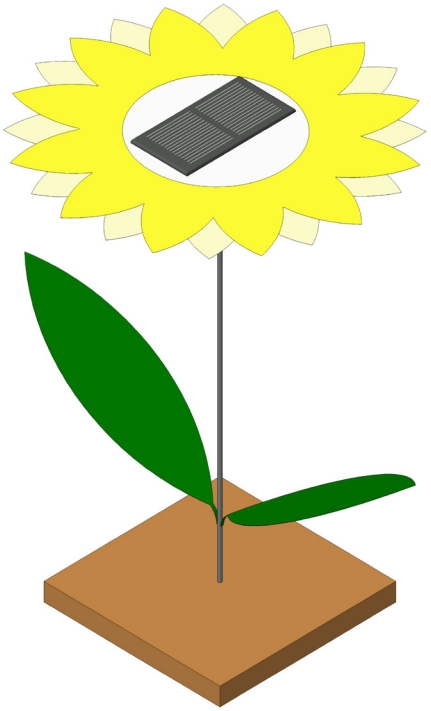
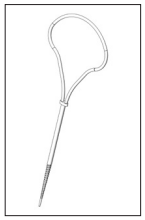
107355

Solar Sunflower

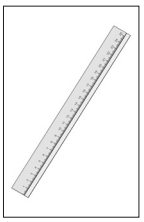


Required Tools:

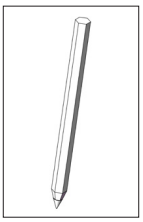
Scissors



Hand drill
Ø 2 mm



Ruler



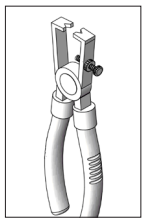
Pencil

Adhesive tape

Punch or
punch pliers

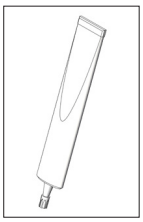
Craft knife

Double sided
adhesive tape



Wire stripper

Slot screwdri-
ver



All purpose
glue

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 technology. These projects should only be undertaken and operated 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!

Parts List	Quantity	Size (mm)	Description	Part No.
Solar cell casted	1	0,5 V / 250 mA	Solar cell	1
Round felt coaster	1	Ø 10,7 cm	Felt coaster	2
Solar motor	1	RF 300	Solar motor	3
Welding wire	1	Ø 2 x 200	Welding wire	5
Wooden board	1	100x100x10	MDF board	6
Cardboard pearl white	1	250 x 350	Cardboard white	7
Cardboard banana yellow	1	250 x 350	Cardboard yellow	8
Cardboard moss green	1	250 x 350	Cardboard green	9
Connector insert	1	Ø 3 x 4 mm	Connector	10
Cylinder head screw	2	3 x 6 mm	Screw	11

