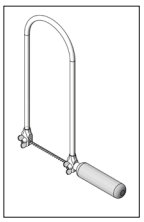
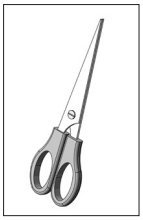
100.803

Wind Machine

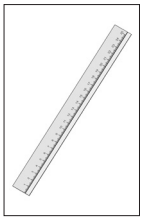
Required Tools:



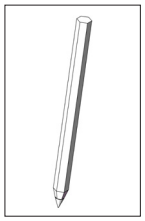
Jigsaw



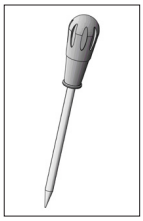
Scissors



Ruler



Pencil



Prickling Awl

Craft Knife

Craft Knife

Pliers

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.
Cork board (pre-stamped)	1	250x125x4	Pre-stamped parts	1
Coloured card	1	210x150	Forms	2
Card board (pre-stamped parts)	1	195x155	Pre-stamped parts	3
Round rod	6	ø3x300	Round rods	4
Metal eyelet	4	ø4/3	Bearing	5
Veneer	1		Wind blades	8
Wooden sticks	1 pack		Wooden sticks	9

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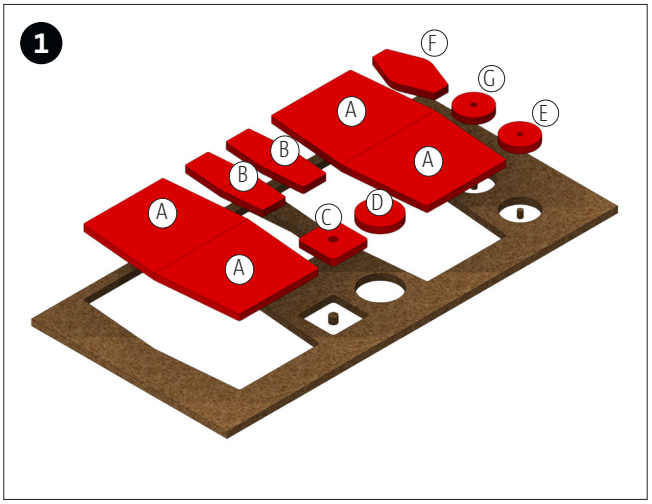
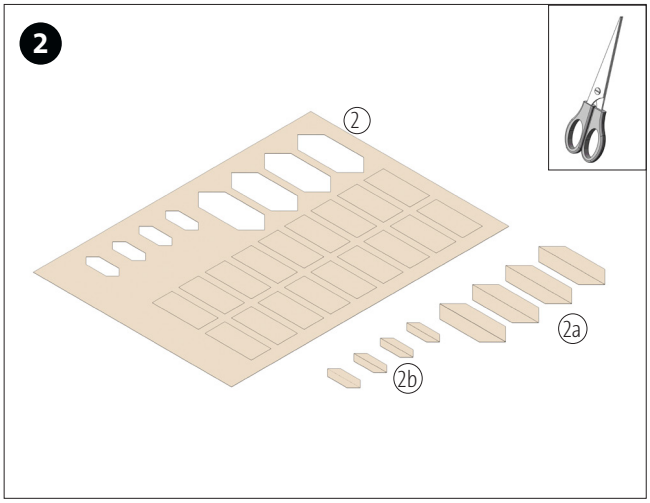
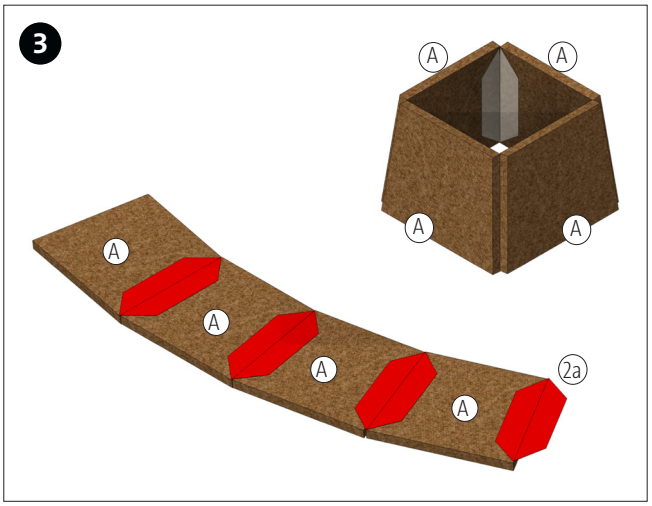


