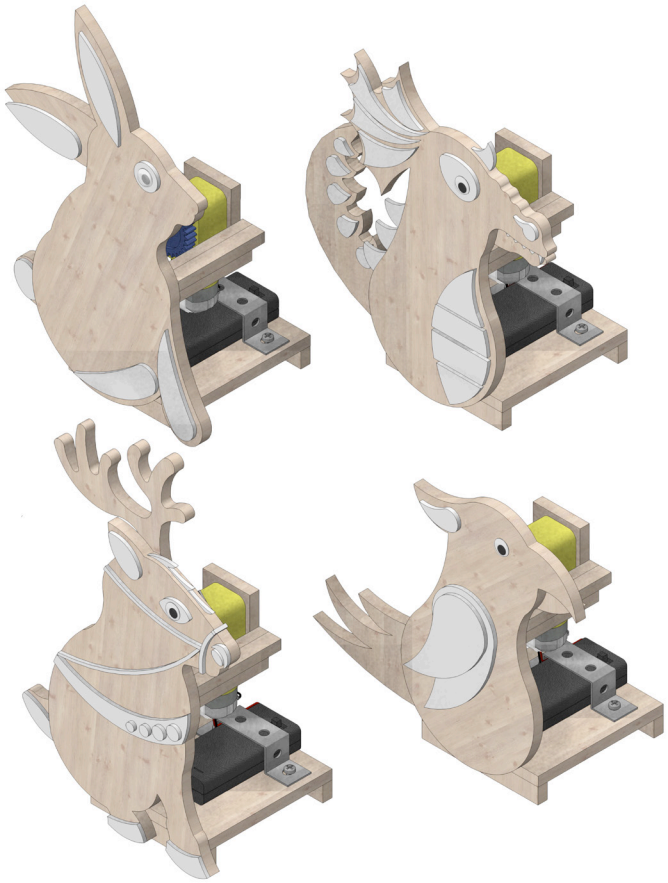
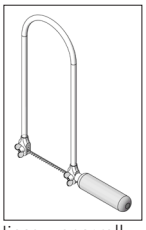
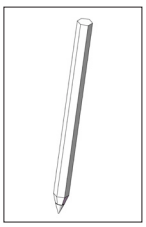
124.351

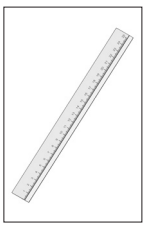
Gear animals

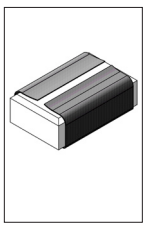


Tools required:

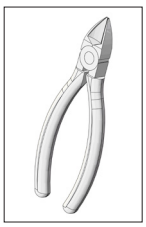

Jigsaw or scroll saw

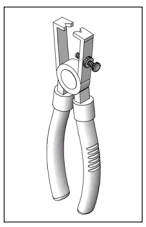

Pencil


Ruler


Sandpaper


Phillips screwdriver

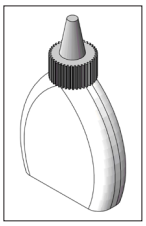

Side cutters

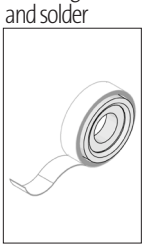

Wire stripper


Soldering iron and solder


PUK saw


Pricking awl

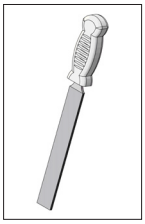

Wood glue


Adhesive tape

Note

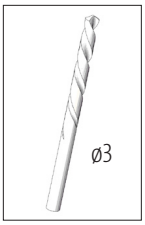
After completion, the OPITEC work kits are not articles with toy character of a generally commercial kind, but teaching and learning aids to support educational work. This kit may only be built and operated by children and young people under the guidance and supervision of competent adults. Not suitable for children under 36 months. Danger of suffocation!


