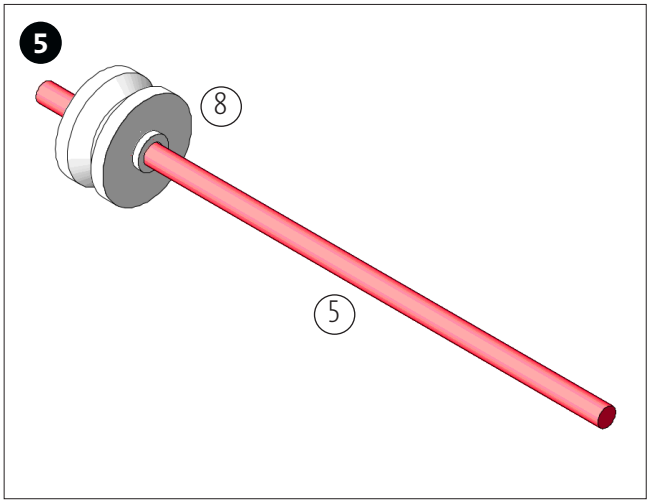
Cut the recesses with silhouette-scissors or craft knife as illustrated.



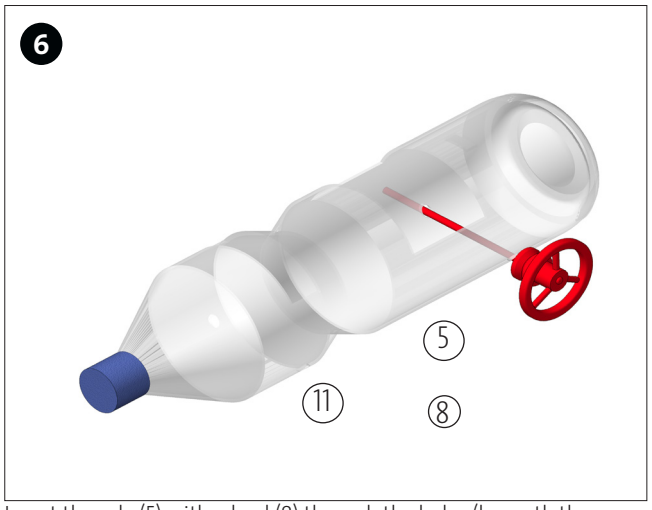
Prick the holes for the axle at the marks with a pricking awl or use punch pliers.



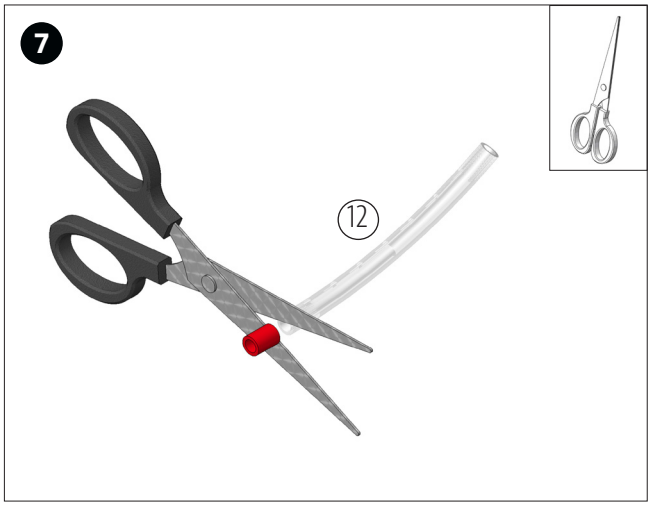
Insert the reducer (10) into the hole of the wheel (8) as illustrated.