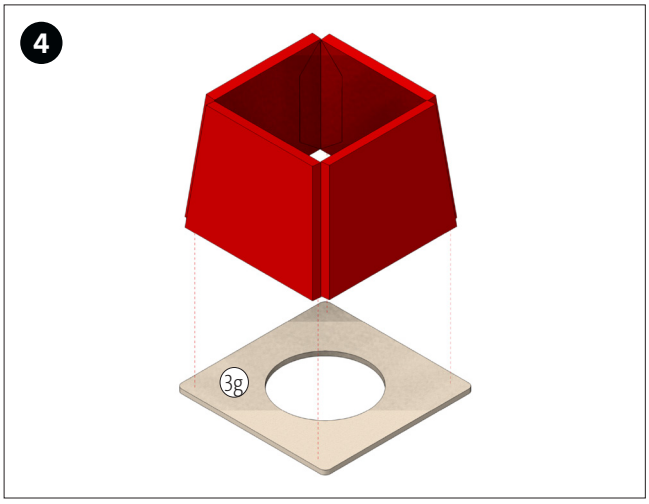
Carefully remove the pre-stamped parts (a-G) from the cork board (1).



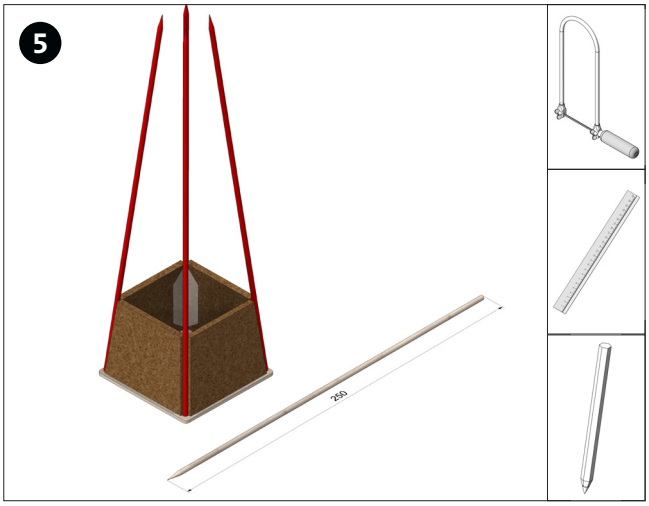
Cut out the carboard connectors (2a+2b) and carefully scratch the fold lines with the tip of the scissors.



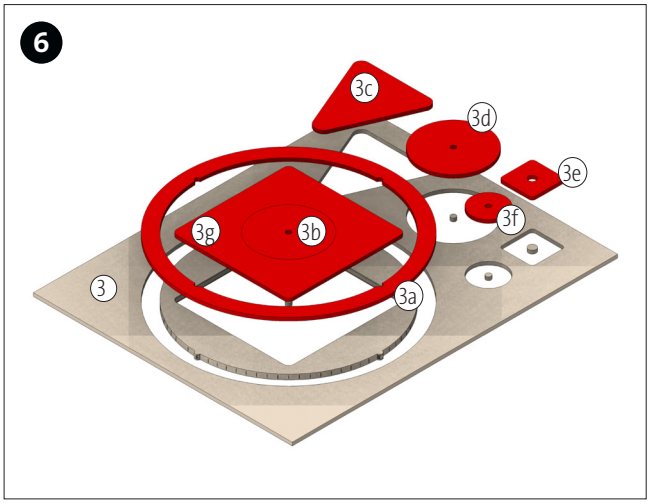
Glue the cardboard connectors (2a) to the cork base part (A) with the superglue. Connect them together as shown.



Glue the finished base centered on the cardboard part (3g).



Shorten 2 rods (3) to a length of 250 mm. Then glue them into the corners of the base with the superglue as shown. **Note:** The rod tip faces up.