Combination pliers


Engineer's file


Wrench


Scissors



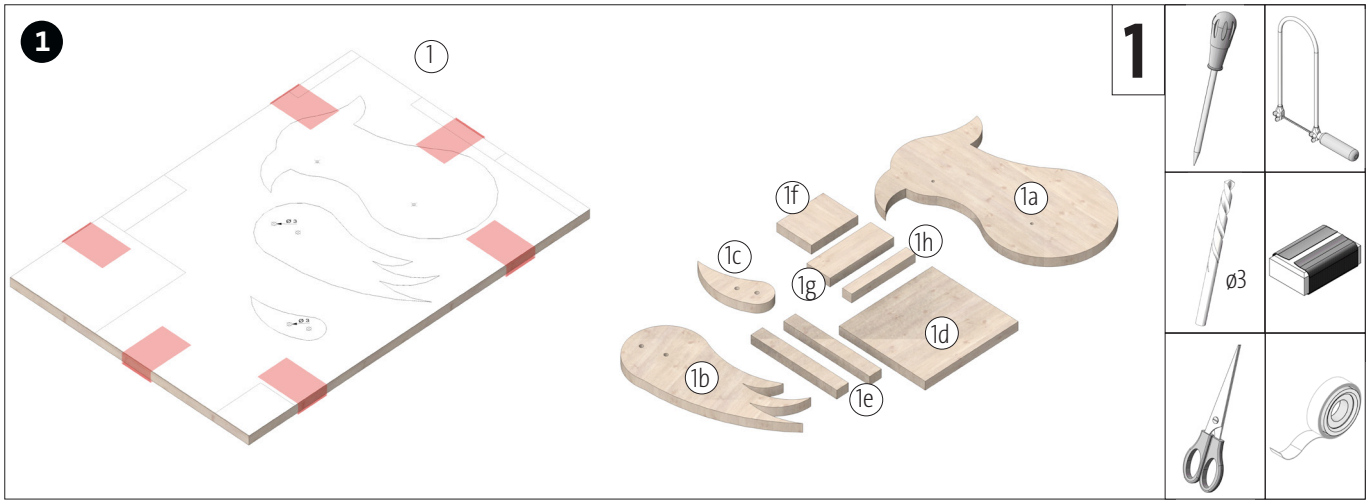
Drill

Parts list	Number of pieces	Dimensions (mm)	Description	Part no.
Plywood	1	300x210x6	Base plate	1
Gear motor	1		Drive	2
Perforated metal strip	1	250x15x1	Drive	3
Gear wheel	1	ø30	Drive	4
Battery holder	1		Power source	5
Cylinder head screw	1	ø4x16	Fastening perforated sheet strip	6
Nut M4	1		Fastening perforated sheet strip	7
Lock nut M4	1		Fastening perforated sheet strip	8
Lenticular crosshead screw	2	ø2,9x25	Fastening gear	9
Lenticular crosshead screw	4	ø2,9x9,5	Fastening wooden parts/battery holder	10
Lenticular crosshead screw	2	ø2,9x13	Fastening gear wheel/perforated plate	11
Wiggly eyes	1	ø8	Eye	12
Foam rubber	1	10x14,5x2	Foam rubber decoration	13