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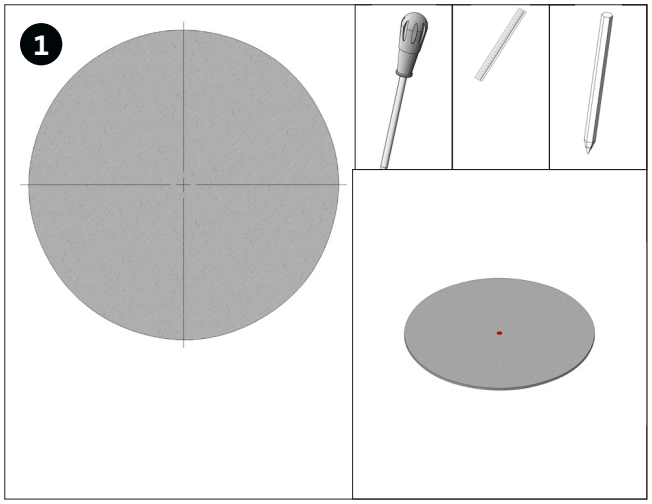
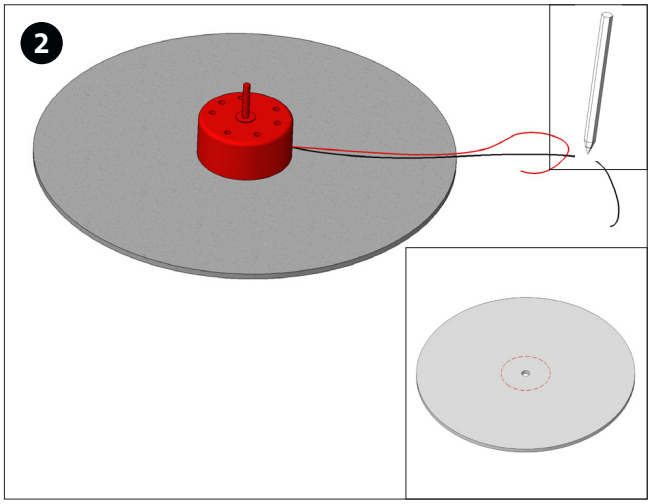
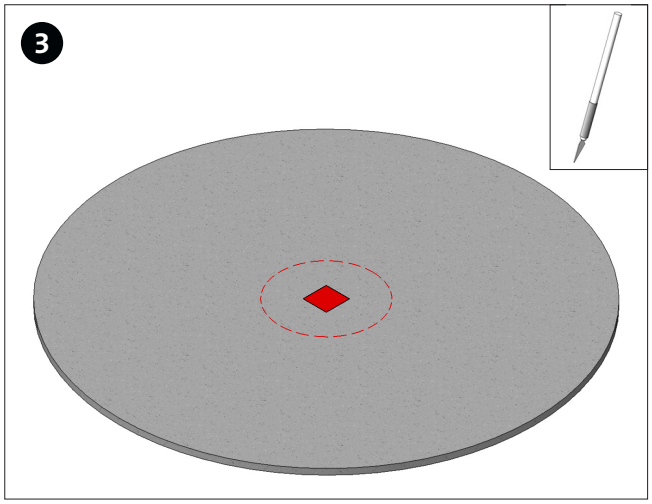


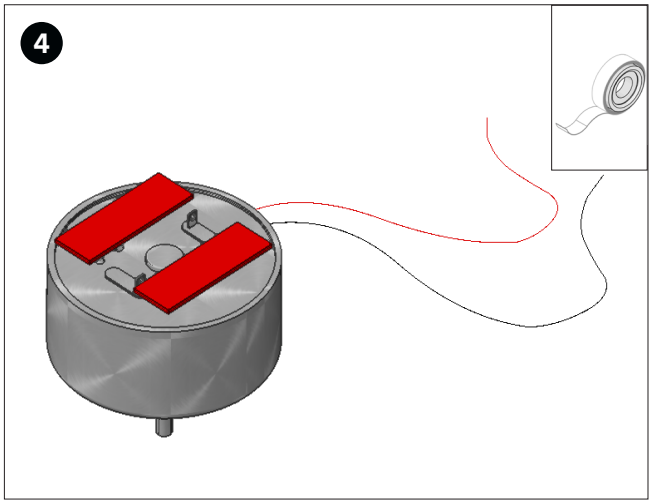
Mark the middle of the felt coaster (2) and make a hole through it with the help of a prick.