Remove the pre-stamped parts (3a-3f) from the cardboard sheet.

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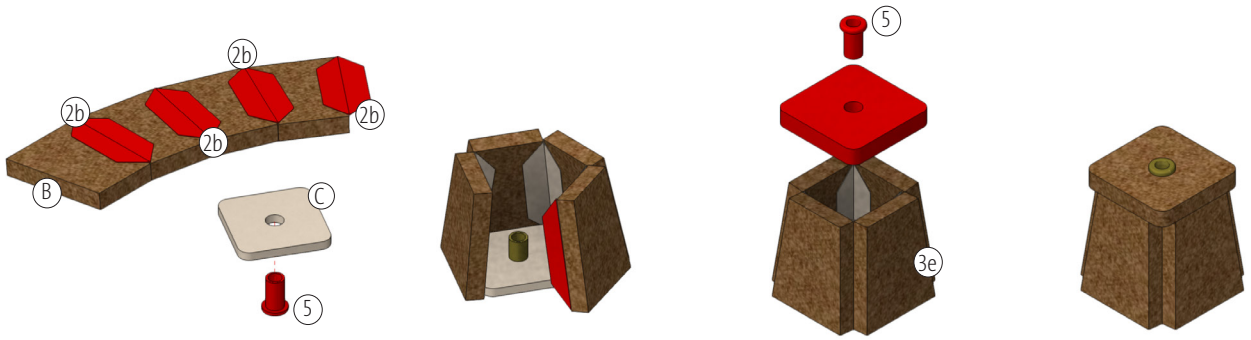
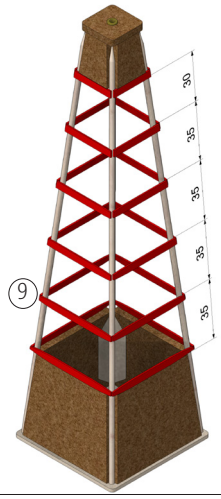


Glue the cardboard connectors (2b) to the cork part (B) with the superglue as shown. Glue a metal eyelet (5) in the cardboard part (3e), glue the cork walls around the cardboard part (3e) and connect them together. To finish, insert a metal eyelet (5) from above into the cork part (C) and glue on centered.

8

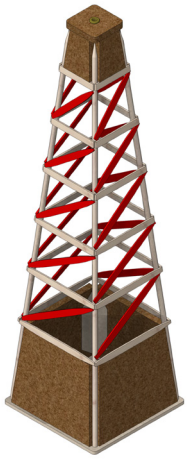
Glue the finished upper part of the tower between the round bars as shown.

9



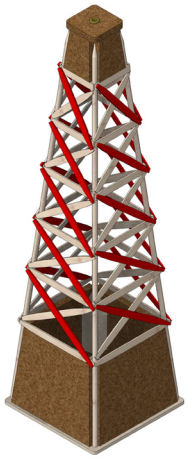
Glue the craft sticks (9) horizontally to the rods according to the dimensions shown.
Note: Gradually adjust lenghts.

10



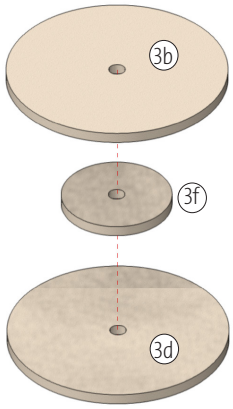
Then glue diagonal sticks between the horizontal sticks as shown above.
Note: Gradually adjust lengths.

11



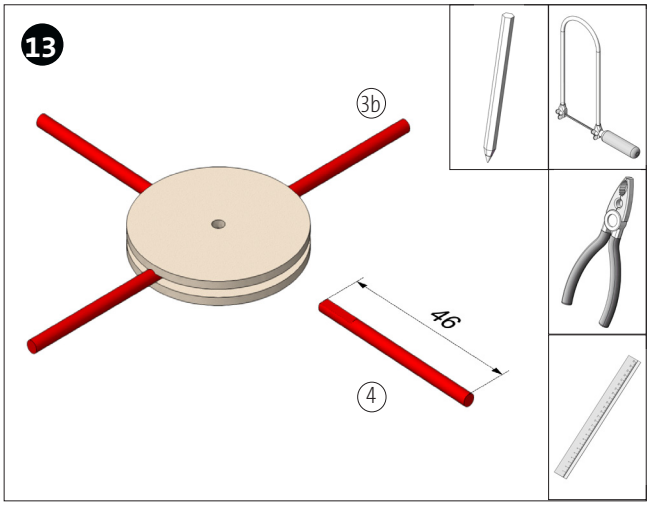
To finish the tower, glue on more sticks rotated by 90°.

