

Propeller & Rotor Guide



Propeller Guide

- **Red** Mini Motor Mount Hub Base & Cover
- Tape (any kind will do)
- Hub Screw
- Toothpicks (or skewers)
- Recycling Bin Materials



Making the Blades

Safety First

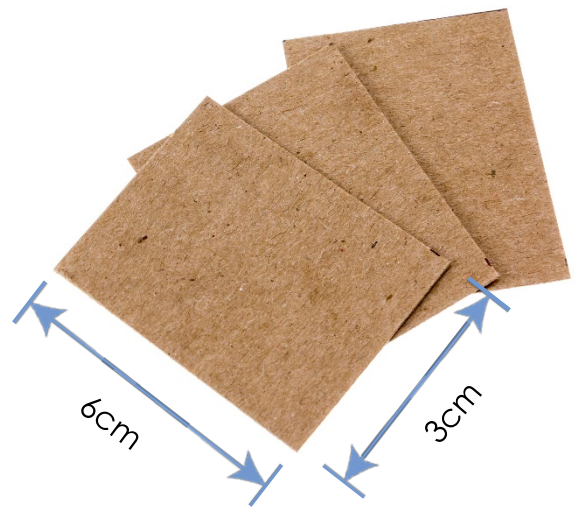
If you're not already, wear eye protection during these steps & when operating your propeller.



1 Cut the both ends off the **toothpicks**.



2 Measure and cut three 3cm x 6cm strips of **recycling materials**.



These will be your blades.

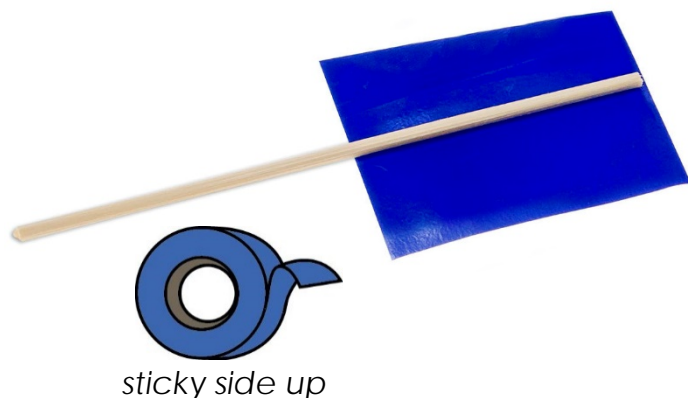
Skewers Option

Cut to size and cut off the pointed ends of **skewers**.

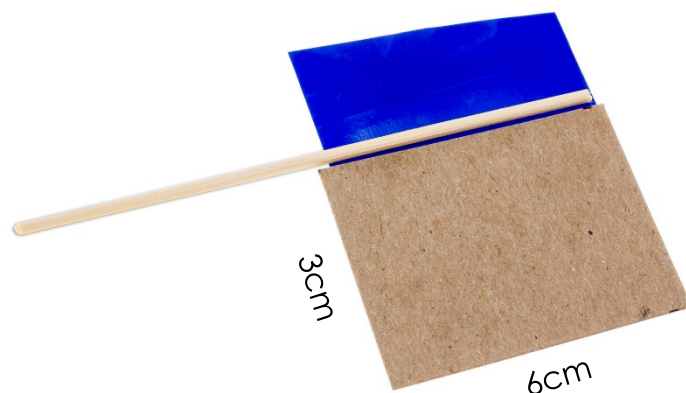


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3 Lay a piece of **tape** (sticky side up) and lay a **toothpick** in the middle.



