

Paper Turbine

What you need:



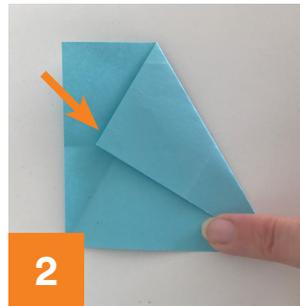
- A square or triangular piece of paper
- Scissors
- Paper straw or wooden stick
- Pin or drawing pin
- Putty or plasticine (optional)

Instructions:

Step one: Make a triangular piece of paper



Fold a square piece of paper in half, then unfold.



Next, fold two corners of the square inwards. Each corner should form a sharp point and the side you are folding in forms a triangle shape to meet the half-way line (see orange arrow in diagram 2).



Unfold and find the triangle outline.



Cut out your triangle shape along the outline.



Now you have a triangular piece of paper to make your turbine with.

Paper Turbine

Instructions:

Step two: Make your turbine



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Fold each point of your triangle in so that it crosses to the other side of the triangle and forms a point at the apex.

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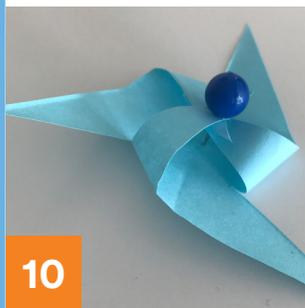
Fold each point of your triangle in half to find the centre of your triangle (see orange arrow).

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Cut down the middle of each point of the triangle until you are about 1-2 cm from the centre of the triangle (this will vary according to the size of your paper).

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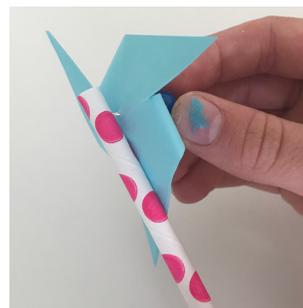
Fold the right hand side of each point in towards the middle of the triangle and pin down.



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Step three: Attach turbine to housing

Attach your turbine (with pinned down blades) to a paper straw or wooden stick using the pin or drawing pin. Place putty or plasticine on the sharp point of the pin (if needed).



Step four: Try out your turbine

Take your turbine outside in the wind. Does it work? Try blowing on the blades of your turbine. Does this make it spin? How does it work?

How it works:

Air blows on the inner blades of the paper turbine, moving them around in the direction of the air. The greater the force of the air, the faster the blades will spin, up to a point.

In a real turbine, the blades are shaped differently: they look more like aircraft propellers. Wind flows past the wind turbine blades as they turn around a rotor, which generates electricity.