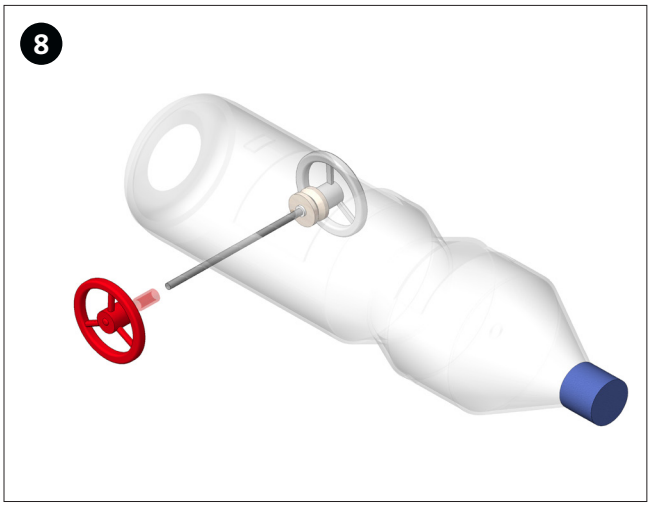
Put the wheel (8) onto one of the axles (5). See illustration!



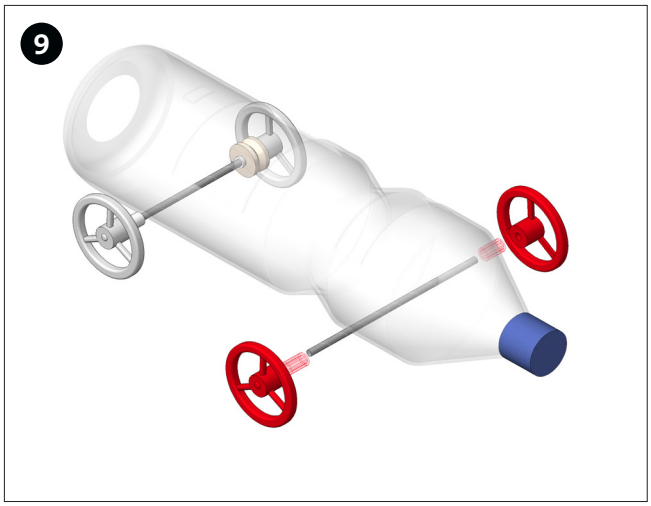
Insert the axle (5) with wheel (8) through the holes (beneath the recesses) and fit the second steering wheel (11) from the other side.



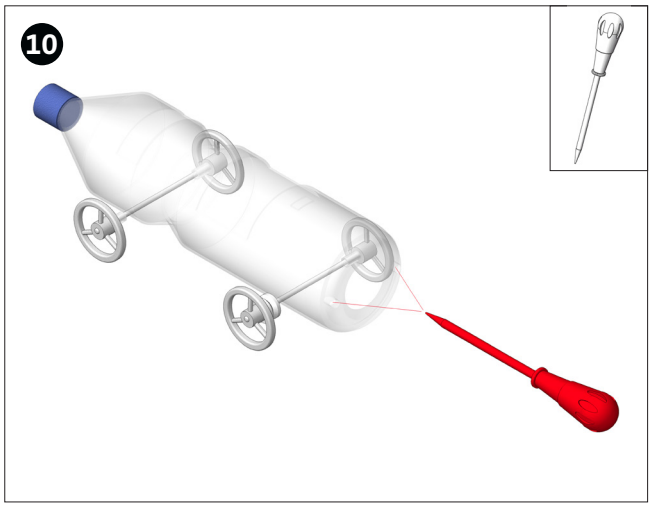
Cut the PVC tube (12) to 3 pieces of approx. 6mm of length.
If you use different bottles, adjust the pieces.