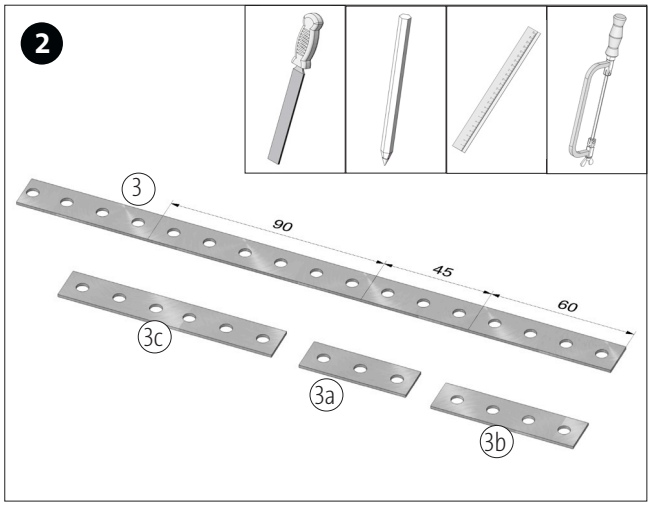
OPITEC

Building instructions 124.351
Gear animals

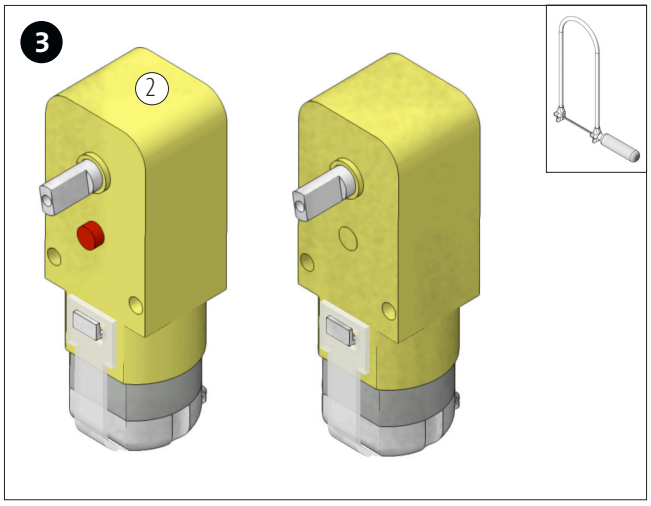
The structure is possible in 4 variants (parrot (A), rabbit (B), dragon (C), reindeer (D)). Steps 2-9 are the same for all variants. The remaining work steps differ only in the respective desired execution. The instructions show the structure of the parrot.



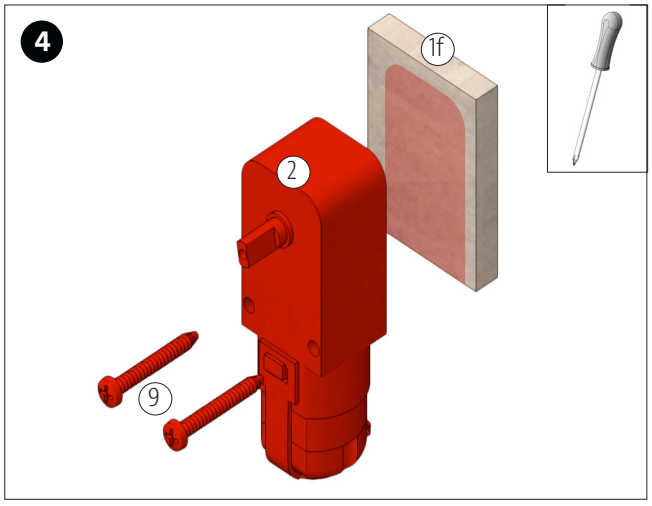
Select the AD template, cut it out and transfer it to the plywood panel (1). Drill all ø3mm holes. Then saw out all the individual parts with the jigsaw or scroll saw. Clean saw cuts.



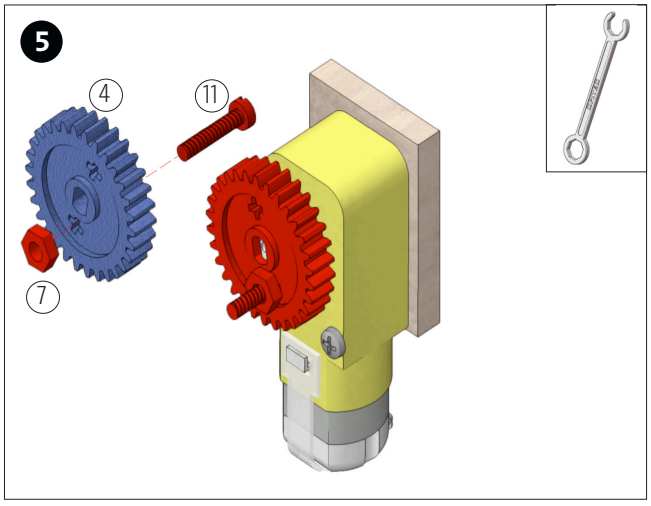
Saw off three pieces (3a, 3b, 3c) from the perforated metal strip according to the dimensions and deburr them.



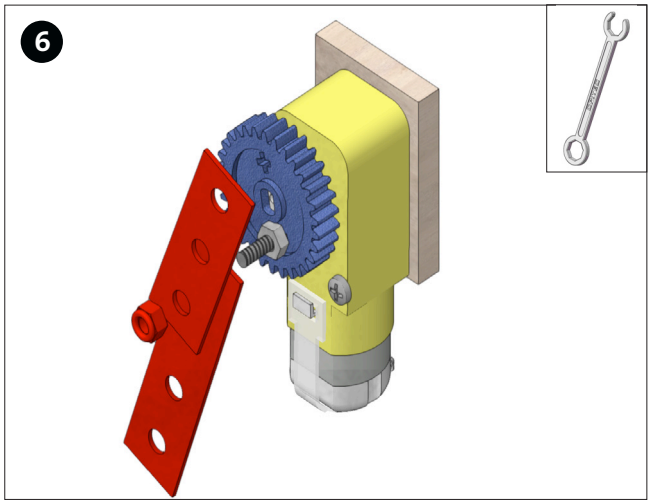
Saw off the cylindrical plastic pin on the geared motor (2) with a jigsaw.



