

YEAR 6 Geography

Field Study and weather investigation

LO: To use field study techniques to investigate the weather

Task: Over a five-day period, you are required to record the weather in your local area.

You need to record:

- The amount of rain (in mm)
- Wind strength and/or direction
- Temperature
- Cloud cover



In order to do this, you need to make a rain gauge (required) and an anemometer (optional), and find a method of recording the temperature (e.g., parent's car or first aid thermometer). You will also need to record your findings in a clear format.

Success criteria and suggested timings:

1. Make a rain gauge (*15mins*). **Ext:** make an anemometer (*30mins*)
2. Check your rain gauge and thermometer, use your anemometer or work out wind direction, and observe the cloud cover each day for five days, (preferably at the same time each day) and record the findings (*5x10mins = 50mins*)
3. Record your findings in a clear format at the end of five days. This can be completed on a spreadsheet/using ICT (*30mins*)
4. Look for patterns and explain your findings using key vocabulary (*30mins*). This must be handwritten.

For example: I noticed from my results that the temperature increased when it rained. However, when there was little or no cloud cover, the temperature dropped.

Make a Rain Gauge

What you'll need:

- A plastic (soft drink) bottle
- Tape
- Marker (felt pen)
- A ruler

Instructions:

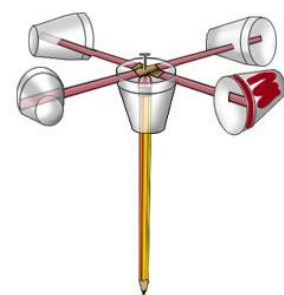
1. Cut the top off the bottle.
2. Turn the top upside down and tape it to the bottle.
3. Use a ruler and marker pen to make a scale on the bottle (or measure afterwards using a ruler).
4. Put your rain gauge outside where it can collect water when it starts raining. After a rain shower has finished, check to see how far up the scale the water has risen and measure using a ruler (in mm).

Make an Anemometer

To measure wind speed, meteorologists use an instrument called an **anemometer**.

Gather your materials:

- 1 pencil with eraser end
- 5 Styrofoam cups
- 1 straight pin
- 2 long plastic straws
- 1 coloured marker
- Tape



With the coloured marker, colour one of the Styrofoam cups and set it aside so you can use it as your starting point when measuring the wind speed.

Take one cup for your centre piece and poke the straws through making a cross "+" shape in the centre and tape the cross section together to hold. Now take one of the pencils and poke it through the bottom of the cup so that the eraser end is up under the cross section of the straws. Place the straight pin through the straw centre into the eraser to hold. Don't make the pin too tight as this is the axis on which your anemometer will turn.

Take the remaining 3 cups and the coloured cup and poke the other ends of the straws through the sides of the cups. Make sure they are all facing the same direction. Now place your anemometer in the ground with the pencil end.

When the wind blows, start counting how many times the coloured cup goes by in one minute. That's the speed of the wind. For example, if the cup makes 10 complete revolutions in one minute, the wind speed is 10mph.

Calculating cloud cover
(in 1/8ths):

Cloud Description	Meaning	Pilot Symbol
clear	No cloud	○
few	1/8 to 2/8 Cloud	○●
scattered	3/8 to 4/8 Cloud	○—
broken	5/8 to 7/8 Cloud	○=
overcast	8/8 Cloud	⊕