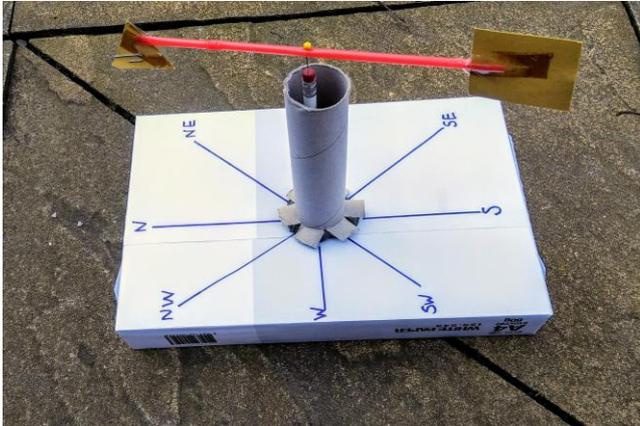


Measuring Microclimates

Explore how different areas of the school grounds are affected by weather and climate

9-12

Physical Geography



This is a nice way of enabling pupils to use fieldwork to observe, measure, record and present the physical features in the local area using a range of methods, including: sketch maps; tables; graphs and digital technologies; thus, supporting **geography, science and technology** studies.

The results can be a great way of promoting discussion around the design and layout of the grounds from selecting gathering spaces to growing areas. It can also spark discussions about harnessing **renewable energy** sources around the grounds.

Equipment

- Thermometer to measure air temperature
- Instruments to measure wind speed and direction such as a portable anemometer and weather vane (see over leaf for DIY versions).
- Pencils, graph paper and clipboards

Preparation

Discuss which areas of the school grounds might be especially prone to the influence of temperature and wind – choose several locations that are likely to provide the best contrast and assign a groups to each location.

Each group needs to create measuring devices as per the designs over leaf or research and make alternatives.

Activity

1. At regular intervals during the day, children go out to measure and record temperature and wind in each location. Record the data in a table.
2. Analyse the results. How wide are the variations from place to place? Do they change during the day? Why? Do the variations affect where children prefer to sit or socialise? Do they affect play or plant growth?

Extension:

Does the surface material have an impact – for example, is the temperature 30cm above tarmac the same as 30cm above grass? Why might there be a difference?



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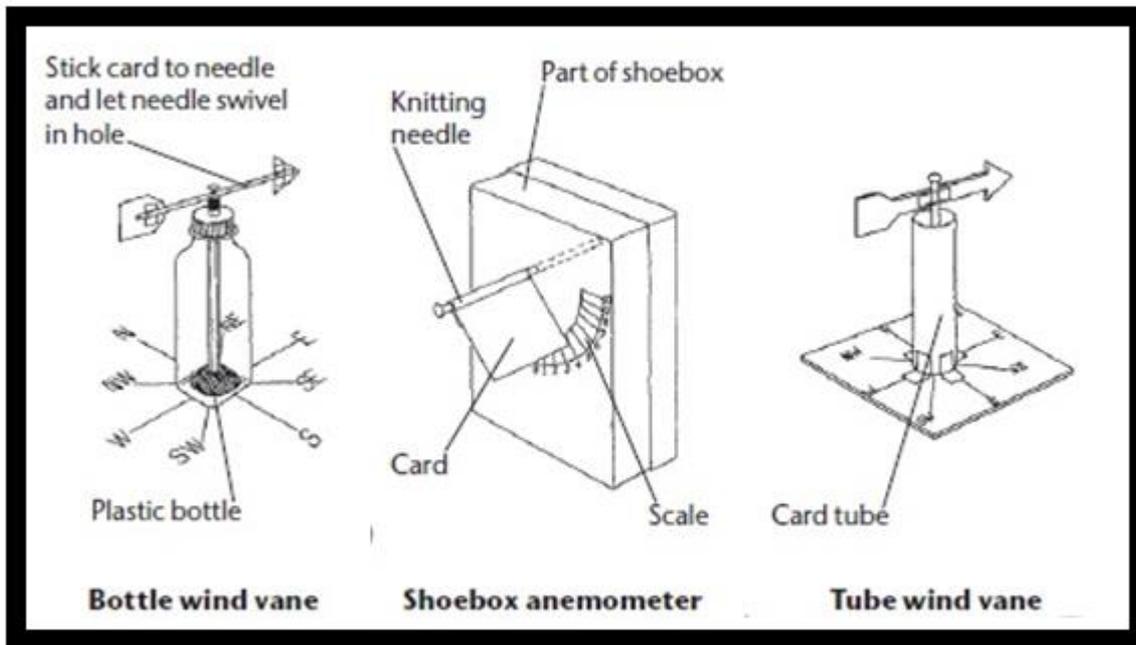
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Physical Geography

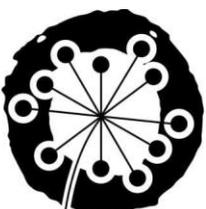
A weather vane is an instrument for showing wind direction. An anemometer is an instrument for measuring wind speed. Here are some diagrams to help you make your own.



Suggested Table for Recording Data

Location.....

Measurements	Time in the day				
	9:00	10:00	11:00	12:00	13:00
Air Temp (°C)					
Wind Speed					
Wind Direction					



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