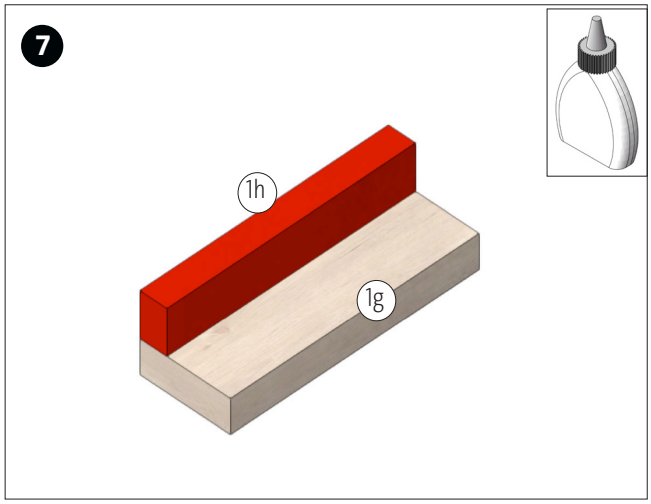
Screw the geared motor (2) onto the wooden part (1f) using the two screws (9) as shown.



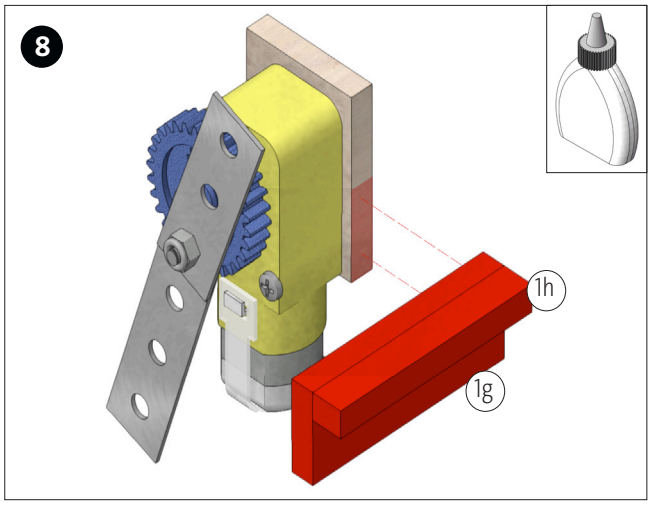
Insert the screw (11) into one of the cross openings in the gear wheel (4) as shown and fix it with a nut (7). Then put the gear wheel on the gear shaft.



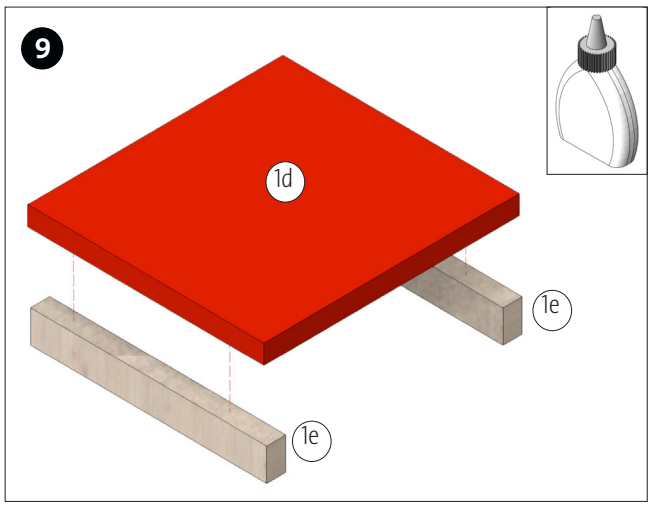
Push the two perforated metal strips (3a, 3b) onto the screw (11) as shown and fix them with the lock nut (7).