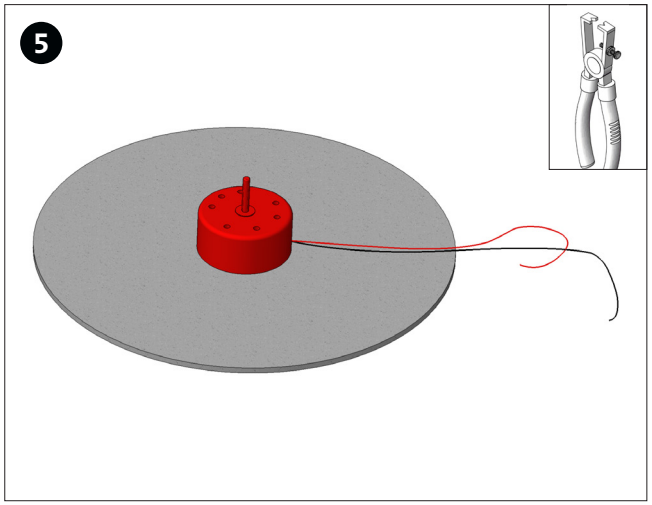
Place the motor (3) centred on the felt coaster and draw the outline of the motor with a pencil.



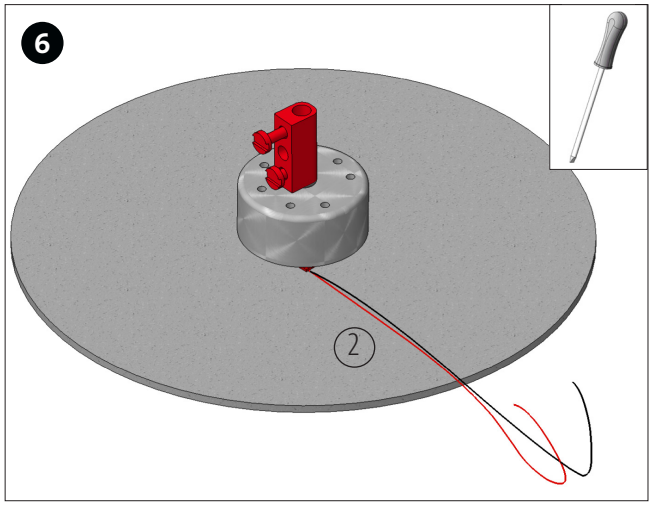
Cut out a 6x6 mm square around the centre with a craft knife. **Note:** This recess will be needed later, so that the motor can lain flat on the flat coaster.



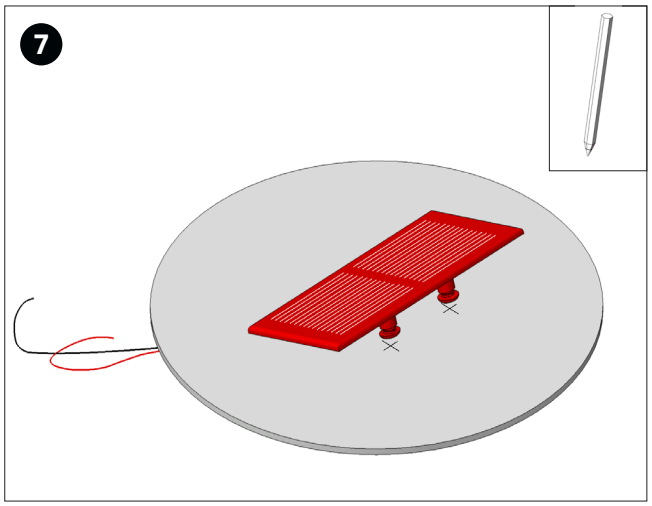
Cut a piece of double sided adhesive tape about 2 cm long. Then cut it into two equal parts. These are glued to the back of the motor.



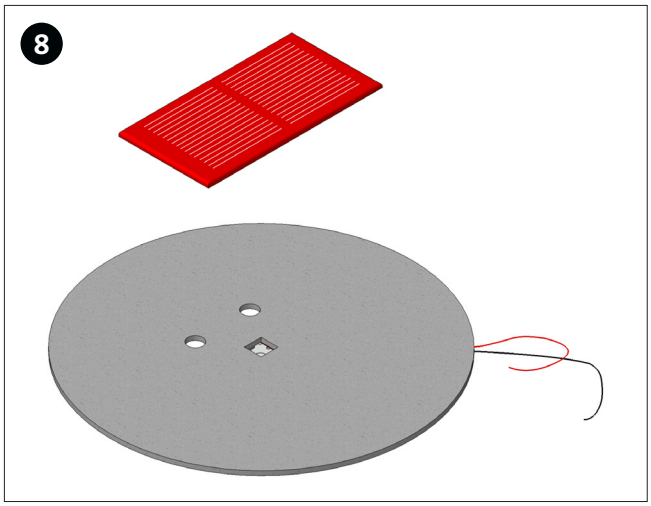
Then glue the motor centred on the felt coaster, so that the elevation on the back protrudes into the reces. Use wire strippers to strip approximately 1 cm of insulation from the motor wires.



