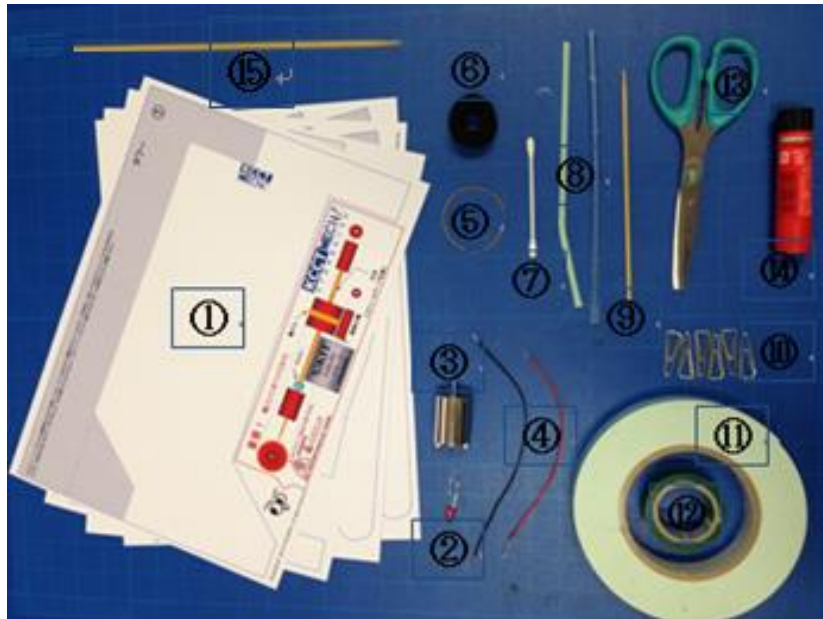


Paper Craft Wind Turbine

~Downwind Ver.~

Assembly Manual

0. Preparation

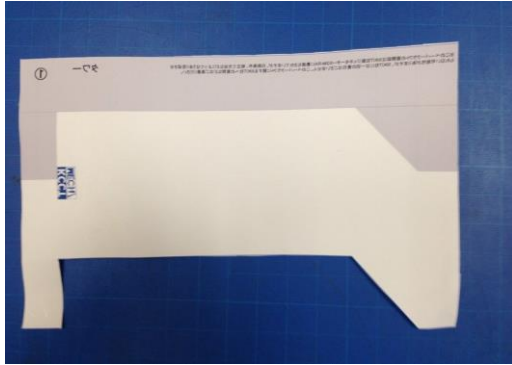


- ① Base sheets × 4
- ② LED × 1
- ③ Motor × 1
- ④ Conductor leads × 1
- ⑤ Rubber band × 1
- ⑥ Sponge cover, (diameter 15mm, length 120mm) × 1
- ⑦ Cotton swab (hollow plastic grip) × 1
- ⑧ Plastic Straw × 1
- ⑨ Bamboo skewer (length 150mm) × 1
- ⑩ Paper clips × 1
- ⑪ Double sided tape × 1
- ⑫ Plastic tape × 1
- ⑬ Scissors × 1
- ⑭ Glue × 1
- ⑮ Knitting needle (length 290mm) × 1

First, cut out all the needed parts along the solid blue lines.

1. Tower

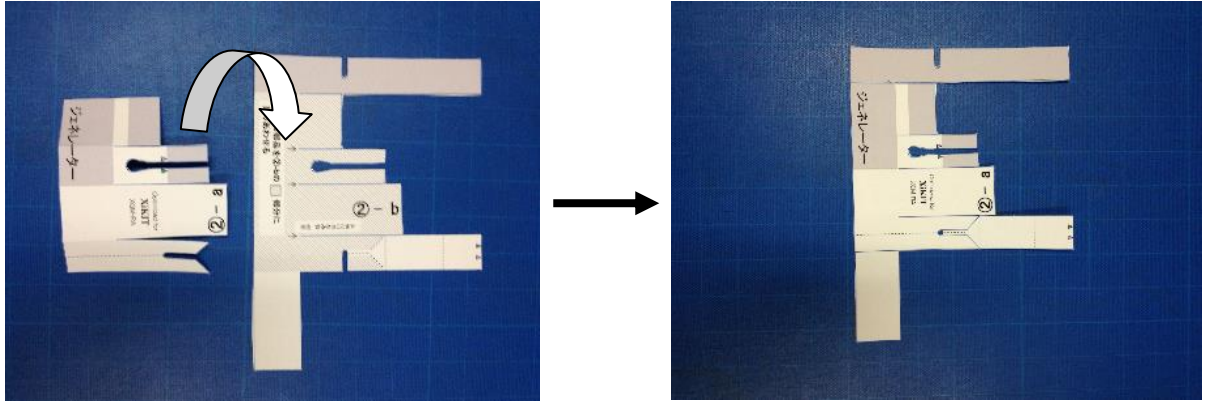
- ① Put on some glue on the glue tab (the purple section) and wind it in a cylinder shape.



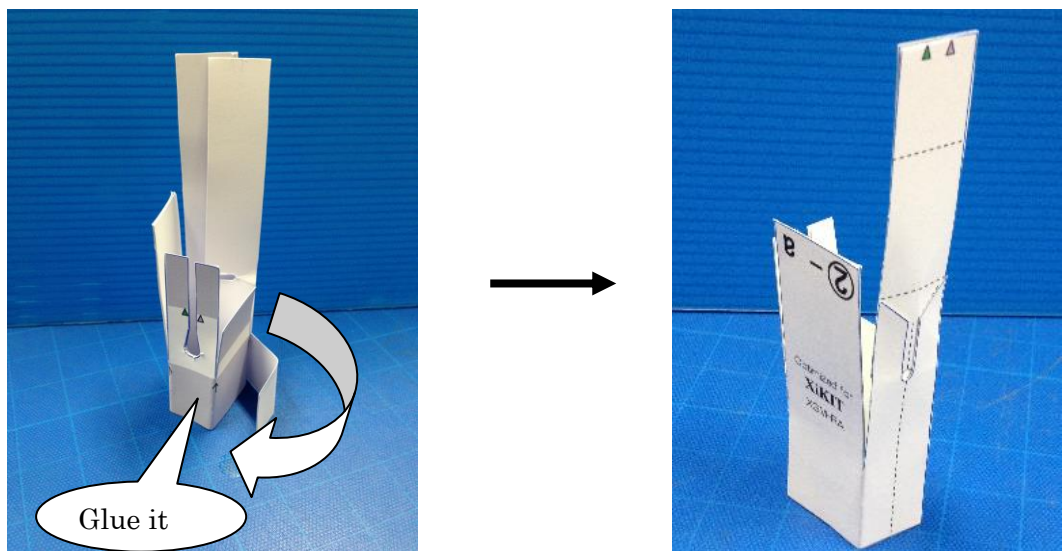
2. Motor Section

2-1 Outer Casing

- ① Glue part no.2-a on top of part no.2-b.

