



Wind Power

Building & testing an Anemometer

Outcomes

- Create an instrument for measuring wind speed-an anemometer.
- Predict the effect wind will have on the anemometer.
- Compare the effect of wind speeds on the anemometer.
- Create wind to test the anemometer.

Set up

- Groups of 3-4
- Suitable for indoors or outdoors

Resources

- 5 paper cups, 2 paper straws or wooden doweling pencil, drawing pin, per group
- Fan, hair dryer

Cross curricular learning opportunities

Science: Climate, Maths: Gathering data

English: Following instructions

Character development opportunities

Team work, evaluation and reflection, perseverance

Active learning contributes to pupils' recommended 60 daily active minutes



CMO Guidelines 2019

Making it easier

Create wind sock to measure wind direction.

Making it harder

Pupils create a weather vane to identify the direction of the wind to use alongside their anemometer.

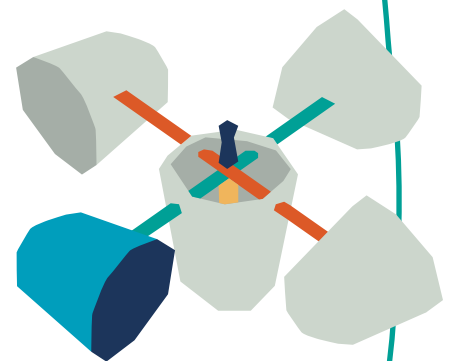
Active Science Let's Go!

1. Groups use the Build an Anemometer: Step by Step Guide to create their wind measuring instrument.
2. Mark one of the cups with a colour so it is different from the others. This will help pupils count how many turns their anemometer makes with different wind speeds

Question for pupils;

- What do you think will happen when the wind blows?
- Why does it spin in the wind?
- What do you think might happen when the wind blows more strongly?

3. Stick the anemometer into the ground and use the the wind outside. Alternatively indoors use a hair dryer, a fan or pupils can create their own wind flapping a tray near to the anemometer.
4. Pupils record the effect different wind speeds have on the movement of the anemometer.





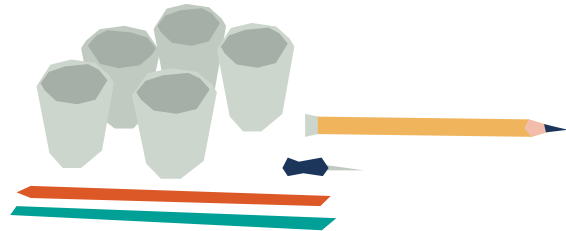
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Build an Anemometer. Step by step guide

Each group will need:

- 5 Paper cups
- 2 Paper straws or 2 pieces of wooden doweling
- Pencil
- Drawing pin

Teachers can hole punch the cups in advance.



1.

Take the 2 paper straws and thread through the cup with 4 holes to form a cross in the centre. Make a hole in the bottom of this cup using a pencil.

2.

Where the straws cross, push a drawing pin through the cross and fix firmly into the flat end of the pencil. Check the straws can spin around. If not, loosen the pin a little.

3.

Fix 1 cup onto the end of each straw, by threading the straw through the 2 holes. The cup should be on its side once fixed.

4.

Repeat with the other 3 cups. Each on the end of their own straw. All cups MUST be facing the same way.

5.

Your anemometer is now ready to use. You can stick the pencil into the ground or you can hold it.

6.

To count the number of turns it makes start counting with the cup with the coloured mark on it. Each time it gets back to the start, that's another rotation