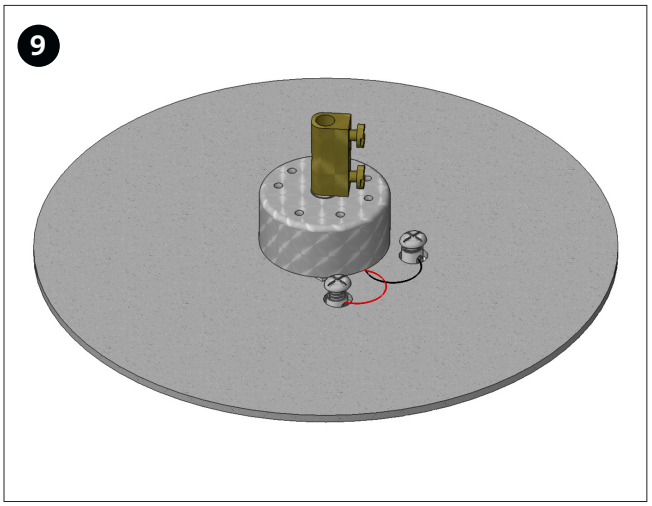
Put the connector (10) on the motor shaft and tighten the screw (11). ***Note:*** There must be a air gap of approx. 1 mm between the motor and the connector, so that the motor can rotate freely.



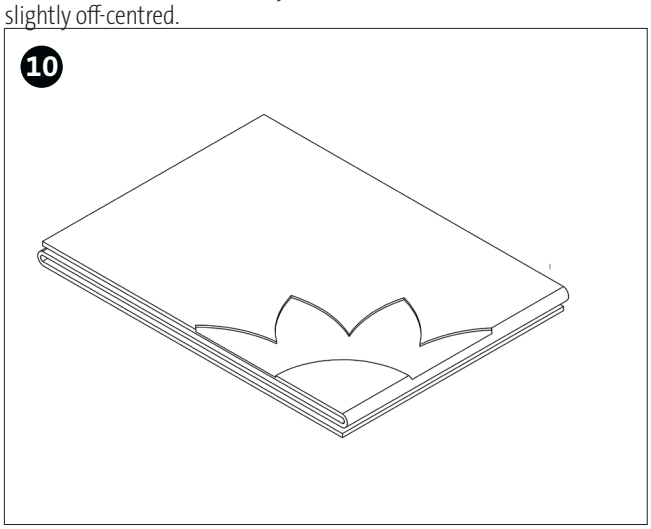
Place the solar cell (1) on the top of the felt coaster. Mark two positions for the screw contacts of the solar cell.



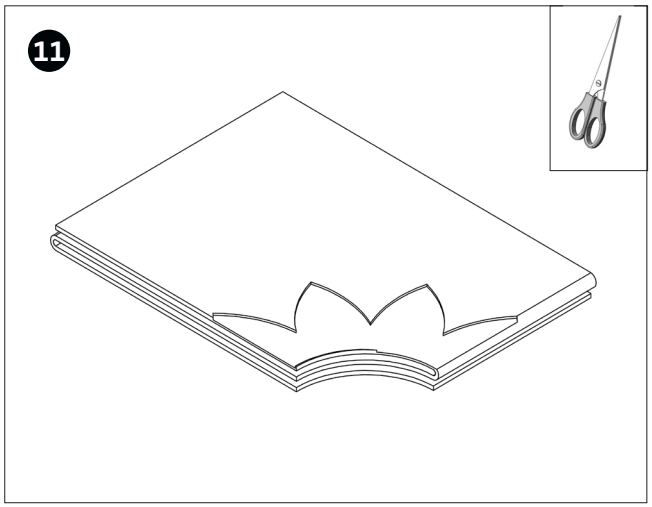
Pierce the holes for the screw contacts with a punch or with punch pliers. **Note:** the screw contacts of the solar cell must pass through the felt a few millimetres away from the motor. Attach teh solar cell slightly off-centred.