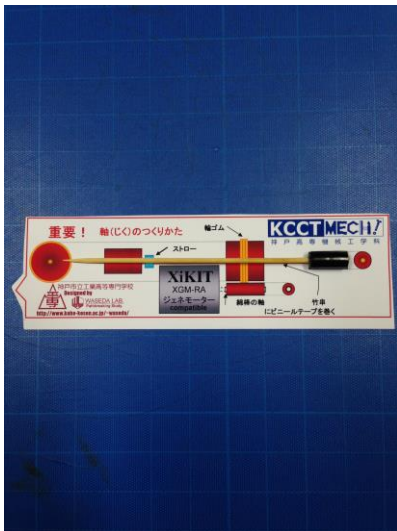
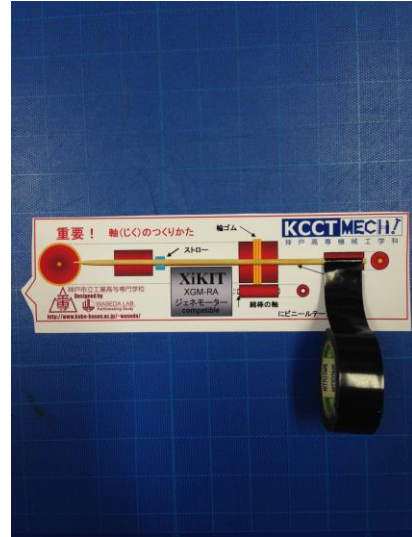
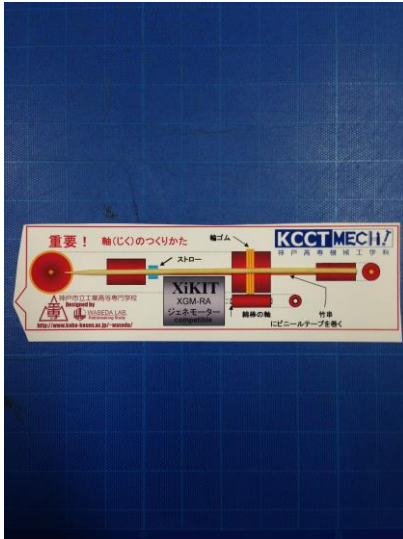


- ② Fold the assembled part in a boxed shape and glue it.

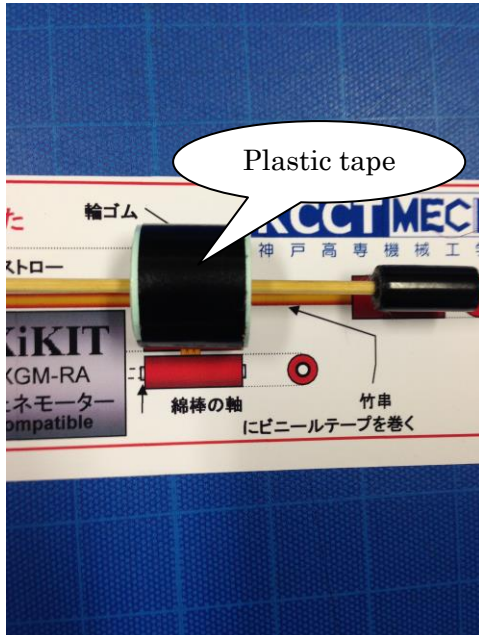
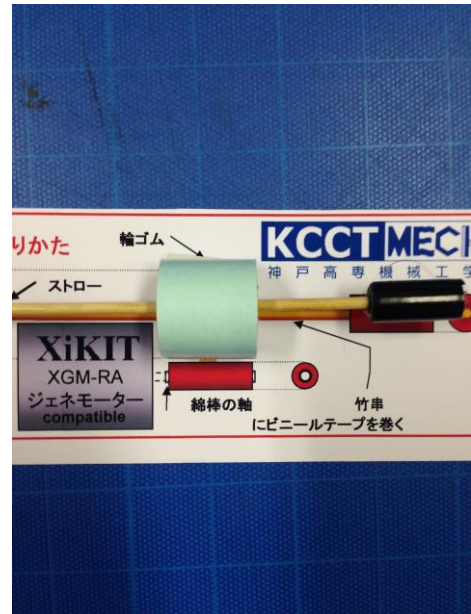


2-2 Central Axis

①Wrap the plastic tape around the plastic skewer (length 150mm) until the diameter reaches the directed size which is shown in the direction “Axis full sized sample”.



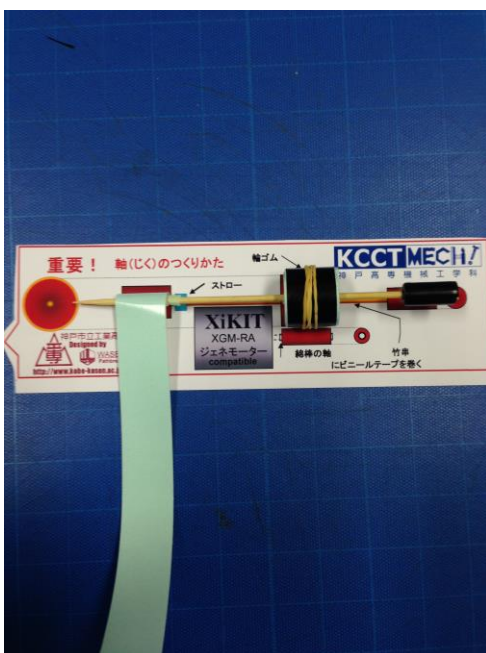
②Wrap the double sided tape around the bamboo skewer (length 150mm) until the diameter reaches the directed size which is shown in the direction “Axis full sized sample”. After the double sided tape is wrapped until the directed size, wrap it over with the plastic tape to make it stay in place.



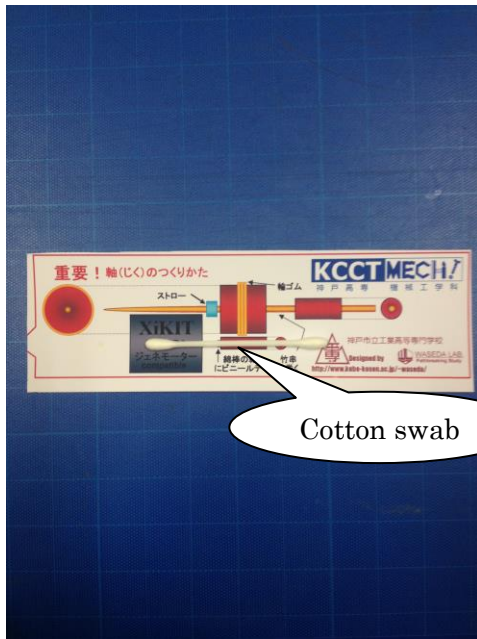
- ③ Wrap a rubber band around the plastic tape following to the photo below. Secondly, Put on a shortly cut plastic straw through the bamboo skewer



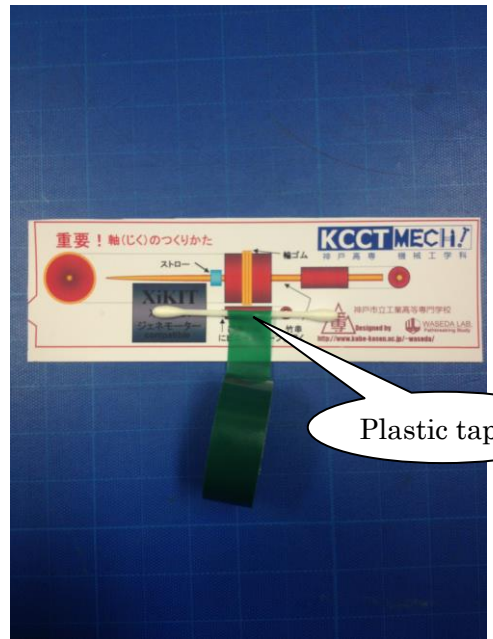
- ④ Wrap the double sided tape around the bamboo skewer (length 150mm) until the diameter reaches the directed size which is shown in the direction “Axis full sized sample”. After the double sided tape is wrapped until the directed size, wrap it over with the plastic tape to make it stay in place.



