

3 Air pressure and weather

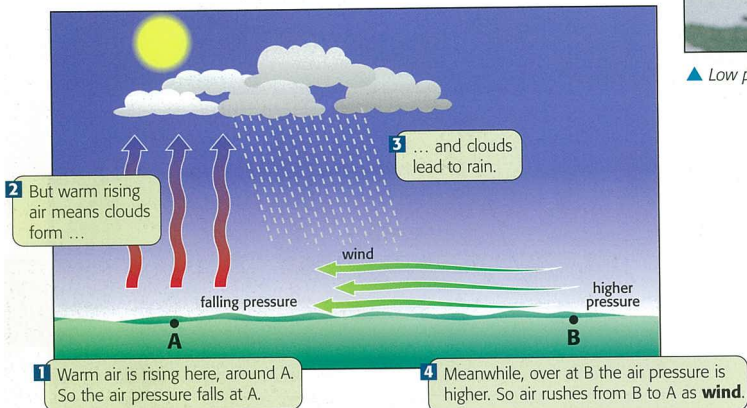
Here you'll learn about the weather you get with high and low air pressure.

What's air pressure?

Although we can't feel it, all the air above us is pressing down on us, giving **air pressure**. If air pressure is **low**, it means air is rising. If it is **high** it means air is sinking. And each brings different weather.

Low pressure weather

Look what happens when warm air rises ...

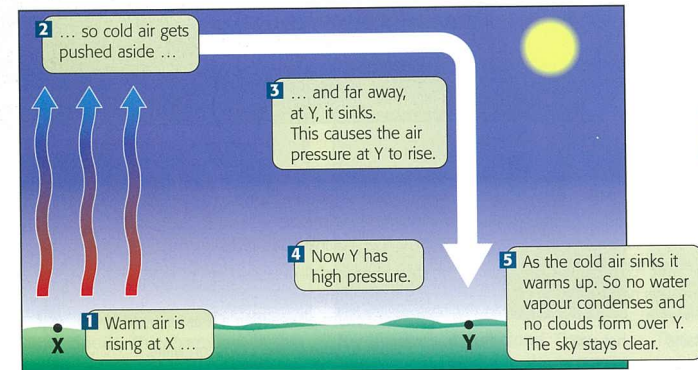


▲ Low pressure weather!

So a fall in air pressure is a sign of rain and wind. The lower the pressure the worse the weather will be.

High pressure weather

When warm air rises in one place, cool air sinks somewhere else.



So high pressure means no clouds. Which means it gives us our hottest summer weather and coldest winter weather, as you'll see next.



▲ To see if the air pressure is rising or falling, check a barometer.

When there's high pressure in summer ...

There are no clouds in the way so the sun is strong. Take care you don't get burned!

Since there is no cloud to trap the heat in, the evenings can be cool.

No cloud means no rain. So there may be **drought** in some places.

No cloud also means the ground gets cold at night. Water vapour condenses on grass to form **dew**.

But inland, on very hot days, the hot air may rise rapidly, cool, and form huge black clouds.

Inside these clouds, strong currents of air whip around, causing **thunderstorms** ...

... and thunderstorms can lead to heavy rain and even **flooding**.

When there's high pressure in winter ...

There is no cloud to act as a blanket. So the days are clear, cold and bright.

With no cloud, the ground cools fast at night and cools the air above it. Water vapour condenses and freezes on cold surfaces, giving **frost**.

It also condenses on dust and other particles in the air, giving **fog**. This makes driving dangerous.

Pipes may burst and homes may get flooded.

Water on roads freezes into ice as the sun goes down.

Ice and frost mean animals have trouble finding food.

Your turn

1 Write this out, using the correct word from each pair.

Low pressure is a sign of fine/unsettled weather. The lower the pressure the calmer/stormier the weather will be. High pressure brings clear/cloudy skies, which means very hot/cold weather in summer and very warm/cold weather in winter.

2 For some jobs, long spells of high pressure weather can bring problems. Try to give three examples.

3 For some jobs, long spells of low pressure weather can bring problems. Write down three examples.

4 It's August, and high pressure. You're going camping. List four items you'll pack, to cope with the weather.

5 a What do fog, dew and frost have in common?
b Explain how each forms.

6 Which type of weather do you prefer – high or low pressure? And in which season? Give your reasons.