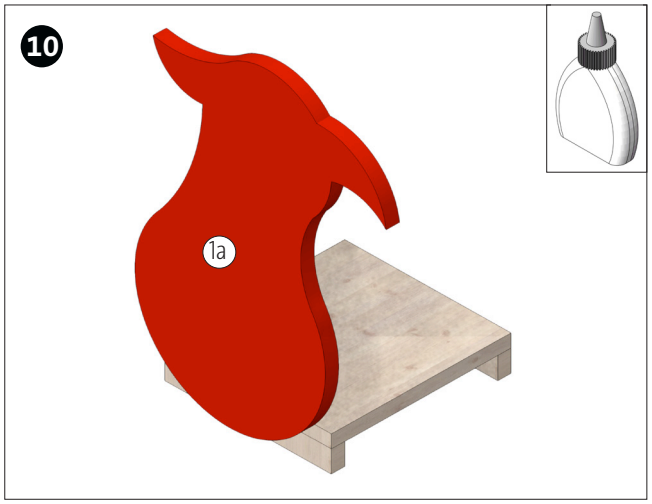
Glue the wooden part (1h) to the wooden part (1g) flush with the outer edge. Let the glue dry well.



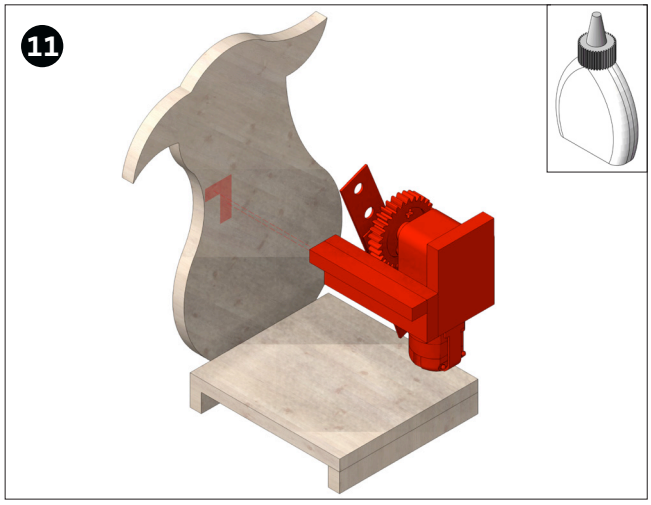
Then glue the glued wooden parts (1h+1g) onto the wooden gear plate as shown. Let the glue dry well.



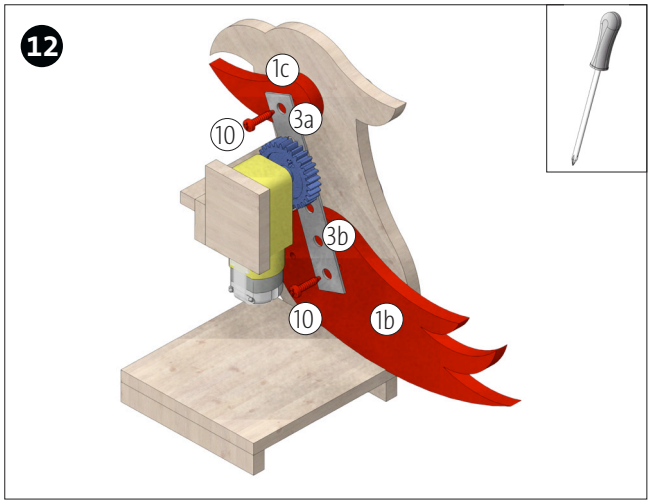
Glue the wooden parts (1e) flush to the outer edges of the cover plate (1d) as shown. Let the glue dry well.



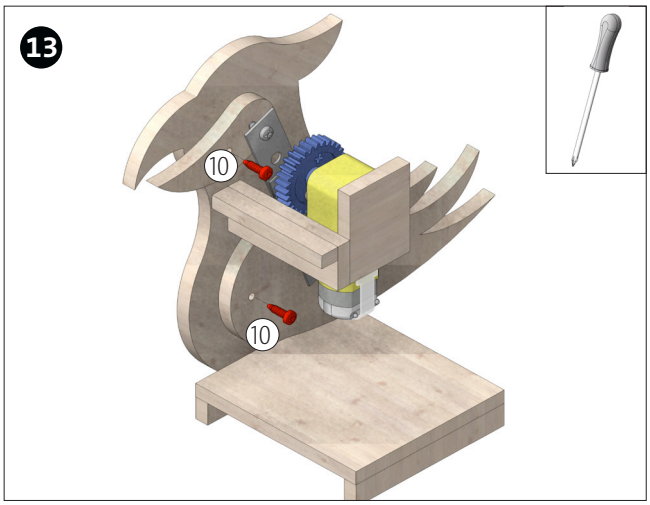
Glue on the body (1a) as shown.