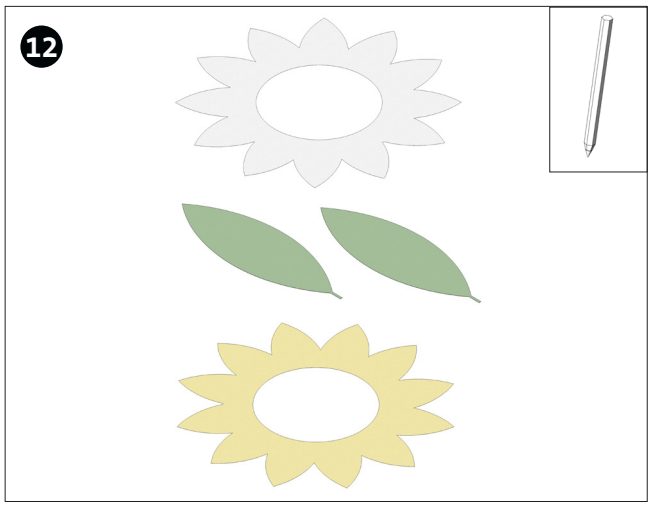
Connect the red connection cable to the positive pole of the solar cell and the black cable to the negative pole. Fasten both connection cables to the solar cell with the screws. Make a functional test!



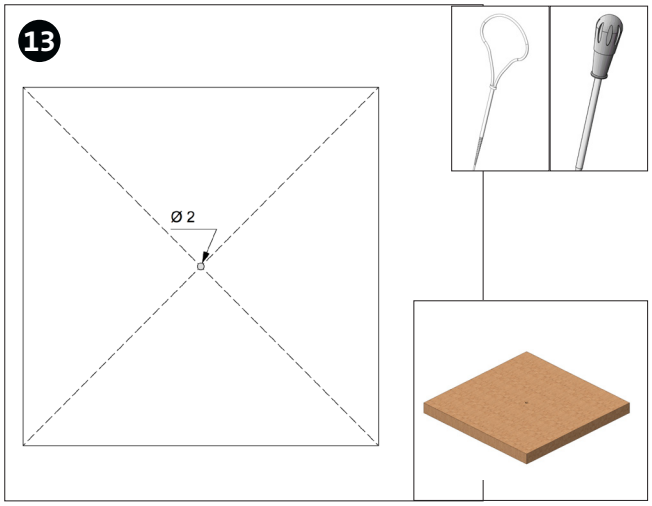
Fold the template along the dotted lines.



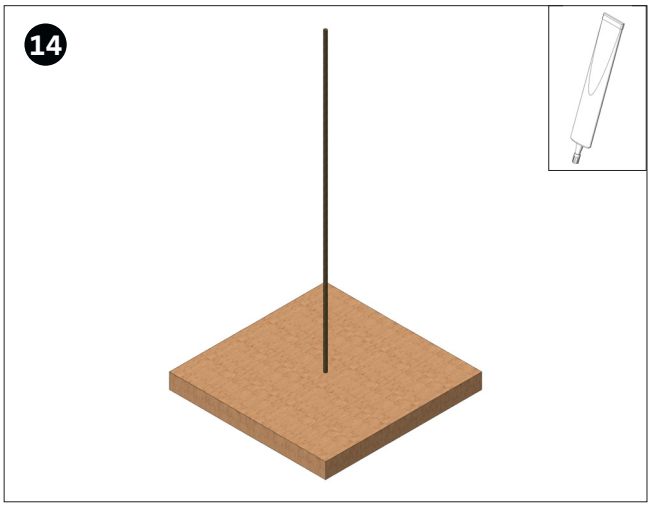
Cut out the petals and the centre of the flower.