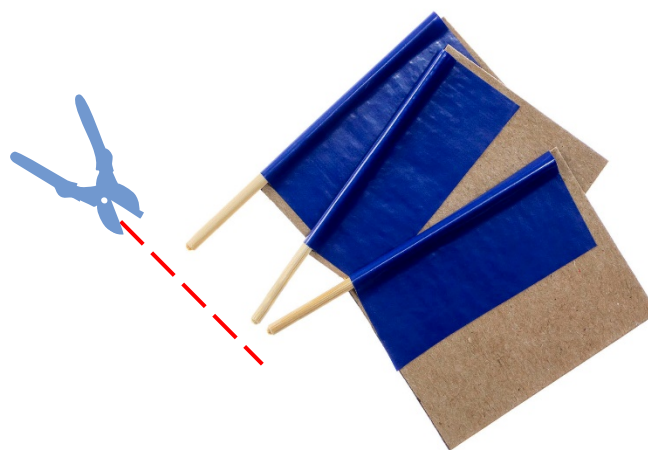
4 Place the **blade** on one half of the **tape**.



5 Fold over the **tape** (around the **toothpick** and **blade**).



6 Measure **15mm** from the end of **blade**... and cut.



Congratulations!

You made your first prop blade. Now, make *two more*.

You should have *three* when finished.

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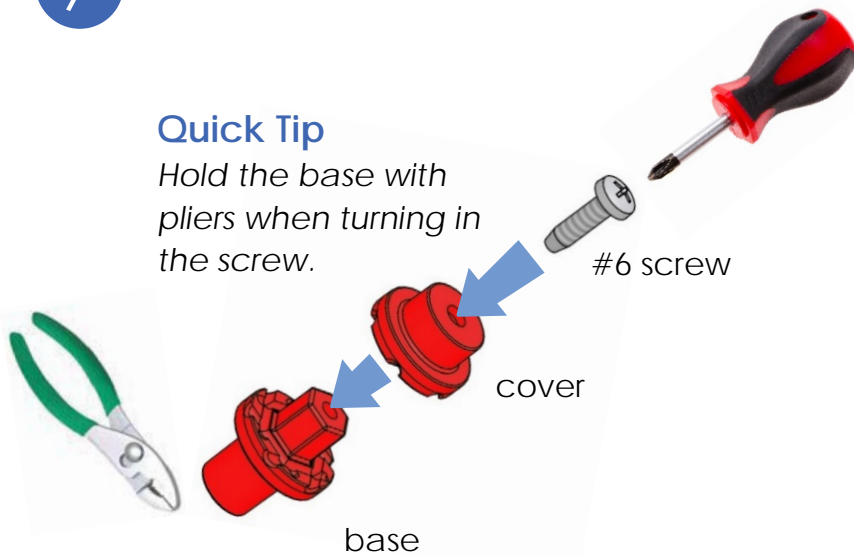


Making the Propeller

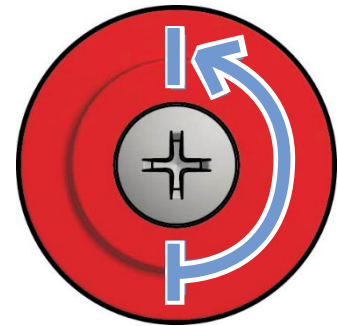
7 Screw the **cover** to the **base** using a **screw**.

Quick Tip

Hold the base with pliers when turning in the screw.