12



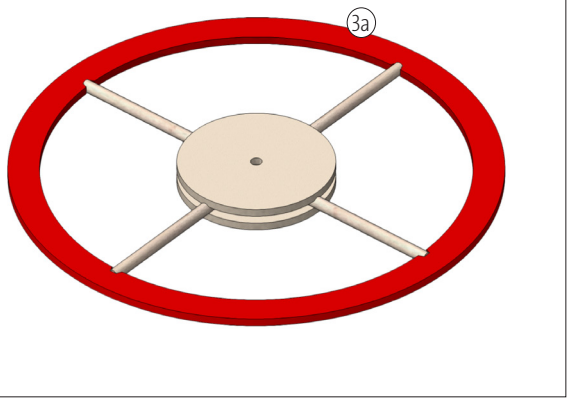
Glue the three cardboard discs (3b, 3d and 3f) on top of each other as shown, so that the holes are exactly aligned.

13



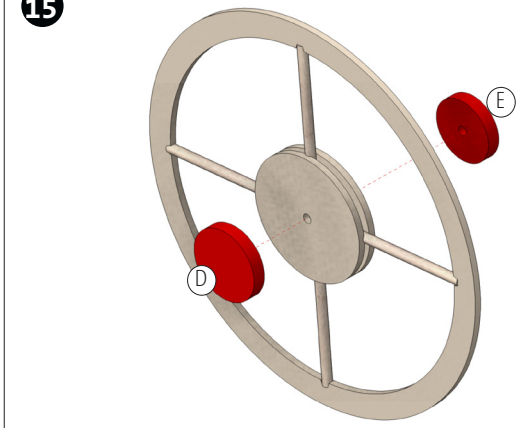
Cut four pieces of equal length (46 mm) from a round rod (4) and clean up the saw cuts. Flatten the ends of the rods with pliers before inserting them between the discs.Then, offset by 90°, glue them flush to the intermediate disc.

14



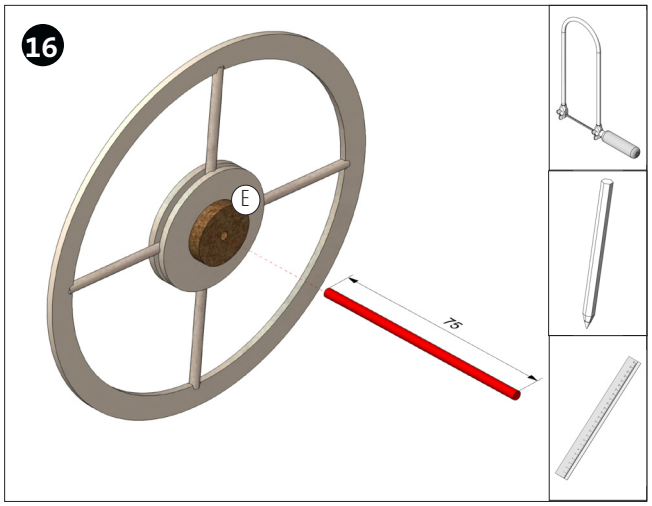
Glue the discs with the rods in the cardboard part (3a) in the recesses provided.

15



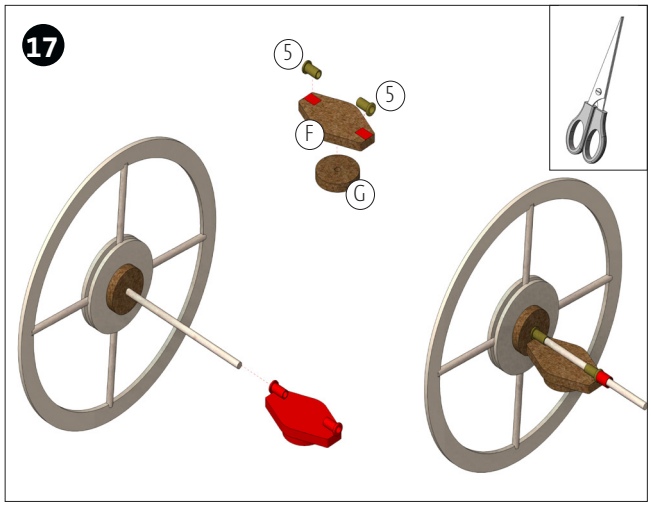
Glue the two cork discs (D+E) centered on the wheel from both sides.

