

# Settled weather

**Most people look forward to settled weather, especially if they are going on holiday or are going to be outdoors. But how can you work out if the weather is settled?**

**Q1.** Would you expect to see clouds when the weather is settled? If so, what kind would they be?



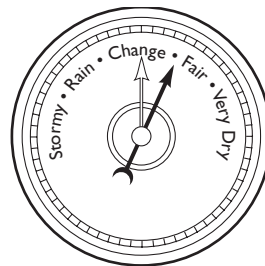
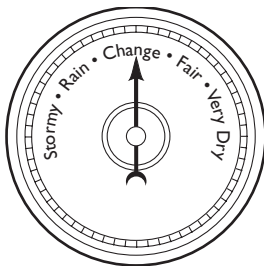
**Q2.** What kind of weather hazard might form during the night in winter?



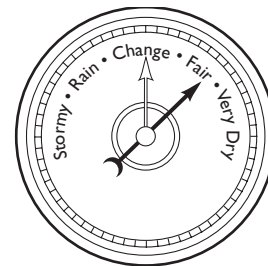
**Q3.** If you looked at the horizon just after the Sun had set, what colour might the sky be if the weather was settled?



**Q4.** Here are some pictures of a barometer at various times of the day. Is the weather becoming more settled or less settled? How can you tell?

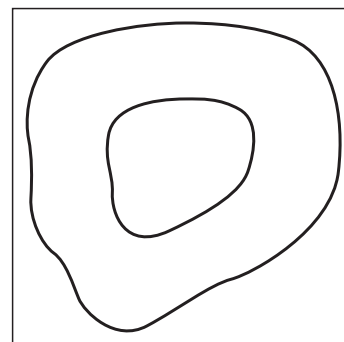


12 noon  
(12:00)



3 pm  
(15:00)

**Q5.** The diagram on the right shows the kind of pattern you see on a weather forecaster's map. The forecast is for fine sunny weather. Write a single word in the centre of the diagram to say what kind of pattern it is.



## Background

Anticyclones are also called high pressure regions or simply 'highs'. It is the pressure equivalent of a hill, with the greatest pressure in the centre and decreasing pressure outwards. In fact the high air pressure is caused because air is sinking (it is a downward eddy, matching the upward eddy of a depression), so air builds up and then pushes outwards.

Highs are larger, move more slowly, and last longer than lows. Winds are slight and conditions are often calm. Because air is sinking, no bubbles of hot air can rise from the ground and no cloud forms. During high pressures, the air is usually very dry (it has a low relative humidity).

Anticyclones are different in summer and winter. In summer, hot air trying to rise from the ground battles with air sinking through the atmosphere. In winter the ground is cold and so the air is cooled. This makes the air near the ground heavy and so it adds to the sinking produced by a high in any case. Highs tend to develop over oceans in summer when the ground is hot (for example, in the Mediterranean). In winter, anticyclones take over in the centres of continents such as we see in northern Europe, Asia and North America.

Over Britain, high pressure may develop after air sweeps across the country from the Arctic. A centre of high pressure is actually uncommon, and more often a smaller area, called a ridge, forms. A ridge moves quickly across Britain, giving a day or so of clearer weather between lows. At night, light winds and clear skies allow temperatures to plummet, all the more so if snow is lying on the ground. This is when local fog patches occur. You can observe the end of the ridge because there is an increase in high and medium cloud ahead of the next depression.

Britain normally experiences a true high when an anticyclone from the south, usually the Azores, buds off, or enlarges, northwards. Most of our spells of warm, dry weather in summer are connected with highs.

Sometimes a large anticyclone moves north, pushing frontal depressions north to Scandinavia or south to Spain. Because the depressions can no longer move from west to east, the anticyclone is called a 'blocking high'. Such highs are often long-lasting and may cause periods of drought.

## Answers

**Q1. There may be no cloud at all, or you might see fair-weather cirrus mares' tails, or you might see a few shallow fair-weather cumulus clouds. Any of these answers would be correct.**

**Q2. Fog**

**Q3. Purple, red or pink**

**Q4. More settled because the barometer needle is moving to the right (clockwise), showing that the air pressure is rising.**

**Q5. HIGH. This is a high pressure region, or a 'HIGH'. See below.**