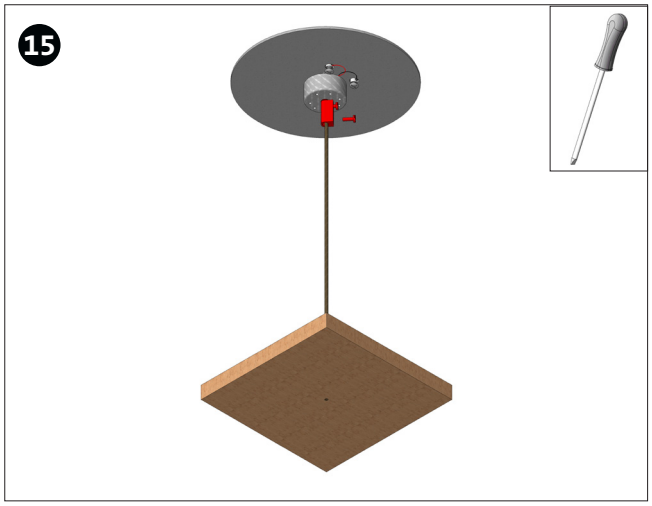
Unfold the template and transfer it to the yellow (8) and white (7) cardboard. Then make two leaves from the green cardboard.



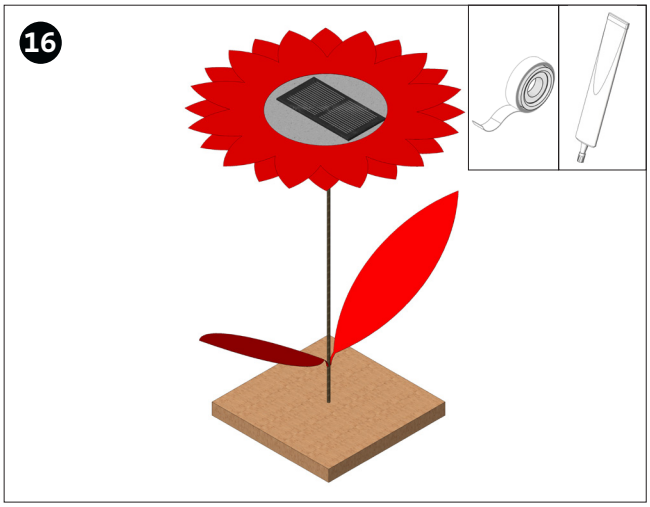
Drill a 2 mm hole in the centre of the base board with the hand drill.
Note: You can mark easily the centre using two diagonals.



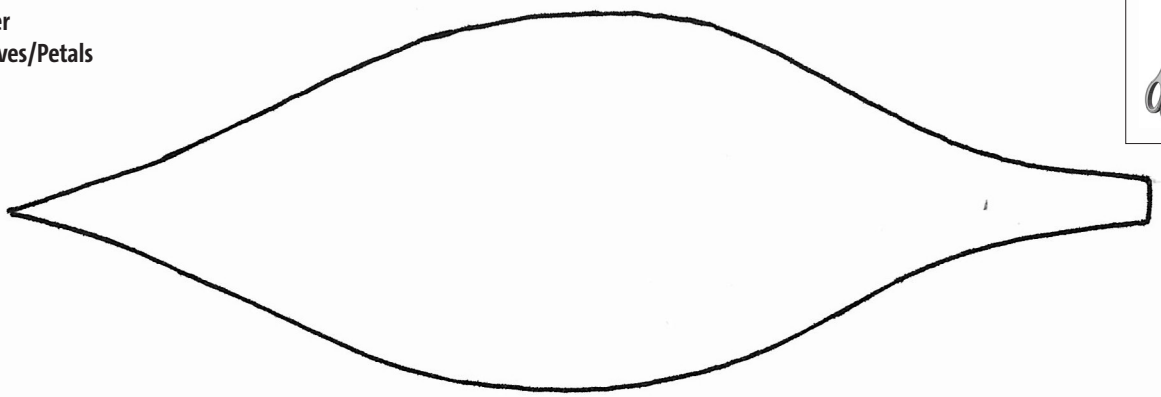
Insert the welding wire (5) into the hole. (It can be glued with all purpose glue.)