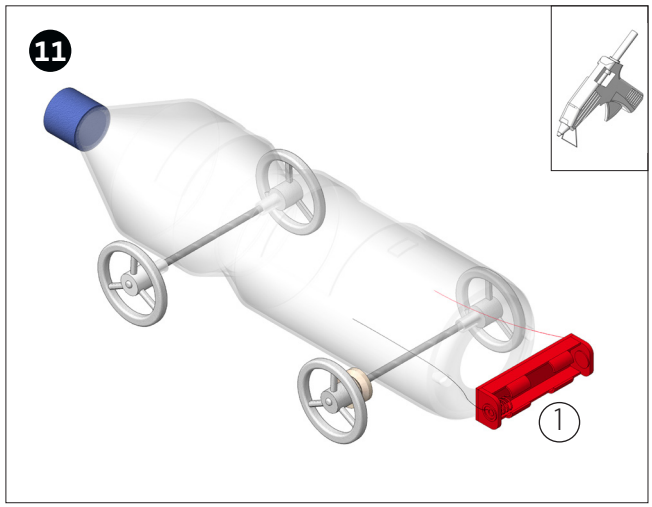
Place a piece of PVC tube on the free end of the axle and then fix the steering wheel (11) on top. Axle has to rotate freely.



Fit the front axle through the appropriate hole and put a PVC tube piece (12) as well as a steering wheel (11) onto both ends.



Use the pricking awl to make two holes for the wire of the battery holder (1) at the rear of the vehicle as illustrated.



Fish the wire of the battery holder (1) through both holes into the inward of the bootle and stick the battery holder (1) to the tail end with hot glue.

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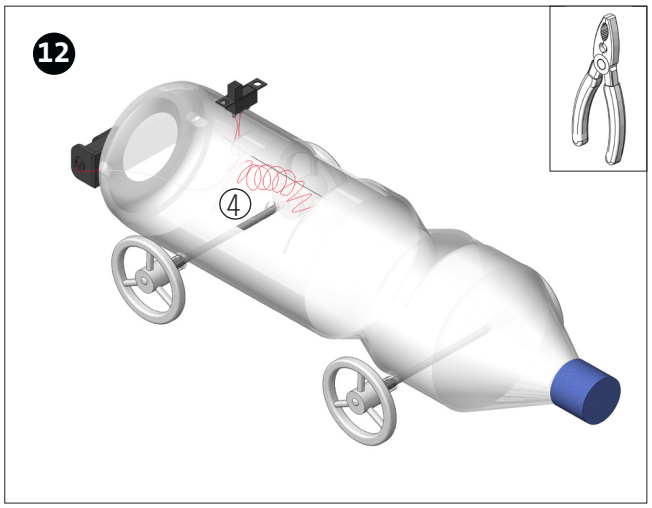
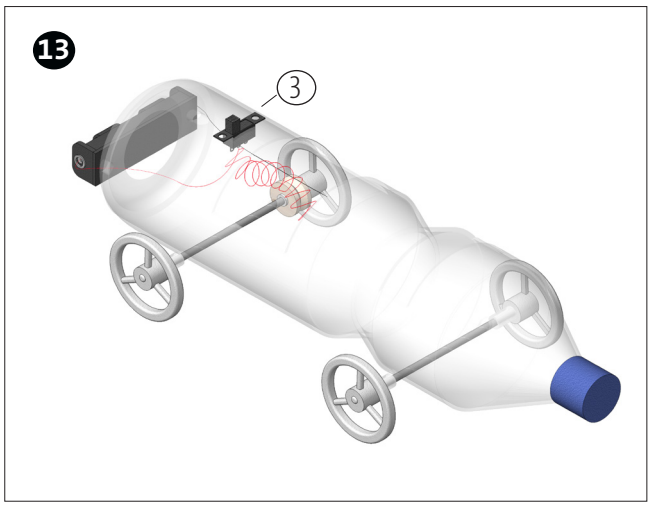
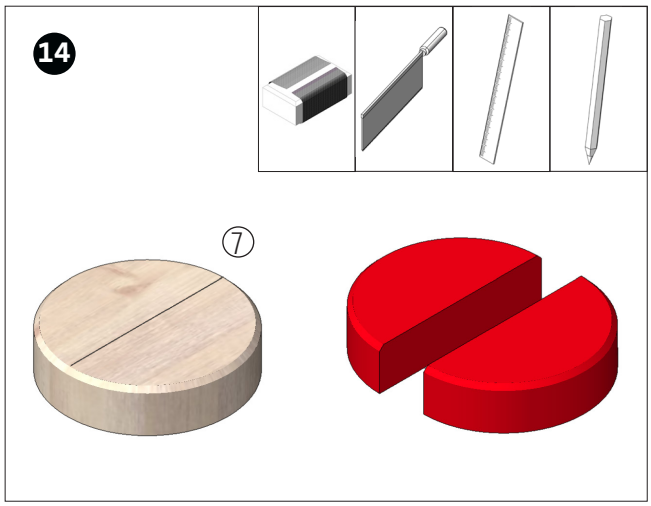