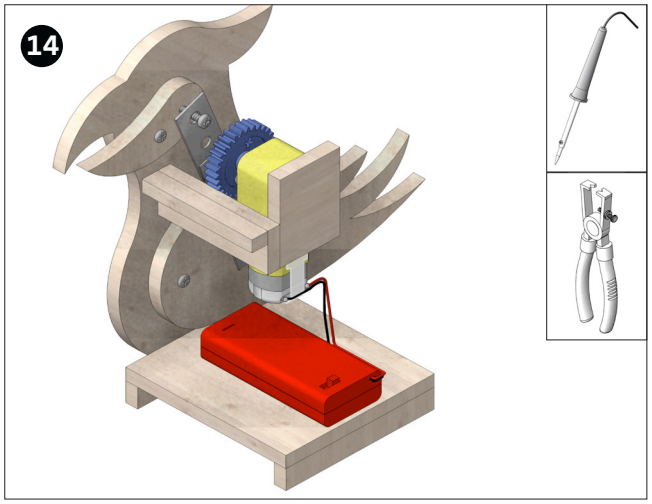
Glue on the finished gear unit (step 8) at the marked position as shown.



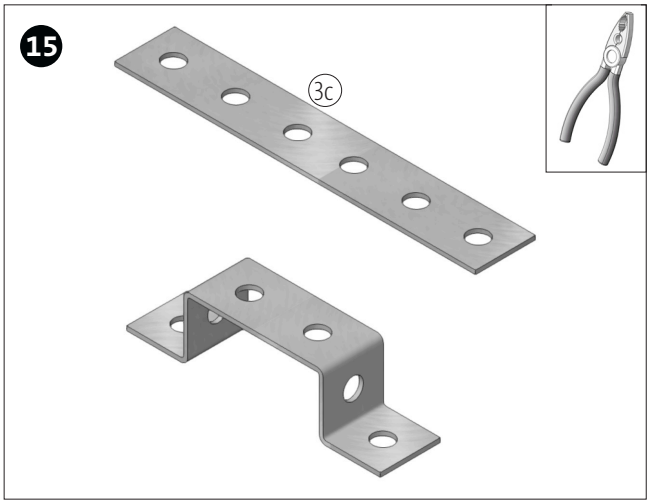
Screw the tail feathers (1b) and beak (1c) to the perforated sheet metal strips (3a, 3b) with one screw each (10) as shown.



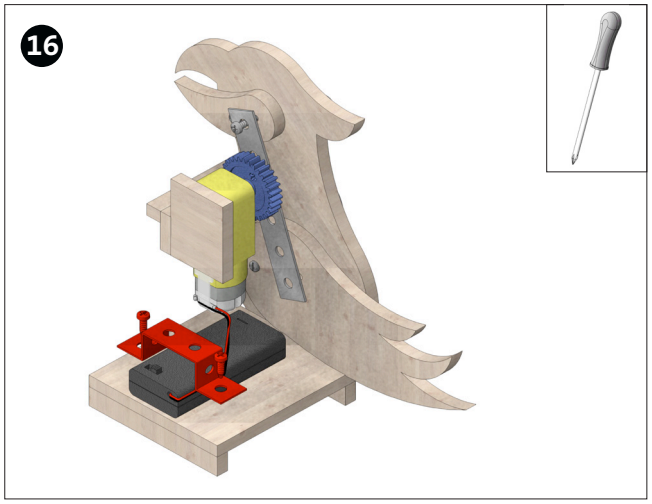
Screw on the tail feathers (1b) and beak (1c) as shown, each with a screw (10).



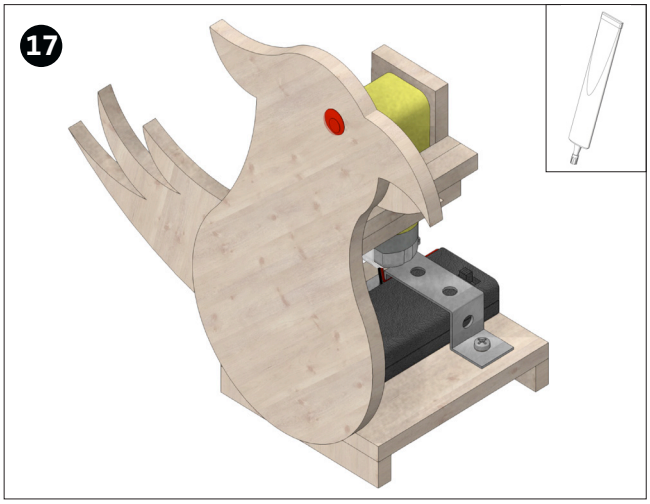
Strip the battery holder cables (5), tin them and solder them to the gearmotor connections (2) as shown.



