

From the Windmill to the Wind turbine



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The traditional windmills



- ✓ Have you ever seen windmills?
- ✓ What can they do?
- ✓ How can they work?

The mechanism of the windmills



Did you know that...

The windmill designed by Heron of Alexandria in the 1st century (AD) is the first machine that uses a wheel driven by the wind.



As the wind moves the outer sails, its inner mechanism moves along the windmill. (as shown in the photos). In this way, people used wind energy to grind grain.

For the Windmill to the Wind turbine



Αυτή η φωτογραφία της Διεύθυνσης Πρωτοβάθμιας Εκπαίδευσης Αθήνας. CC BY

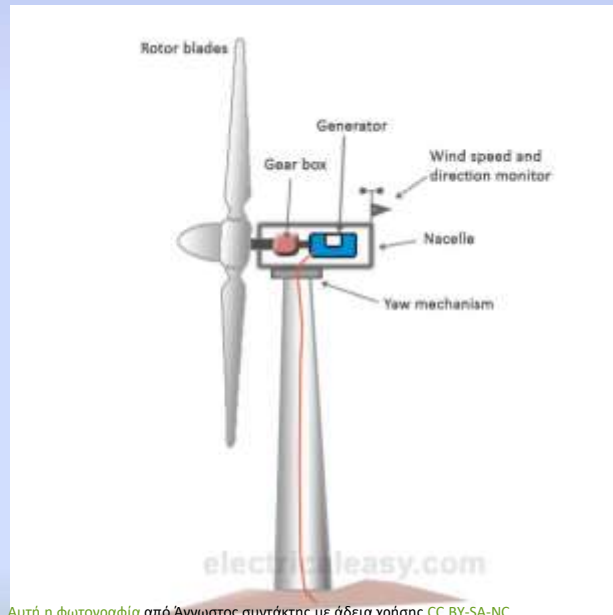
Today people can grind cereal faster with different machines. However, wind power is an essential source of human civilization.

- The photo shows a wind farm.
- ✓ What can wind turbines do?
 - ✓ Have you seen them?
 - ✓ How can they work?

The mechanism of the wind turbine



As the wind moves the blades, the wind power converts into electricity stored inside the turbine.



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Wind Machine's



Materials:

- 1 square piece of paper
- Scissors
- one straw
- one pushpin
- Play dough



Photo by [Innovation For Teachers](#)

Wind Machine's



1. Fold your square paper to create a triangle.

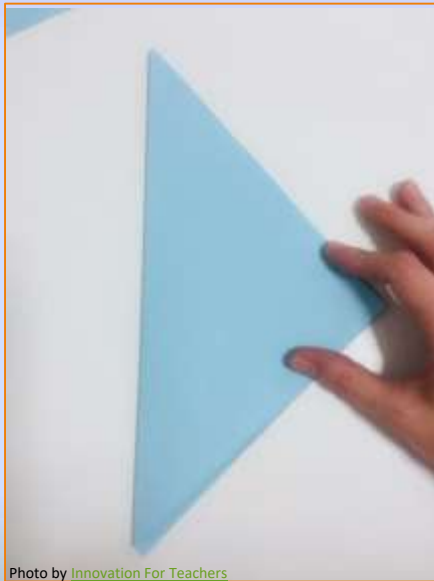


Photo by [Innovation For Teachers](#)

2. Repeat the same with its other corners. Open it.

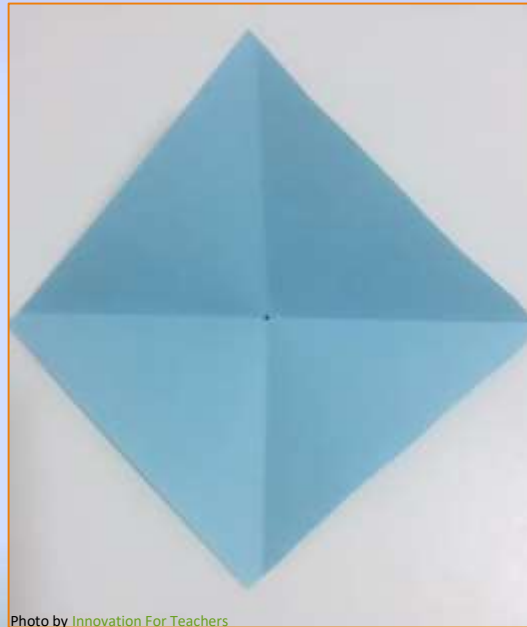


Photo by [Innovation For Teachers](#)