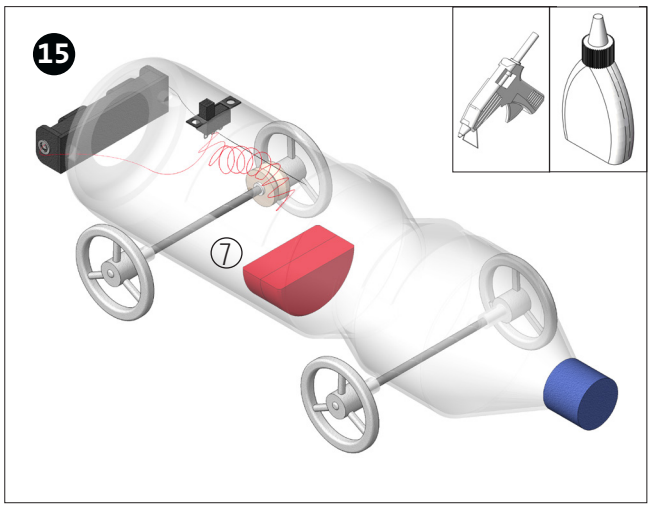
Cut a 200mm long piece off the jumper wire (4) and coil it around a pencil. Pull it off and strip the insulation at both ends at a length of 5mm. Place the spiral-shaped piece into the bottle interior and guide one end through the recess for the switch (3) to the outside. Connect the end of the wire to the external switch connection. Connect or solder the red wire end of the battery holder (1) to the middle connection of the switch.



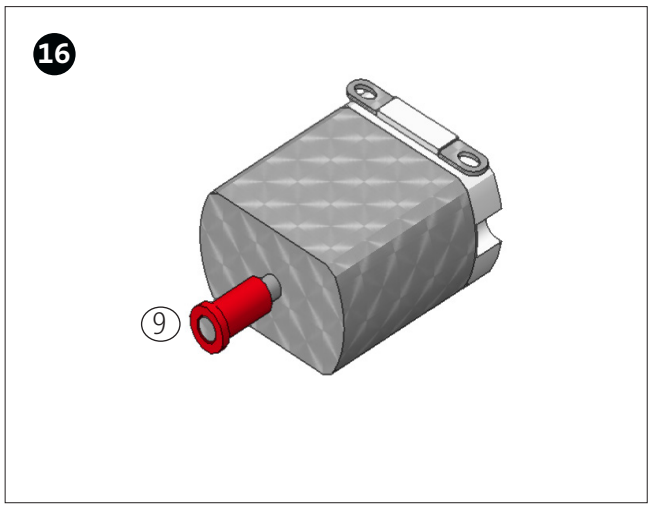
Fix the micro sliding switch (3) into the recess on both sides using hot glue.