16



Cut a piece (75 mm) from a round rod (4). Clean the saw cuts and then glue it in the hole of the cork disc (E).

17



Glue 2 metal eyelets (5) to the cork part (F). Then glue the cork disc (G) centered from below. Push the finished bracket onto the rod as shown. To fix the turbine axle, glue a strip of paper approx. 5 mm wide and 60-80 mm long around the end of the axle.

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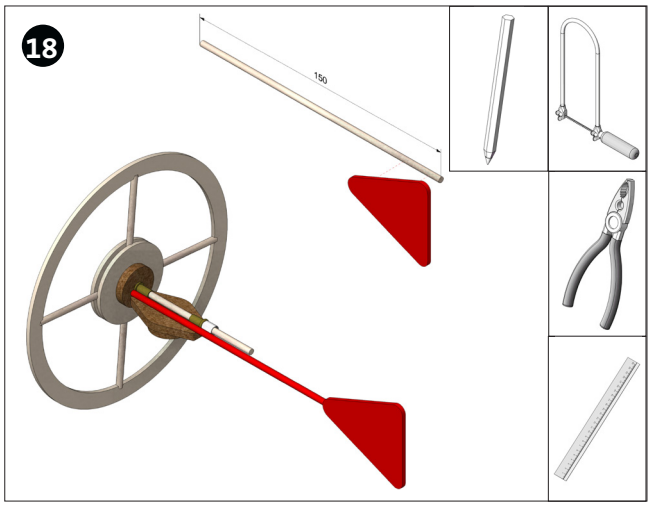
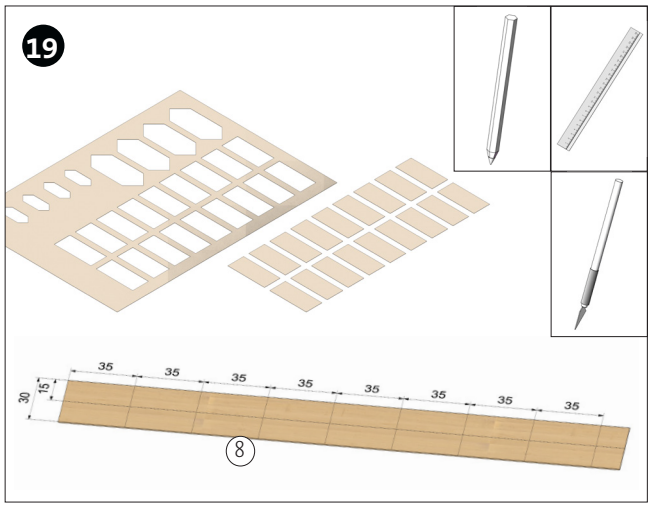
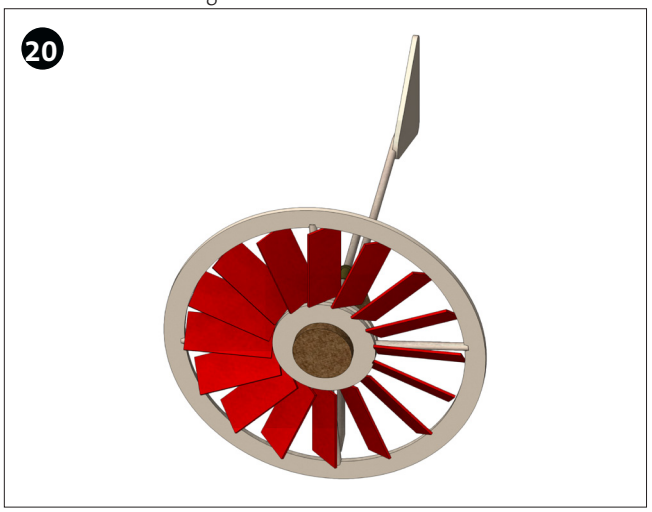