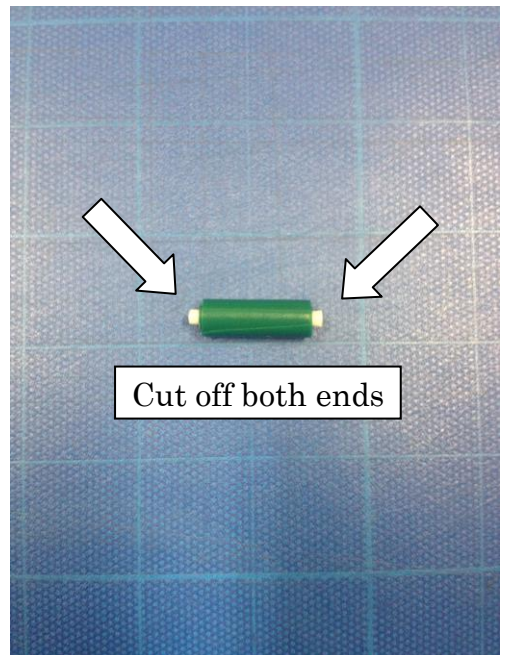
- ① Wrap the plastic tape around the cotton swab until the diameter reaches the directed size which is shown in the direction “Axis full sized sample”. Afterwards cut off both ends of the cotton swab.



Cotton swab



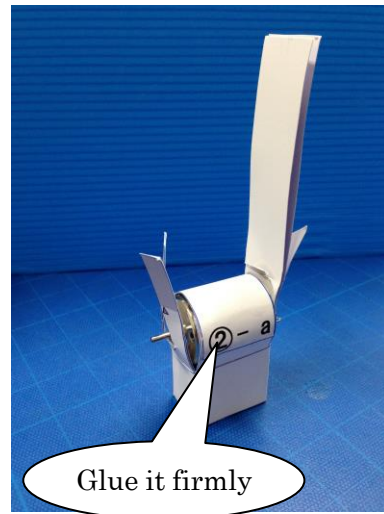
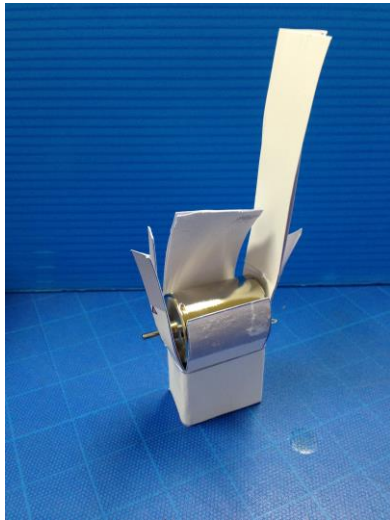
Plastic tape



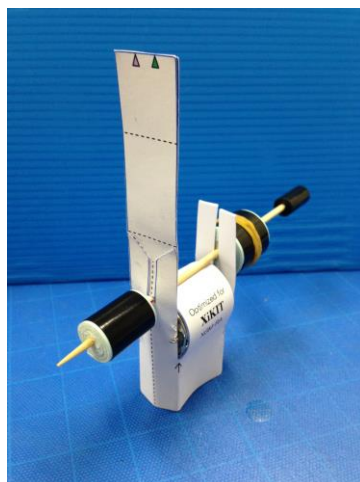
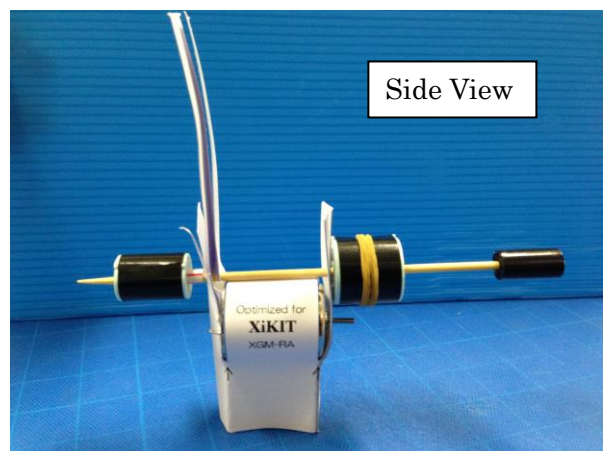
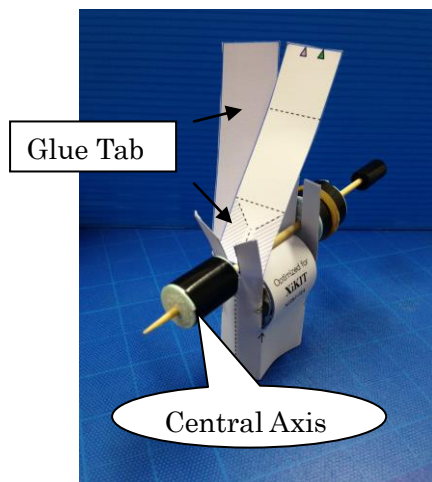
Cut off both ends

2-4 Motor Case Assembling

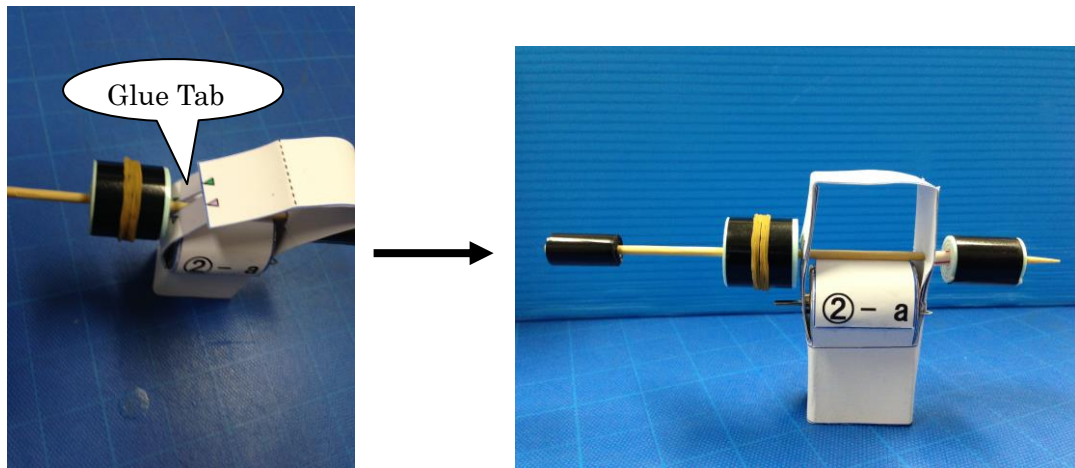
- ① Place the motor in the motor case and glue it.



