



This week we are learning all about wind!



1. Go outside or look out of window... what is the weather like today?



Can you remember what season it is? What came before this season? What season will come next?

Look at the leaves on the tree. Are they still or are they moving? What makes the leaves on a tree move when there is no one else around?

2. You probably guessed that the leaves on the tree move when they are blown by the wind! Do you like the windy weather? Have a look at these pictures and tell your grown up all about how the wind is useful:



This is a wind turbine. A wind turbine turns wind energy into electricity.



This girl is flying a kite. Watch this short clip of amazing kites at a festival in Denmark:  
[https://www.youtube.com/watch?v=xz\\_yeWgJFqI](https://www.youtube.com/watch?v=xz_yeWgJFqI)



How does the wind make this sailboat travel?



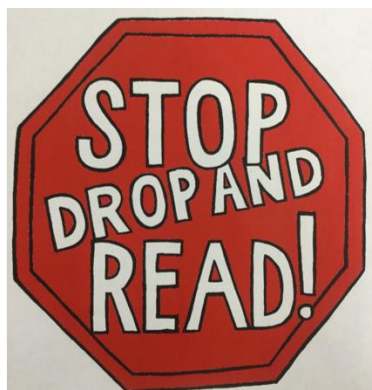
Pilots use many instruments to keep track of the wind during a flight. The wind can help an aeroplane to push through the sky so it uses less fuel.

3. What happens if the wind is too strong?



Can you remember what it is like to walk against a strong wind? A short burst of fast wind is called a **gust**. A light wind is called a **breeze**. Strong winds may be called a **gale**, **storm** or even a **hurricane**!

Look at the damage these **gales** have caused...




4. Your task today is to investigate the wind by creating your own wind turbine.

Click here to learn all about wind turbines: [https://www.youtube.com/watch?v=U5\\_cZ3IRUKU](https://www.youtube.com/watch?v=U5_cZ3IRUKU)

On the following page, you will find the instructions to create a wind turbine. I would recommend making your turbine look amazing by colouring a beautiful design on to your squared paper before cutting and folding.



In place of clay or putty, you could use blu-tack or playdough. You can attach this to the top of a stick with sticky tape if you don't have an eraser-topped pencil.



## Power up

### LINKED CHALLENGE

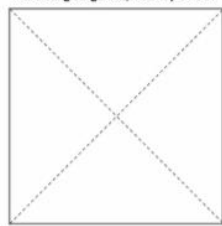
To make a simple wind turbine



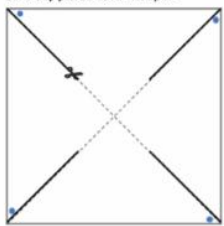
#### ACTIVITY OVERVIEW

Encourage children to recognise objects around the classroom that use electricity and discuss the different ways it is produced, including the use of fossil fuels and renewable energy. (The linked video could be used to support this.) Focus on why renewables are important. In this session, children will make a simple wind turbine.

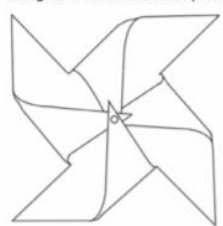
Fold along diagonals, then open out.



Cut along diagonals to ~2cm from centre. Mark dots as shown and carefully pierce each with pin.



Bring 'dotted' corners to centre and secure by pushing a dressmaker's pin through each dot and the centre point.



Attach this wind turbine to the top of a pencil by pushing the pin through the rubber. Test the turbine by taking it outside (on a windy day), using the class fan, or blowing. Explore different sizes of paper and/or card.

#### RESOURCES

Squares of paper (various types and sizes)	Dressmaker pins
Rulers	Modelling clay or mounting putty
Pencils	Pencils with rubber tops
Scissors	Class fan

#### Health & Safety:

Use modelling clay, mounting putty (or similar) to cap any pin point that protrudes the pencil rubber.

#### QUESTIONS/FURTHER LEARNING


- Does the size of the wind turbine or the type of paper/card from which it is constructed affect its movement?
- What do you think happens to the energy produced when the blades spin faster or slower?
- Why might it be better for our world to use renewable energy sources? Are there any disadvantages?

#### KEY FACTS/SCIENCE

Wind and water power are 'clean' sources of energy. They do not produce harmful greenhouse gases such as carbon dioxide that contribute to global warming.

Each blade of a turbine is similar in shape to the wing of an aeroplane, in this case catching the wind's energy as the air passes over the blades to create spin. In wind turbines, these moving blades turn a rotor, which is connected to a generator. A generator converts rotational movement into electricity. Children may have seen a dynamo on a bicycle work in a similar way (spinning wheels turn the rotor in the dynamo).

Online supporting video :  
<https://tinyurl.com/kpdww5w>



We cannot wait to see your beautiful wind turbines in action so please send us photos! Perhaps, if you make an extra one, you can bring one to school on Monday to display in our Willow garden!