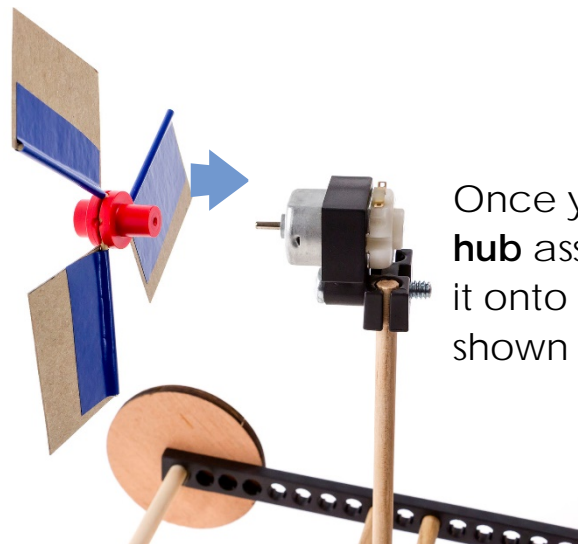
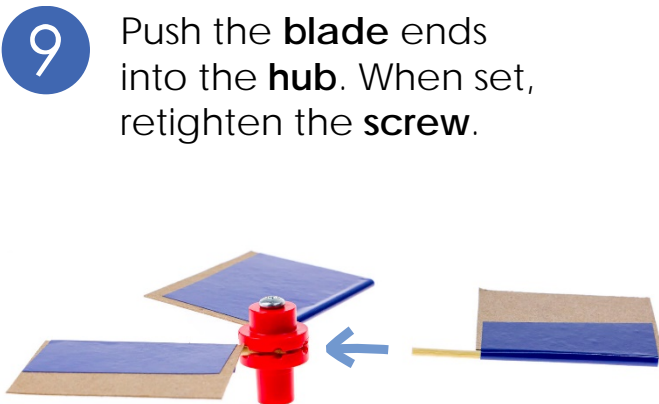


8 Loosen the **screw** ½ turn.



Front View

9 Push the **blade** ends into the **hub**. When set, retighten the **screw**.



Once you have your **hub** assembled, push it onto your **motor** as shown on the left.

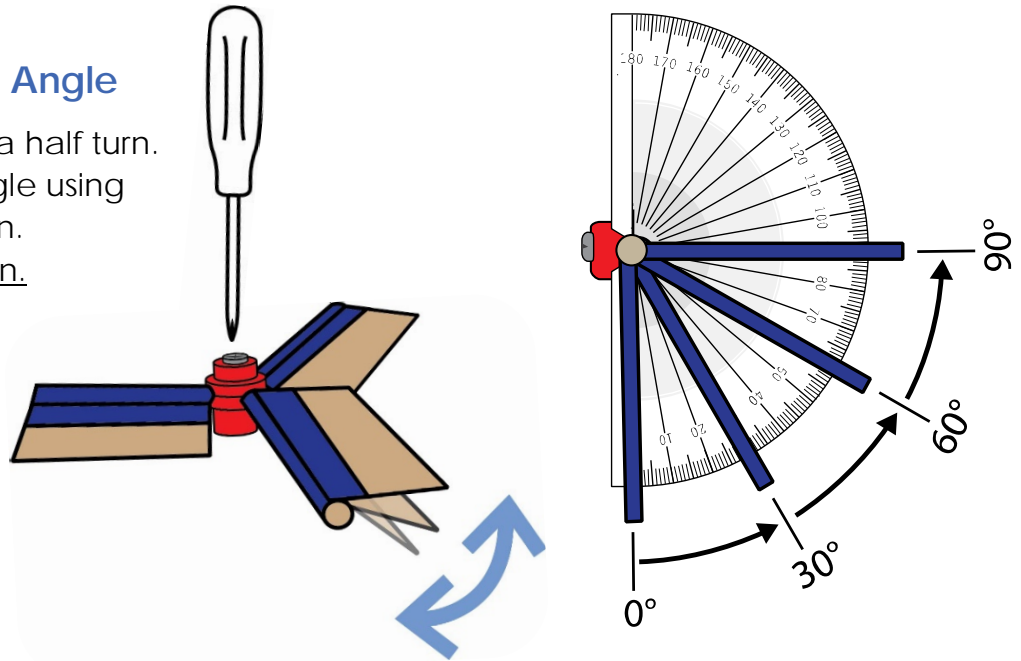
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Blade Angle