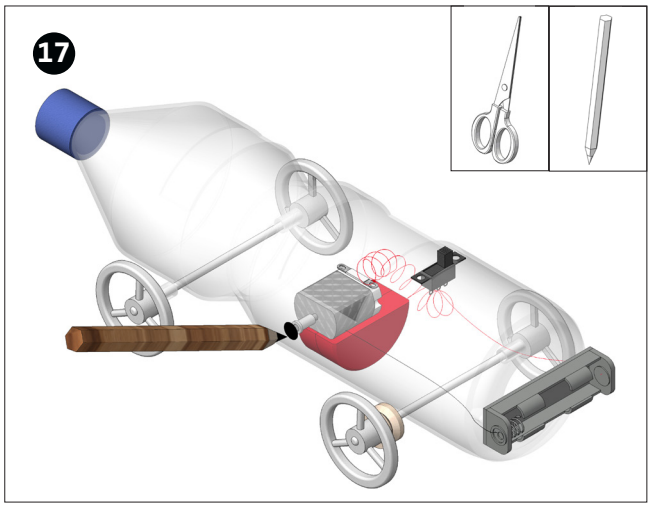
Mark the centre of the wooden wheel (7) and divide it in half with a dovetail saw (see illustration).



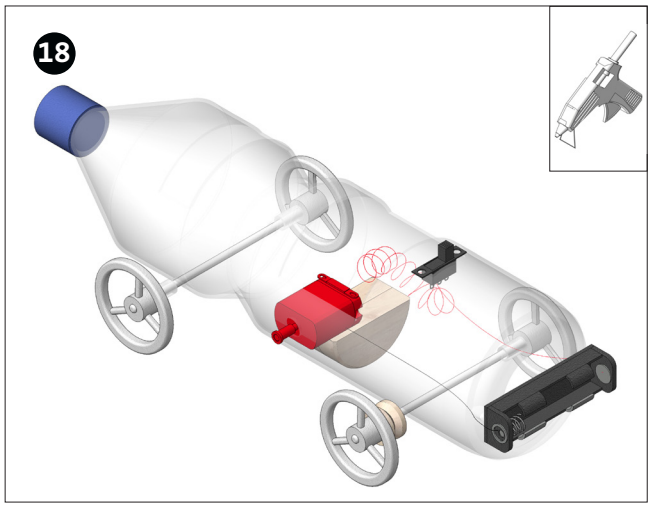
Use wood glue to stick the two wooden parts together and hot-glue it to the bootom through the opening as illustrated.
Position as per template.



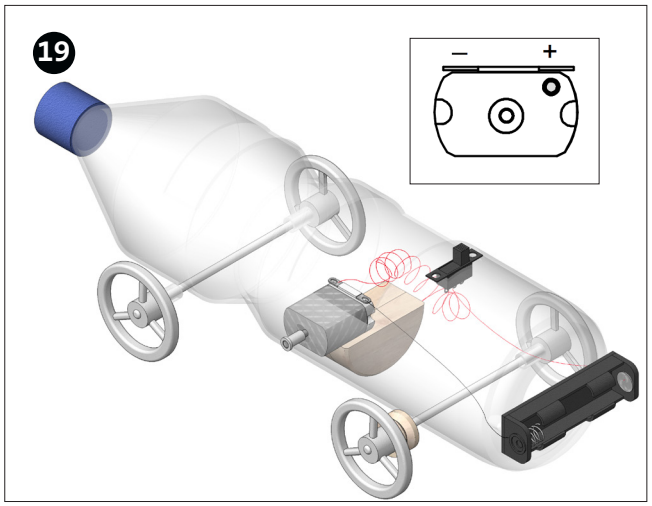
Put the reducer (9) on the motor axle with the big ring pointing outwards (see illustration!).