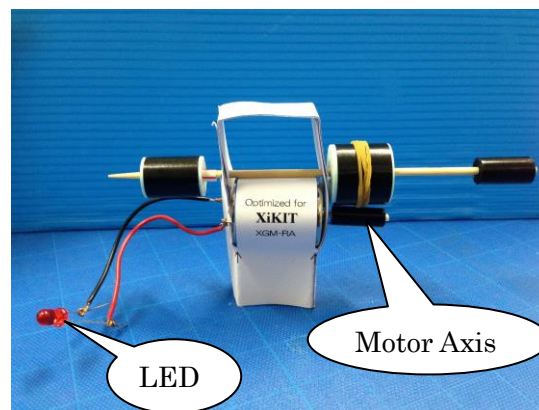
- ② Attach the central axis and stick the glue tabs together.



③ Glue the top of the motor case and attach the central axis.

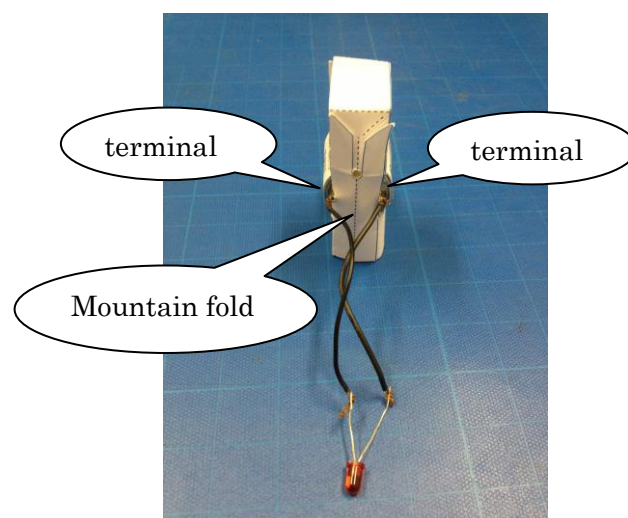


④ Put on the motor axis to the motor and link the LED.



(Assembling Tips)

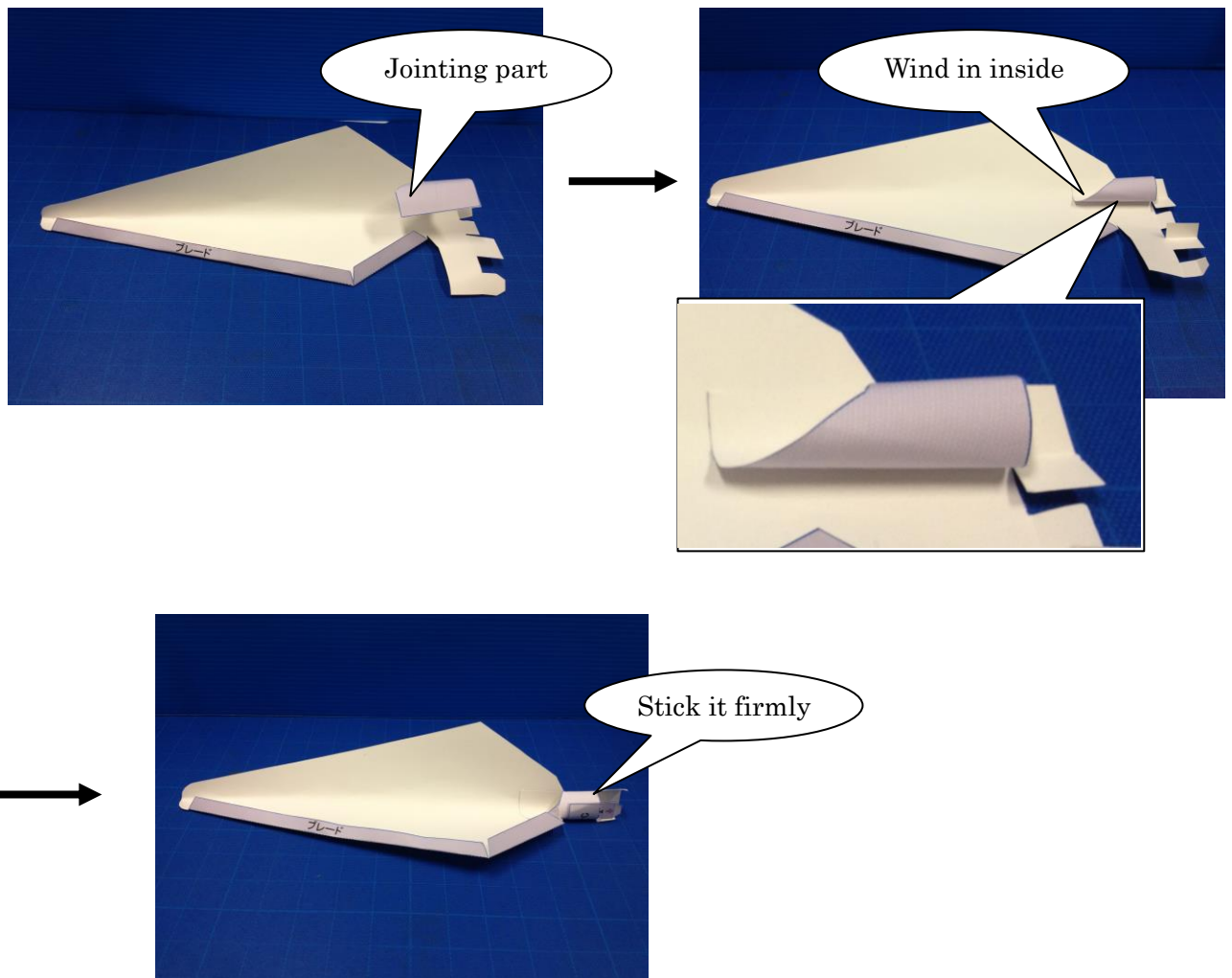
Mountain fold the motor case to show the joining terminal outside so that you could attach the LED easily.



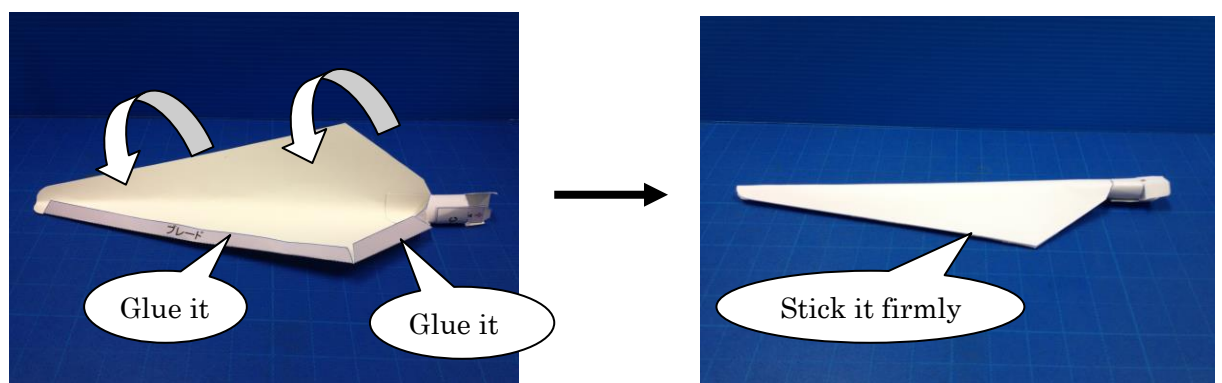
3. Wind Turbine

3-1 Rotor Blade

- ① Wind the jointing part in a cylindrical shape and glue it.