Try Changing Blade Angle

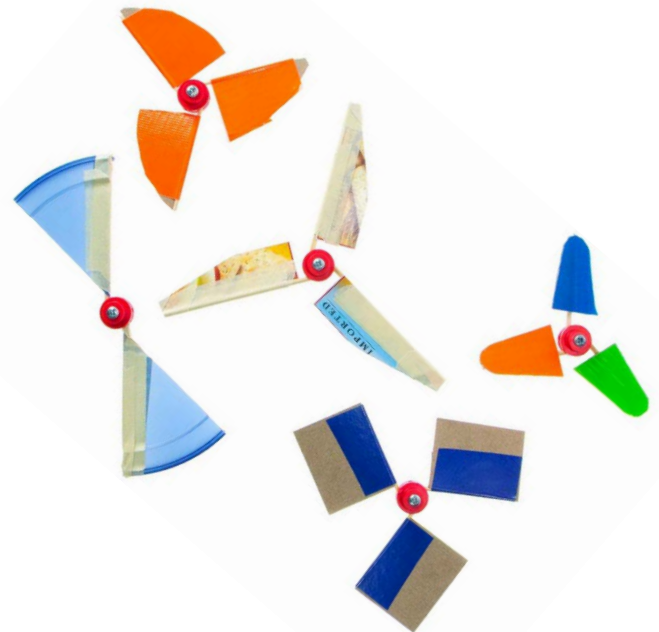
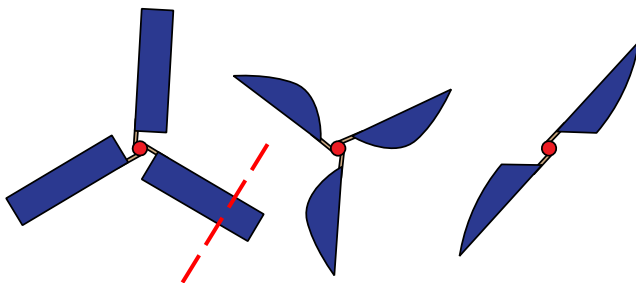
- Loosen the hub screw a half turn.
- Change the blade angle using the protractor as shown.
- Tighten the screw again.



Try Changing Blade Shape & Size

Blade designs come in all shapes and sizes. Try adding to your blades by taping on extra pieces or cutting them down into new shapes.

Or try using only two blades.



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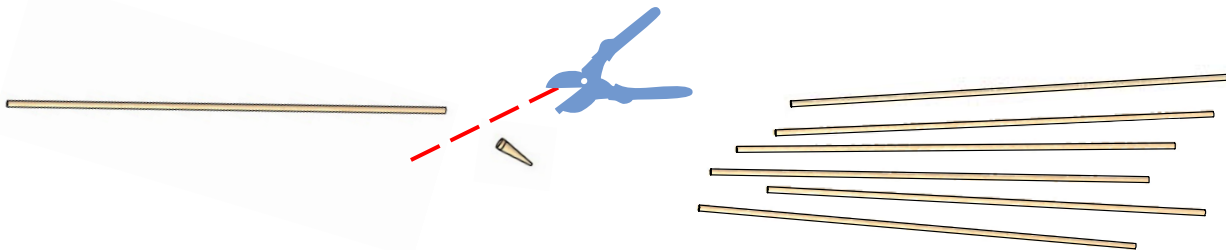


Rotor Guide

- **Green Mini Dowel Mount Hub Base & Cover**
- Tape (any kind will do)
- Hub Screw
- Toothpicks (or skewers)
- Recycling Bin Materials

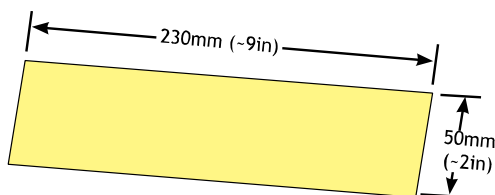
Making the Blades

- 1 Cut **points** off **skewers**.