3. Cut from all four corners a little below the waist with your scissors.

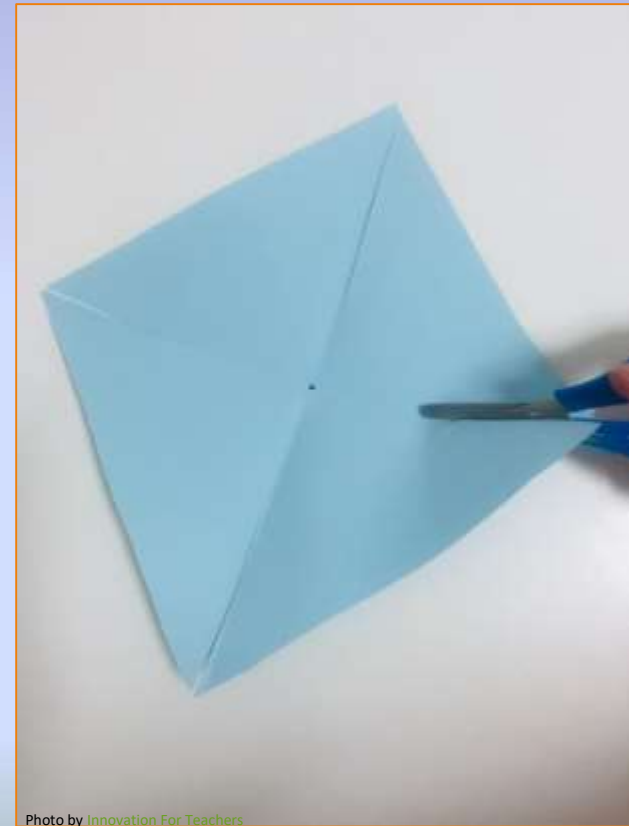


Photo by [Innovation For Teachers](#)

Wind Machine's



4. Pass your pin through the left leaf of each corner. Finally, punch the centre of the paper.



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Wind Machine's



The pin must have enough space because we want to pierce a straw.
You can fix it temporarily with some play dough.



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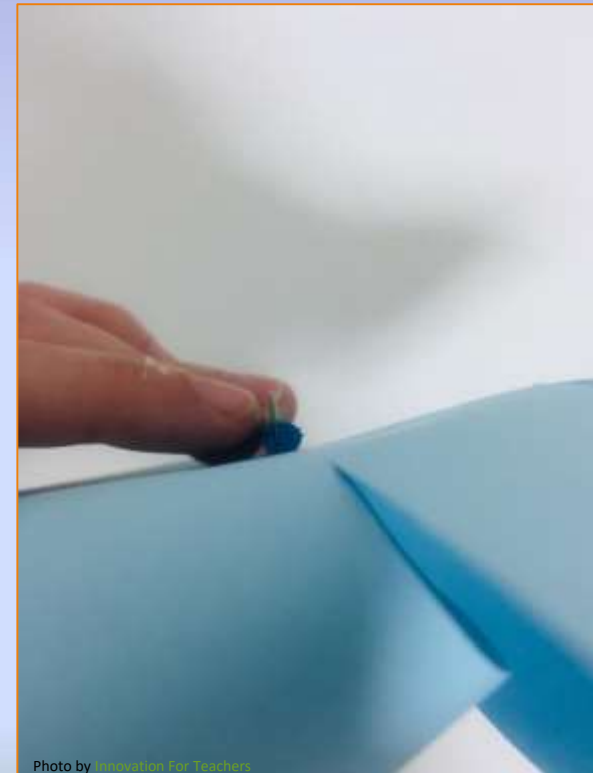


Photo by [Innovation For Teachers](#)

Wind Machine's



5. Attach one straw to the playdough and pierce it with the rest construction. Secure your pin with playdough.



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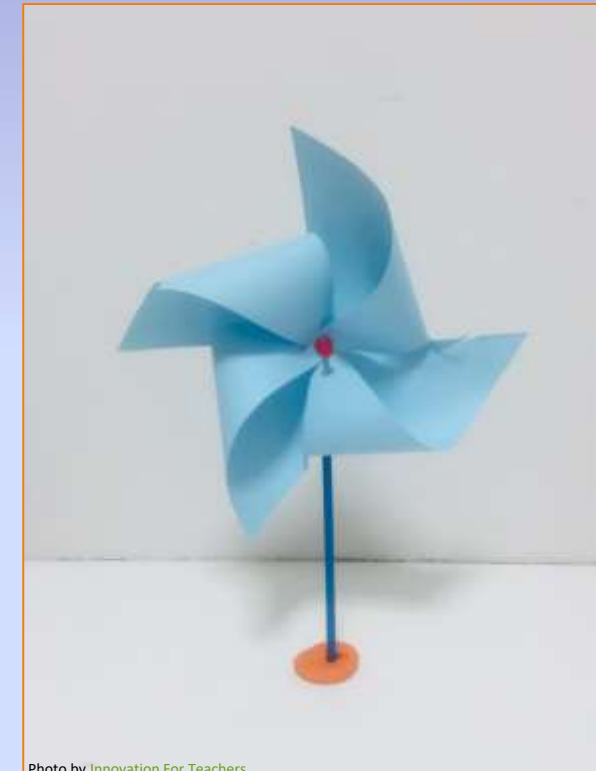


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