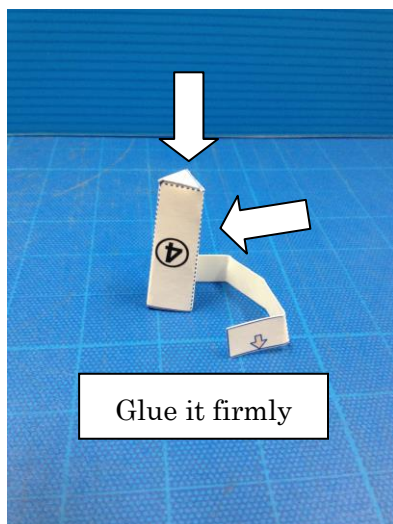
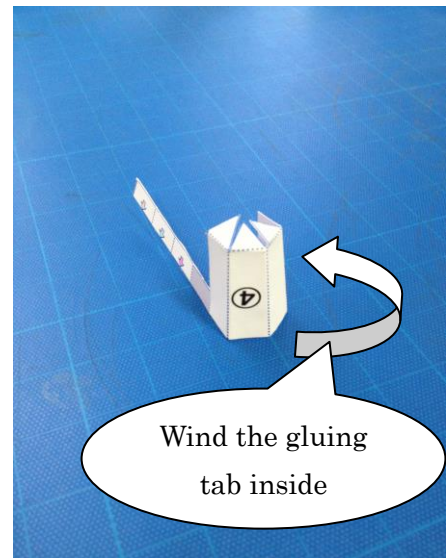
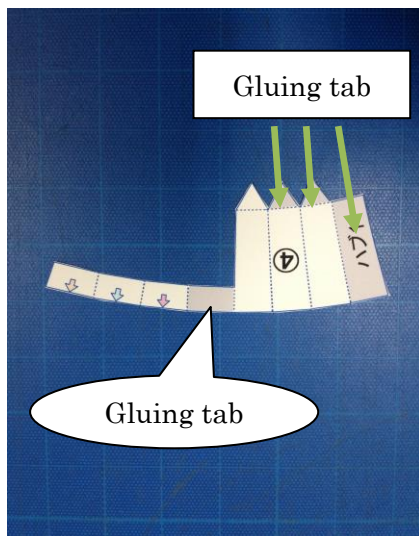


- ② Glue the outer edge of the blade and fold in inside.

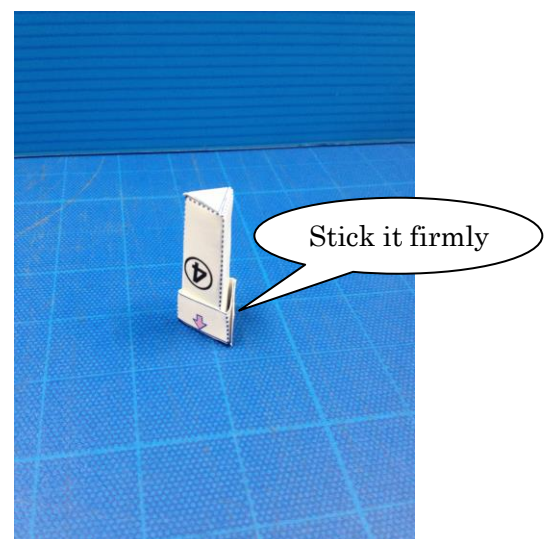
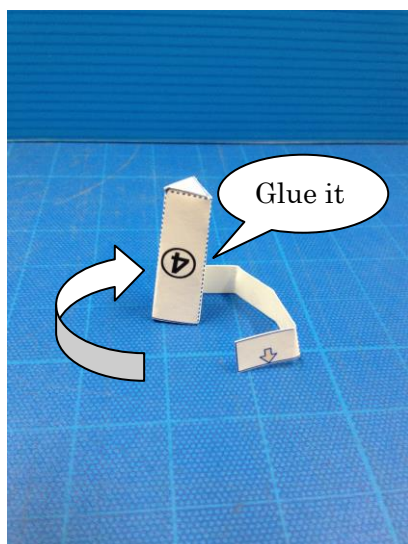


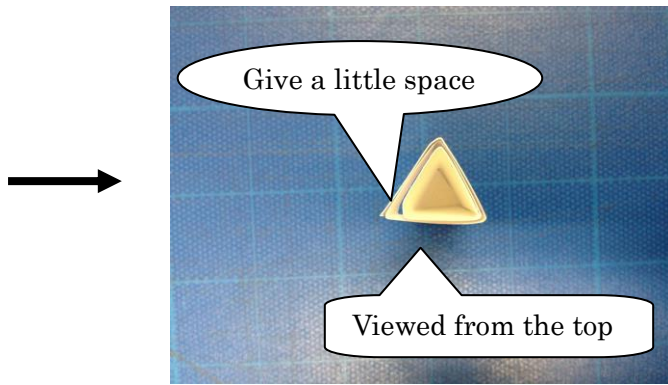
4. Hub 1

- ① Fold along the blue dotted line and glue the pointed tab. Afterward, assemble it in a tower shape.



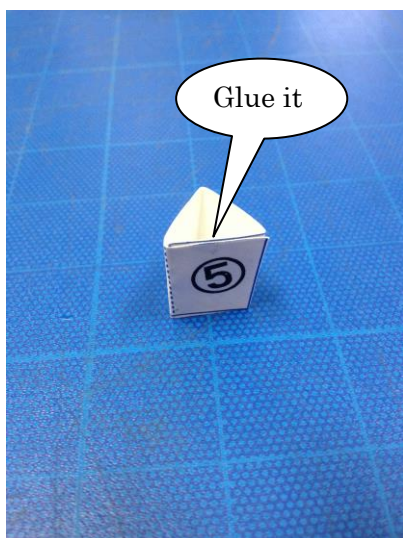
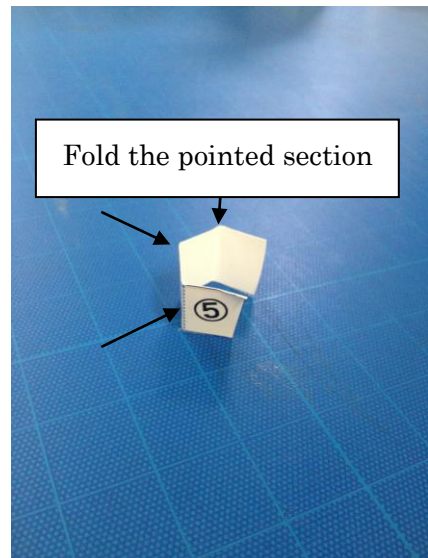
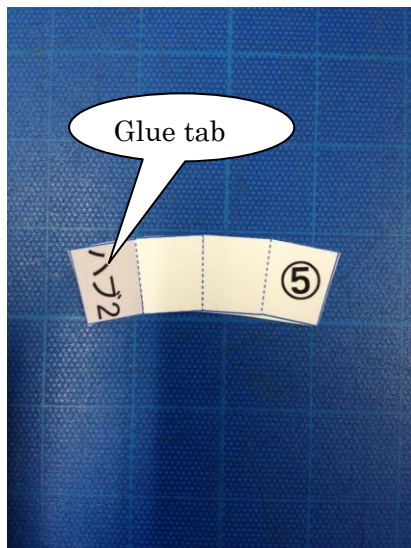
- ② Fold the outer flap and glue it.