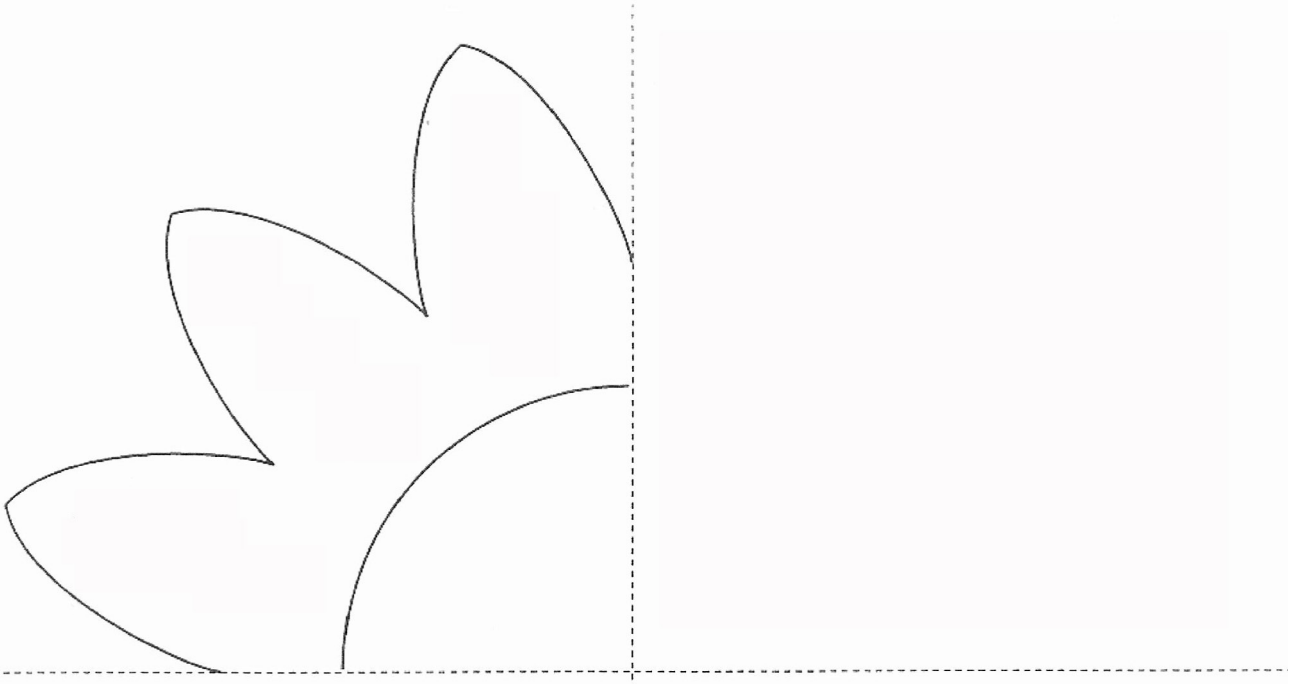


Put the felt coaster on the welding wire. Loose the screw from the connector and place the connecto on welding wire. Then tighten the screw again.



Glue the petals to the felt coaster offset around the solar cell. Attach the leaves to the stem with adhesive tape. Done!





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