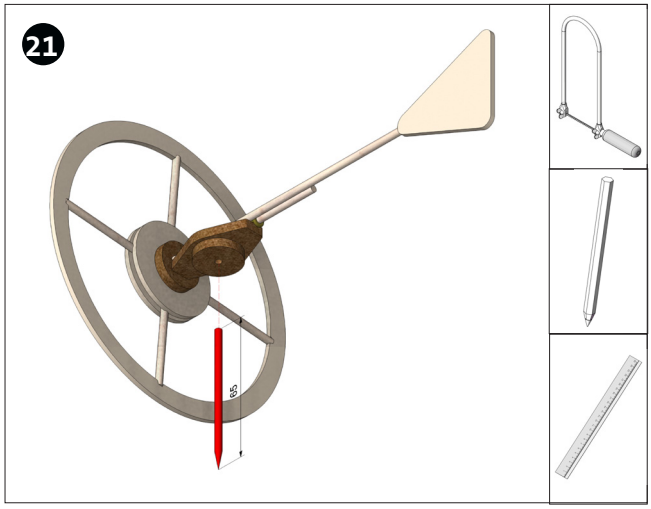
Cut a 150 mm long piece of round rod and glue on the wind blade (3c) centered, as shown. Place the stick with the wind blade on the wind machine bracket with glue.



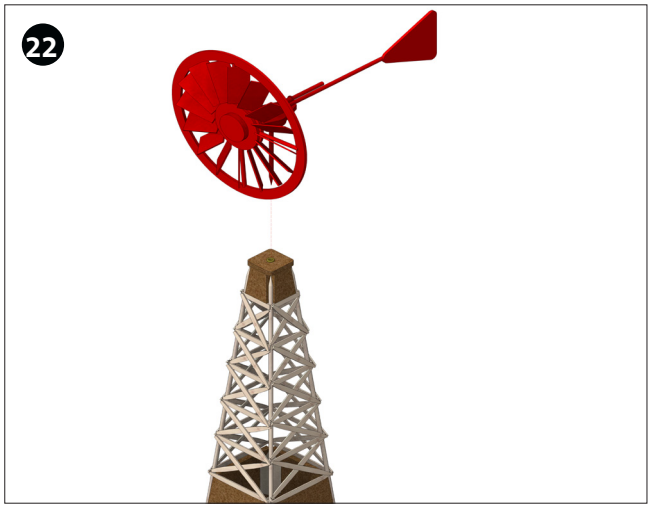
Cut out the blades from the cardboard (2) or transfer the dimensions to the wooden veneer (8). Then carefully cut out of the veneer with a craft knife.



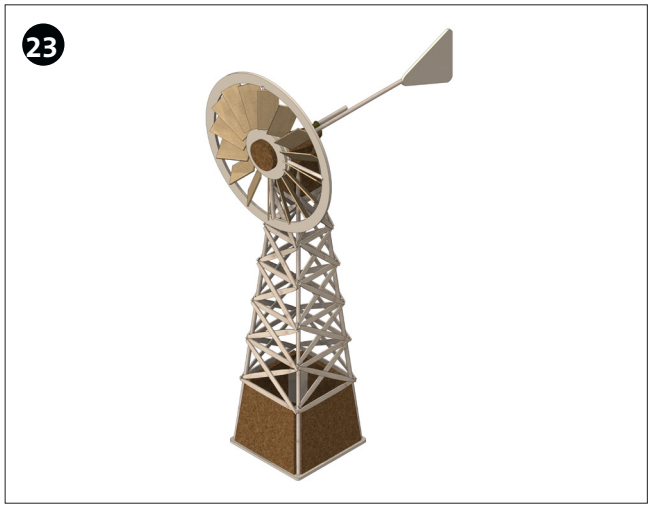
Glue 16 blades (depending on the version) into the wind wheel as shown.



Then glue a 65 mm long round rod into the hole of the cork part (G) from below.



Insert the finished wind turbine into the upper part of the tower as shown.



Done!