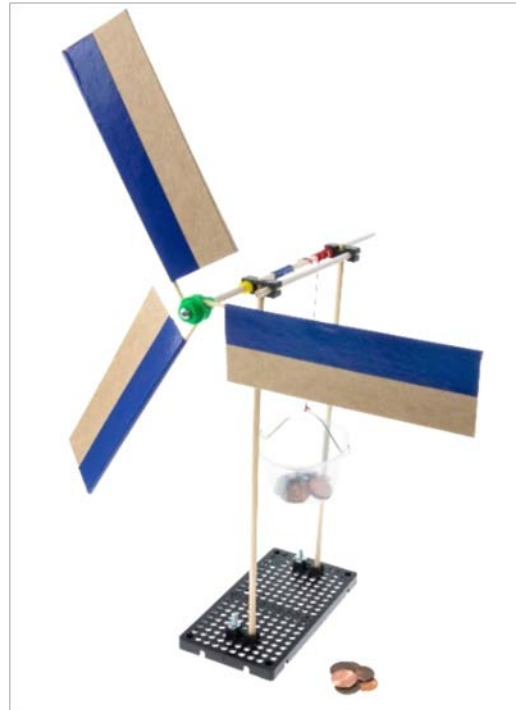
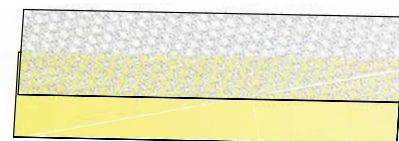


- 2 Tape your **recycling materials** (cardboard, card stock, cereal boxes, etc.) to the **skewers** as shown below.

a. Cut a section of **recycling material**.
This will be one of your **blades**.



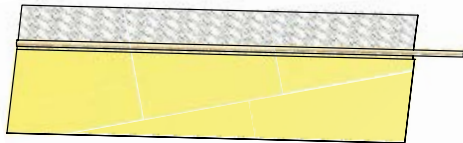
b. Place **tape** half over the edge of the **blade**.



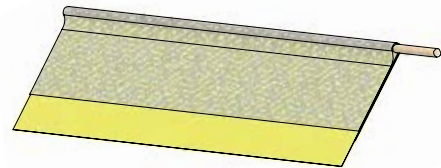


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c. Place a **skewer** at the edge of the **blade**, overhanging to one side.

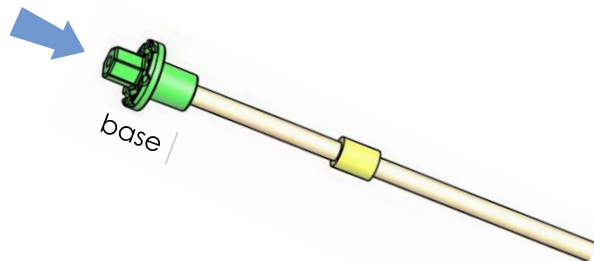


d. Fold the **tape** over the **skewer**.
Press to secure tape.

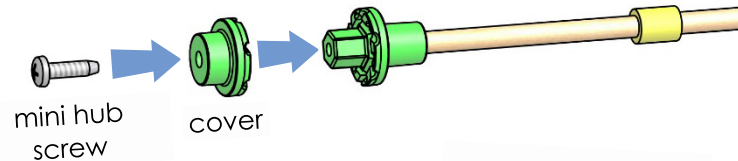


Making the Rotor

3 Push or tap the **mini hub base** onto the **dowel** as shown.



Attach the **mini hub cover** to the **base** using a **mini hub screw**.

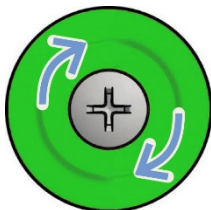


Hub Assembly

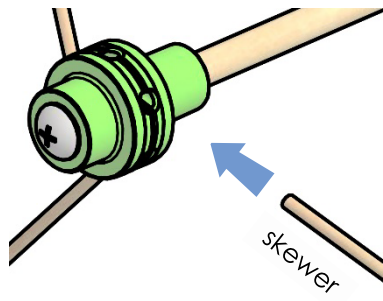
This is what it should look like when you are done.



4 Loosen the **mini hub screw** about **1½ turns** to allow the **skewers** to **slide** in.



A First, **loosen** the **mini hub screw** by **1½ turns**.



B Then, carefully **slide** the skewers into the **mini hub's holes**.
Angle your blades and **re-tighten**.