

How does weather affect us?

Weather affects our lives in many ways. It can affect the sort of activities we do, the type of clothes we wear, what we plan to do at the weekend and where and when we go on holiday.

State how each of the following people is likely to be affected by the weather and climate in the UK.



The owner of an ice-cream parlour in Blackpool.



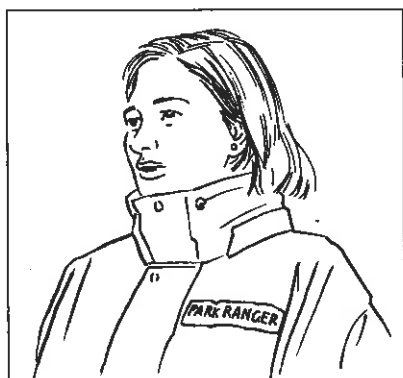
A farmer in East Anglia.



A lifeguard on a beach in Devon.



The owner of a ski resort in Scotland.



A Park Ranger in the Lake District National Park.



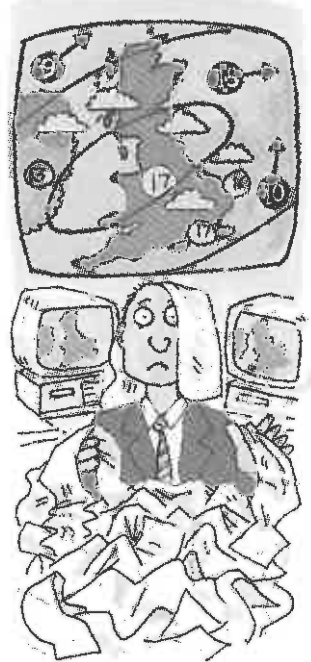
A fisherman on a trawler in the North Sea.



A teenager on a day trip to a theme park.

How might you observe and record the weather?

The weather maps shown on TV are based on thousands of weather observations made around the world. Weather forecasting is very scientific. It uses satellites, weather balloons, ships, aircraft, radar and some of the most powerful computers in the world.



1 Colour the matching heads and tails below.

Heads

Civil and military aircraft

Weather stations on land

Satellites

Weather balloons

Weather radars

Tails

and sea measure wind, rainfall, temperature and more.

report as they travel the world.

measure winds, temperature and humidity in the sky.

show where it is raining.

in space send back pictures of clouds.

2 A weather scientist (or meteorologist) needs the following measurements in order to describe the weather. Colour the matching pairs below.

How hot or cold it is.

The weight of air pressing in on us.

Rain, snow, hail or sleet.

How 'wet' the air is.

Measured in kilometres per hour.

Where the wind blows from.

Measured in eighths.

Measured by a sunshine recorder.

How far we can see.

Visibility.

Hours of sunshine.

Wind direction.

Cloud cover.

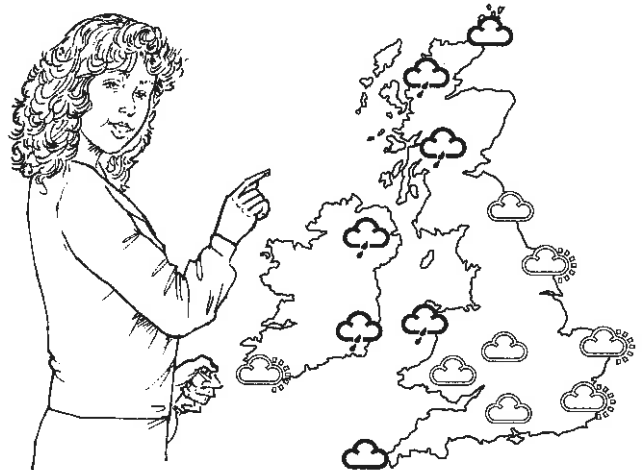
Rainfall.

Wind speed.

Relative humidity.

Pressure.

Temperature.



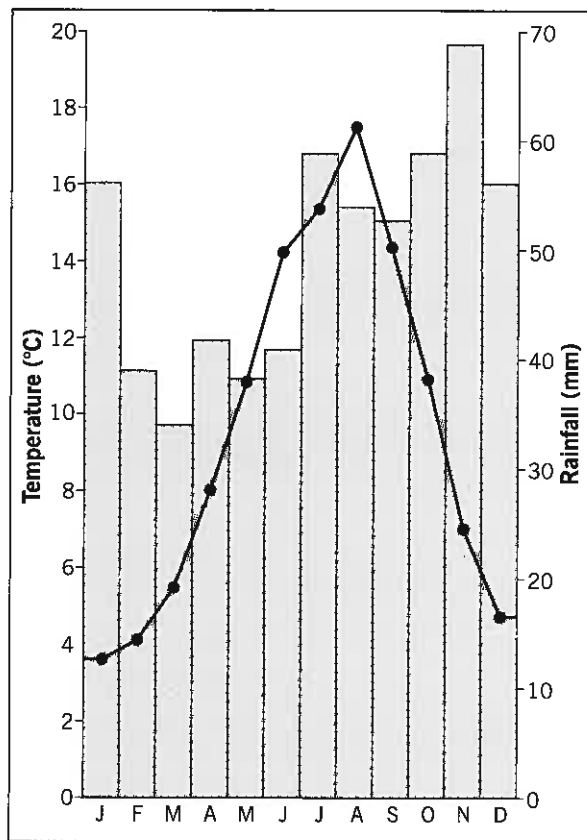
3 Watch the weather forecast on TV or on the Met Office website (www.met-office.gov.uk). In your book or file, write a paragraph to describe tomorrow's weather. Use the title: 'Here is the weather forecast...'