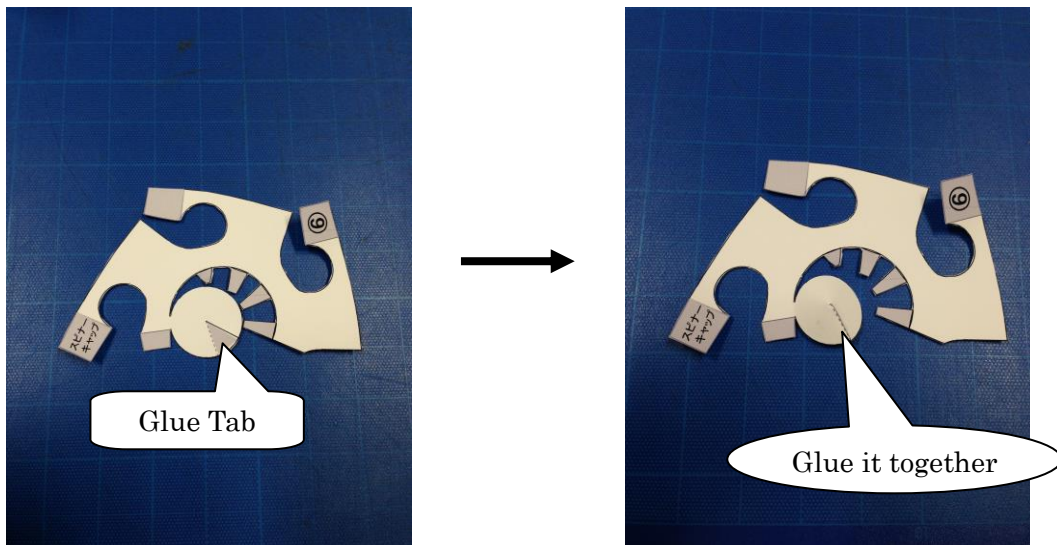
5. Hub 2

- ① Fold along the blue dotted line and assemble it in a tower shape.

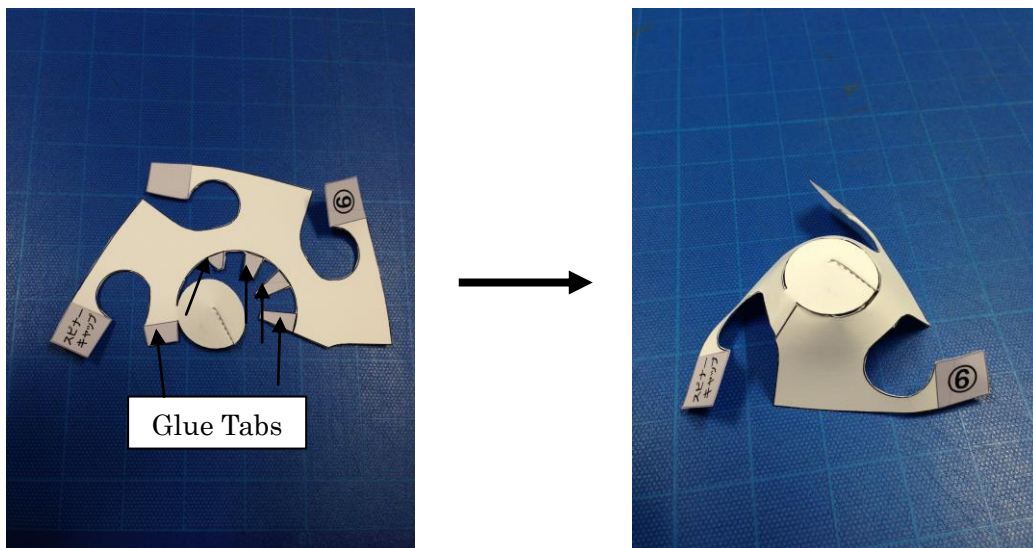


6. Spinner Cap

- ① Cut in along the blue line and assemble it in a corn shape.

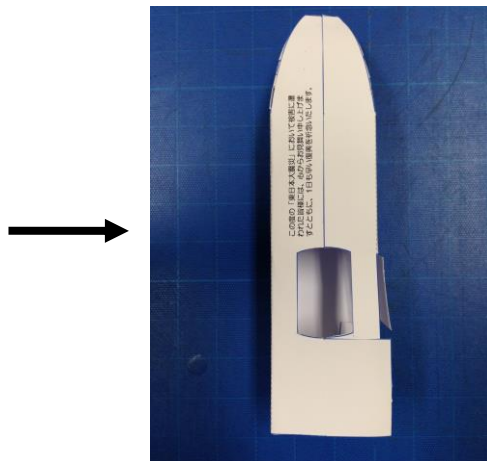
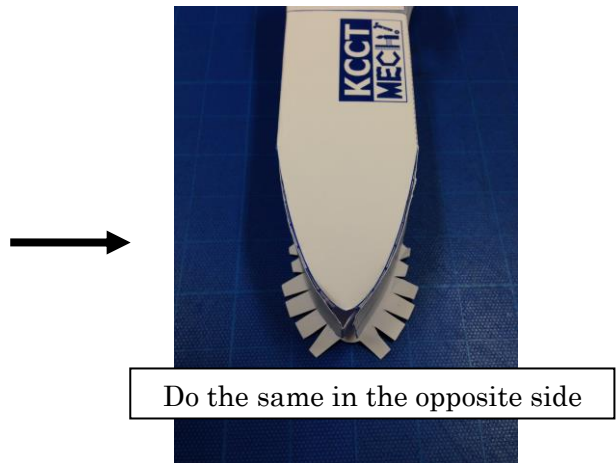
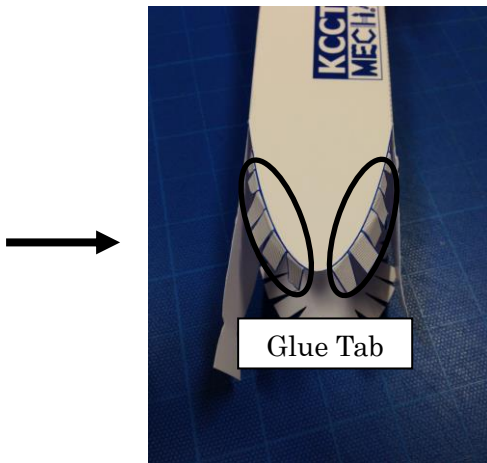
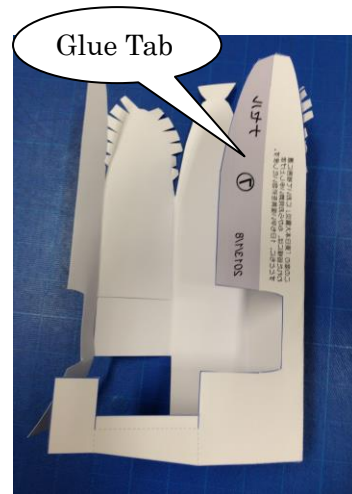


- ② Glue the glue tab and assemble it in a bigger corn shape.