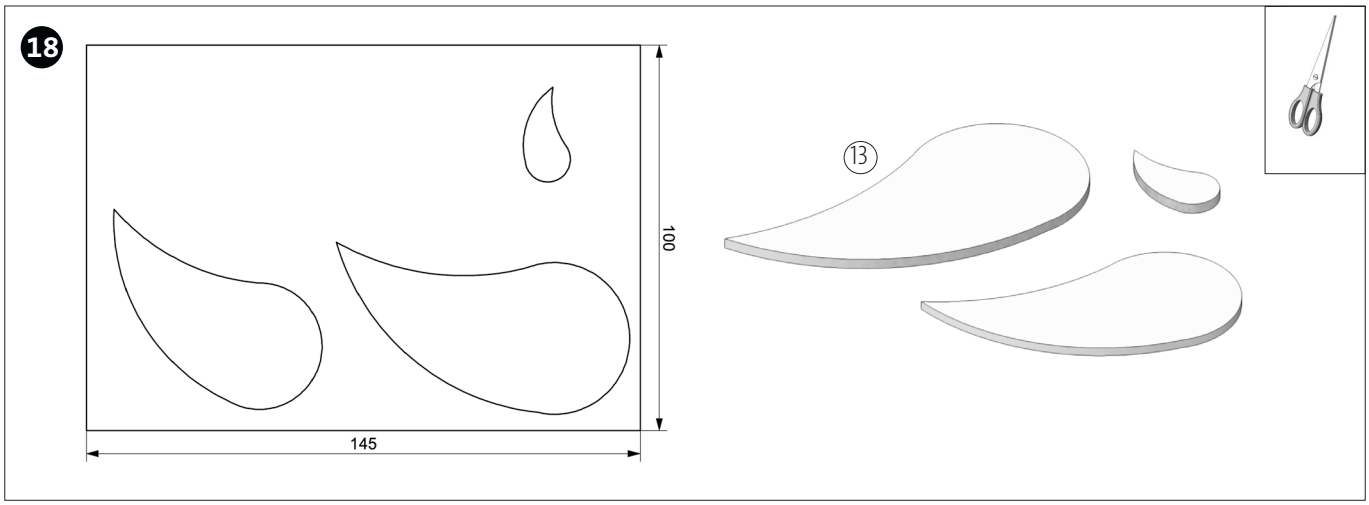
Bend the perforated sheet metal strip (3c) 4x 90° as shown.



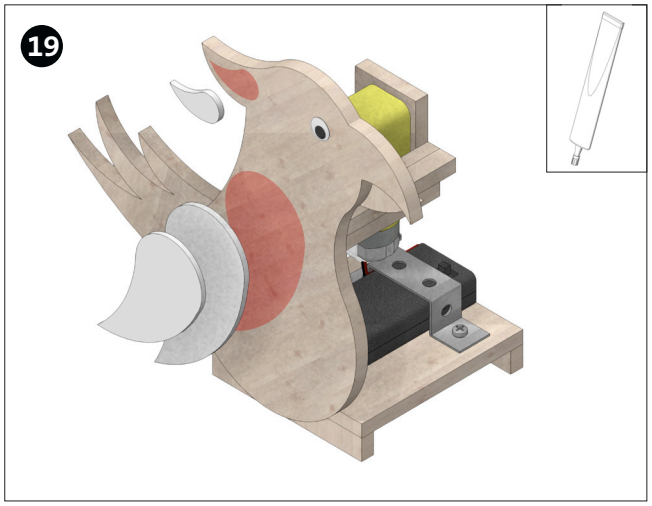
Fasten the bent perforated sheet metal strip with two screws (10) as shown and thus fix the battery holder.



Glue on the wiggle eye (12) as shown.



Transfer the template for the decorative parts to the foam rubber (13) and cut out.



Glue on the foam rubber decoration parts as shown.