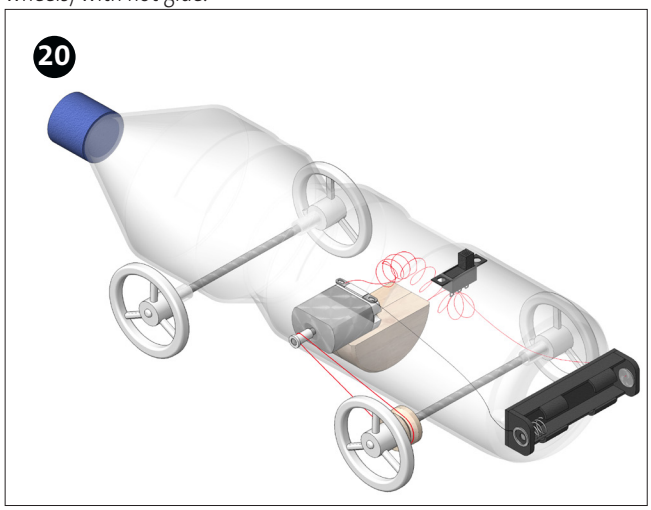
Fix the motor (2) to the motor holder and mark its position on the axle with Edding from outside. Cut out an approx. ø 8mm circle at this location.



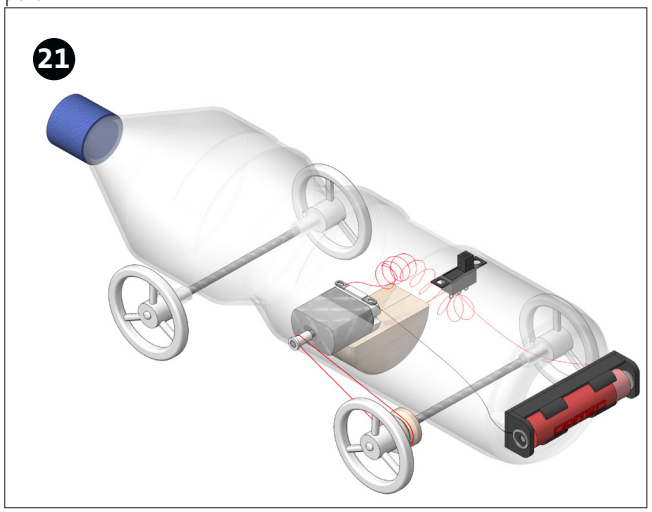
Insert the motor axle along with reducer (9) through the opening. Keep the motor in that position and fix it to the motor holder (wooden wheels) with hot glue.



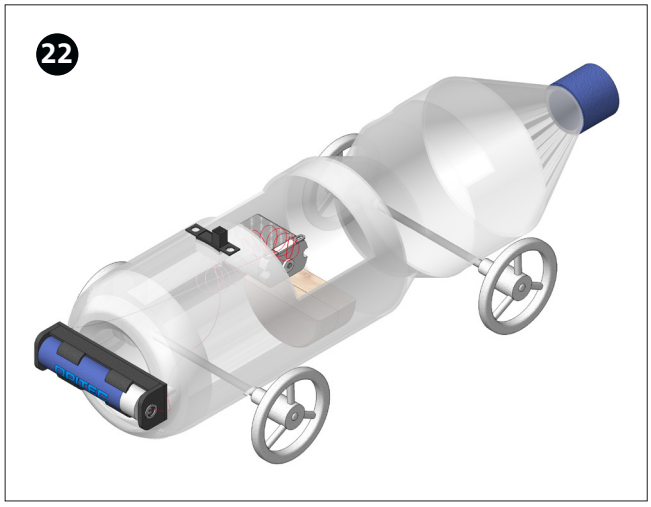
Connect the helical red wire to the circle-marked pole of the motor. Then connect or solder the black wire of the battery holder to the free pole.



Fix the rubber ring (6) to the motor axle and the groove of the wheel (8) as illustrated.



Insert 1,5 V Mignon batery into battery holder (1).



By operating the switch, the circuit is closed and the rubber bands propel the back axle. **Please Note:**
If the vehicle moves backwards, just reverse the polarity of the wires at the motor!

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Template S 1:1
(for 0,5 litre plastic bottle)