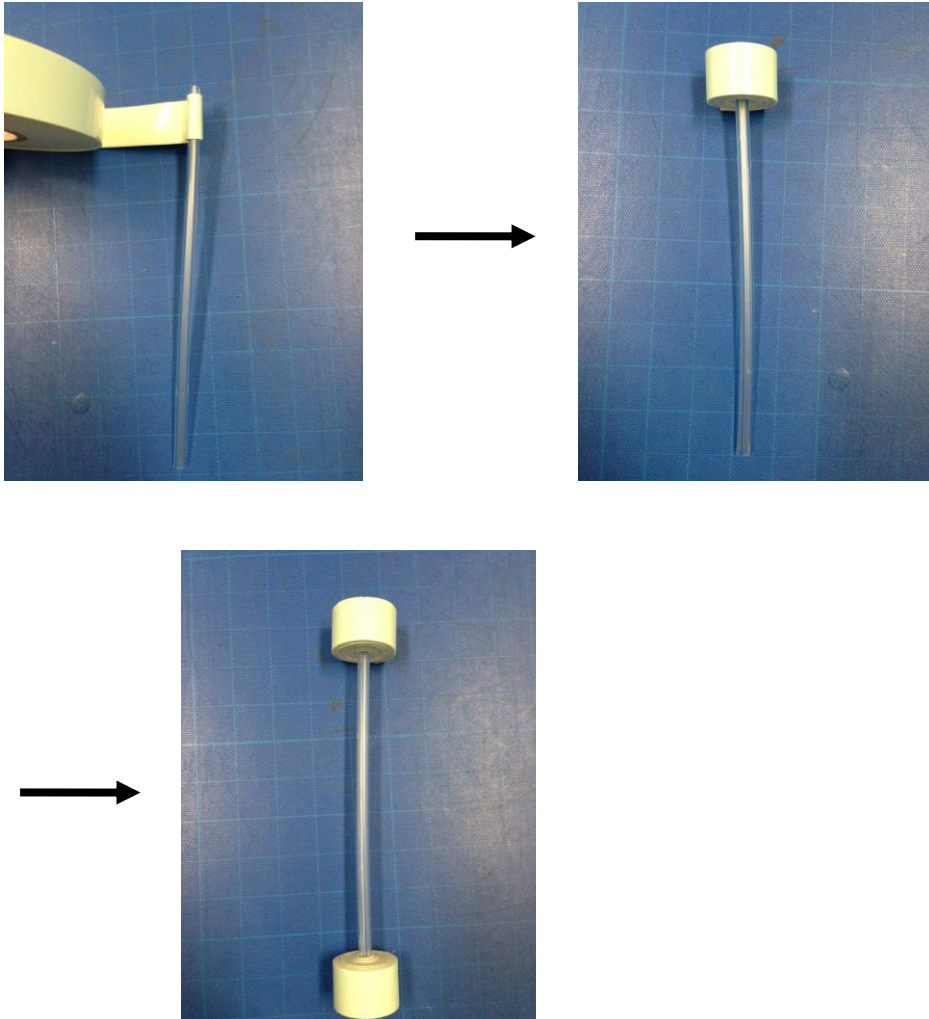
7. Nacelle

- ① Fold it along the blue dotted line and glue it in a boxed shape.

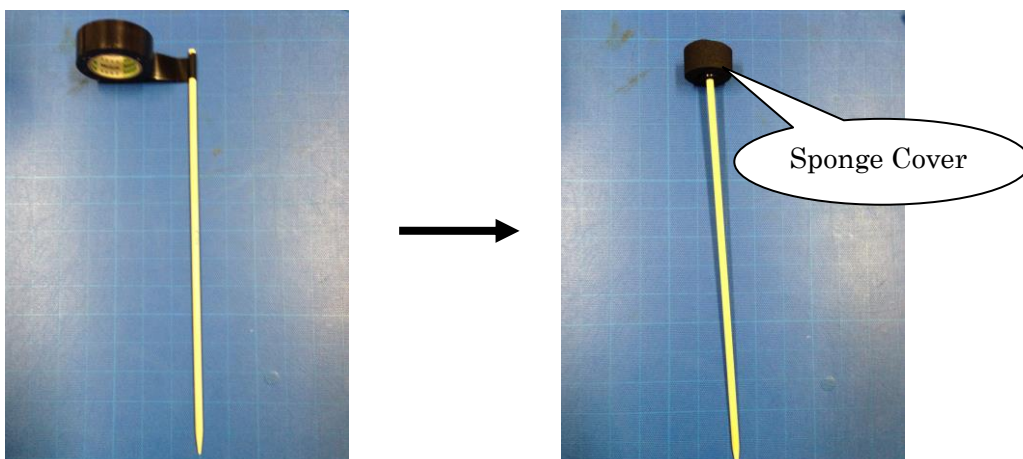


8. Free Yaw Section

- ① Wrap the both sided tape around the straw until the diameter reaches 30mm. Do the same on the other end.



- ② Wrap the plastic tape around the knitting needle until the diameter reaches 15mm. Afterwards, put the sponge cover over and make the diameter reaches 30mm.

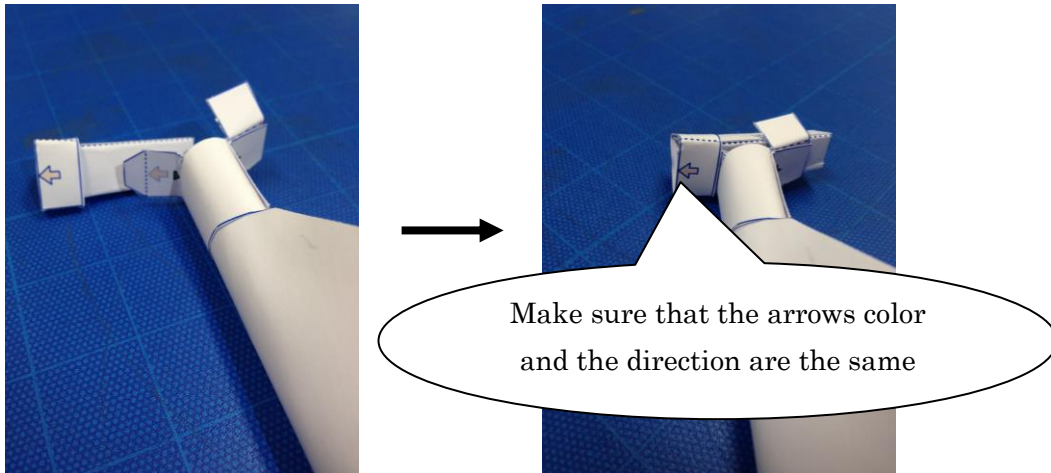


9. Assembling

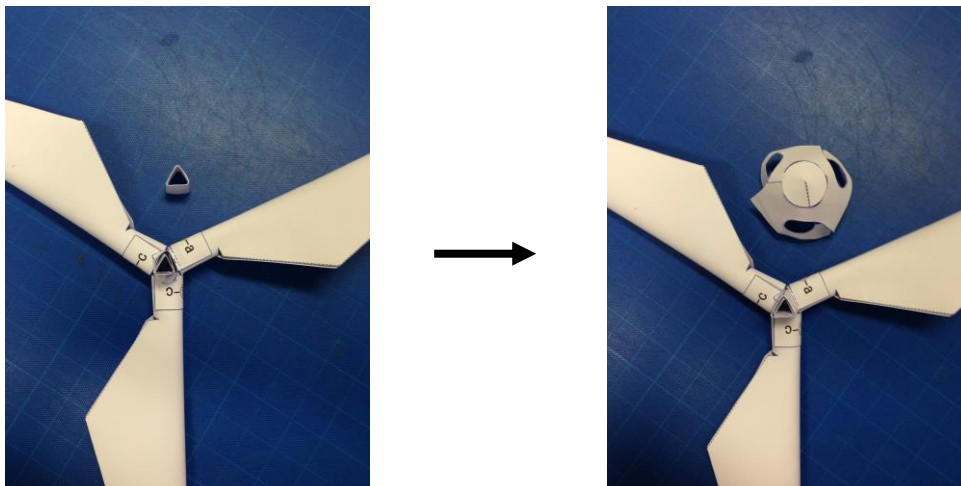
- ① Make sure that all parts are in shape.

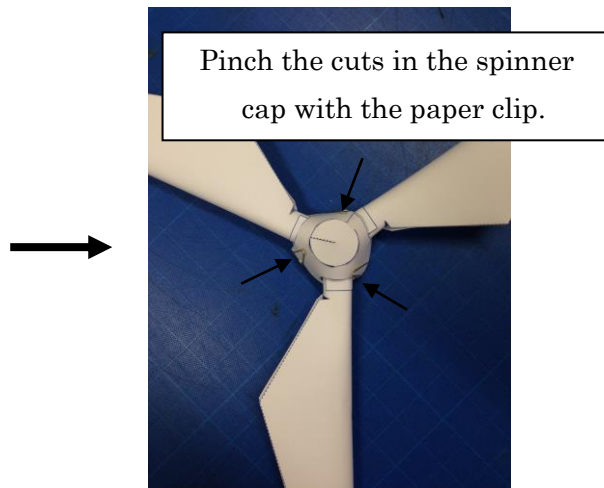


- ② Attach hub 1 to the rotor blade.

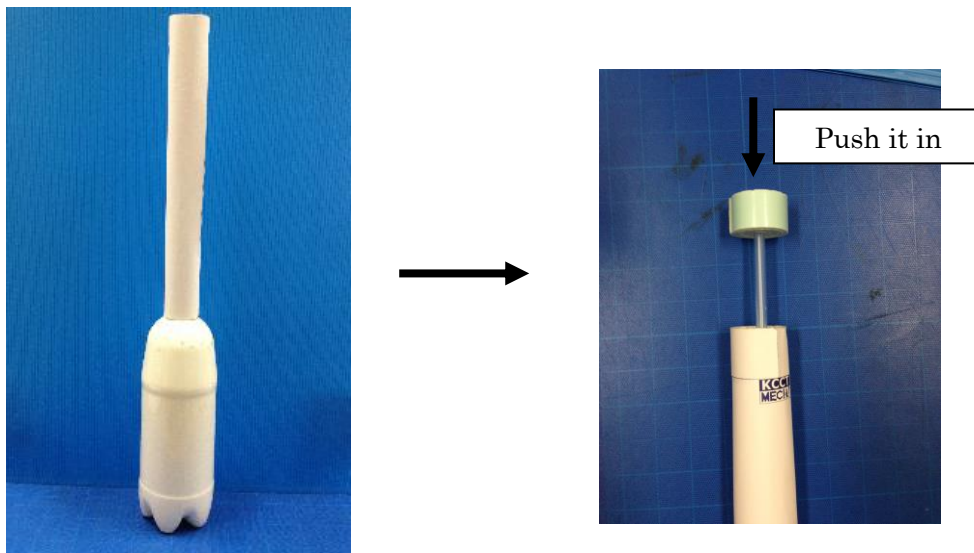


- ③ Attach three rotor blades. Hold it with hub 2 and cover it with the spinner cap.

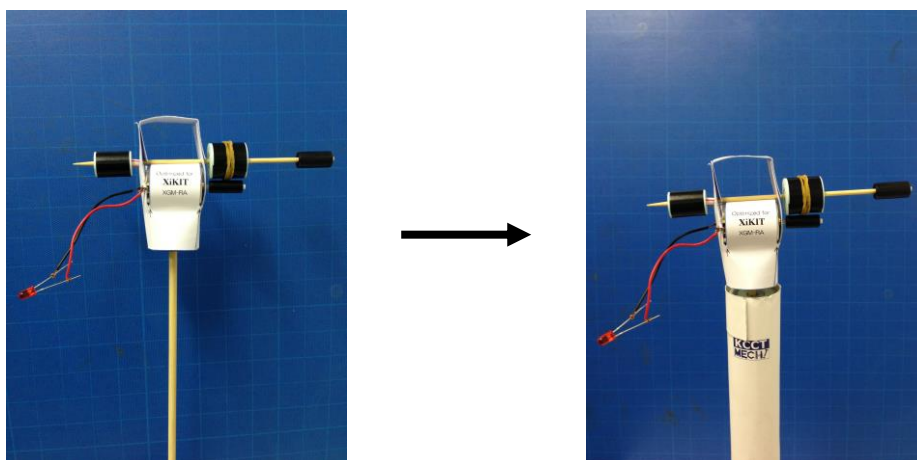




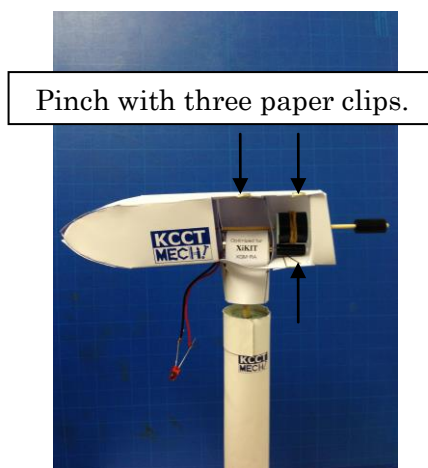
- ④ Pour water in a plastic bottle for the base. Then attach the free yaw section.



- ⑤ Attach the motor section to the free yaw section and push it in the tower.



- ⑥ Attach the nacelle and pinch it with three paper clips.



- ⑦ Attach the turbine on the tip of the central axis



Completed Shape