What is Britain's weather?

Britain may be a small area of land but the climate varies from place to place and from season to season.

1 Study the events listed below. They all took place in a town called Lowestoft in Suffolk. Each event is linked to the climate recorded on the graph.

- A Lesley has to scratch the ice off her windscreen before she leaves for work.
- B Lucy can't go out on her bike, as it's just too dark and wet after school.
- C Taylor decides to go to the beach for a swim and play Frisbee.
- D Phew! It's so hot that Paige decides to sunbathe using a factor 25 sun cream.
- E Janet decides to take her jacket out with her just in case it rains.
- F Callum has to play hockey on the Astroturf, not on the school playing field.
- G Michael wants to go and fly his new kite.
- H Susan hangs her washing out to dry on the washing line, as it's a warm day.
- I Craig decides to wear his waterproof boots on the geography field trip.
- J Jim arrives late for work, the flood water led to long road diversions.
- K Steve's old car won't start first thing in the morning.
- L Beth isn't going to school today because it's closed due to heavy snowfall.



2 Using the climate graph, match each event in the list above to one of the months below.

- | | | |
|------------------|---------------|------------------|
| January = | May = | September = |
| February = | June = | October = |
| March = | July = | November = |
| April = | August = | December = |

3 Think of four sentences to describe each of the months shown in **bold** above.

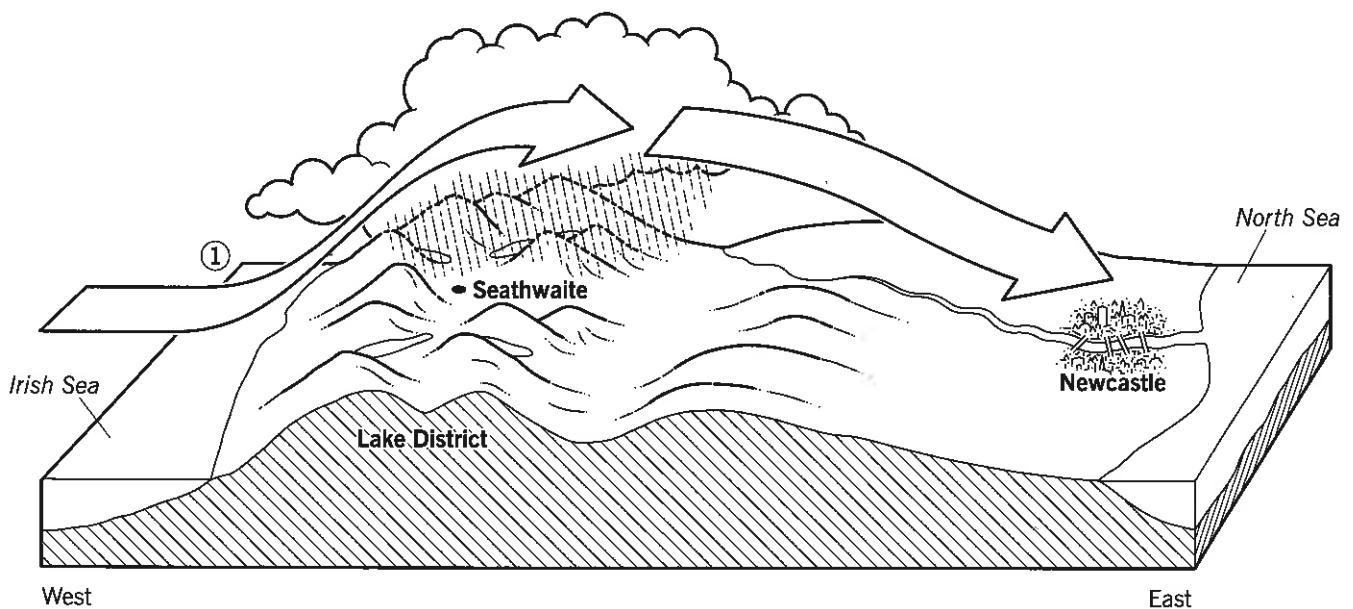
Relief rainfall

Rain is caused by moist air rising and cooling. The three types of rainfall produced in this way are relief, convectional and frontal.

Relief rainfall is quite common in Britain especially in the west where most of the high land is located.

The statements below describe what happens when we get relief rainfall. Number the statements in the correct order. It has been started for you. Add your numbers to the correct places on the sketch below.

Order	
	The other side of the high land (the leeward side) stays dry and sheltered.
1	Warm, moist air is blown in from the sea.
	When this moist air reaches high land, it can do only one thing: it has to go up.
	As the air rises, it cools.
	Droplets in the cloud join together to form larger droplets, which fall as rain.
	The rain falls on the high land (the windward side) facing into the wind.
	As it cools down, the water vapour in it condenses to form tiny water droplets.
	The wind meets a line of high hills or mountains.
	The tiny droplets of water form clouds.



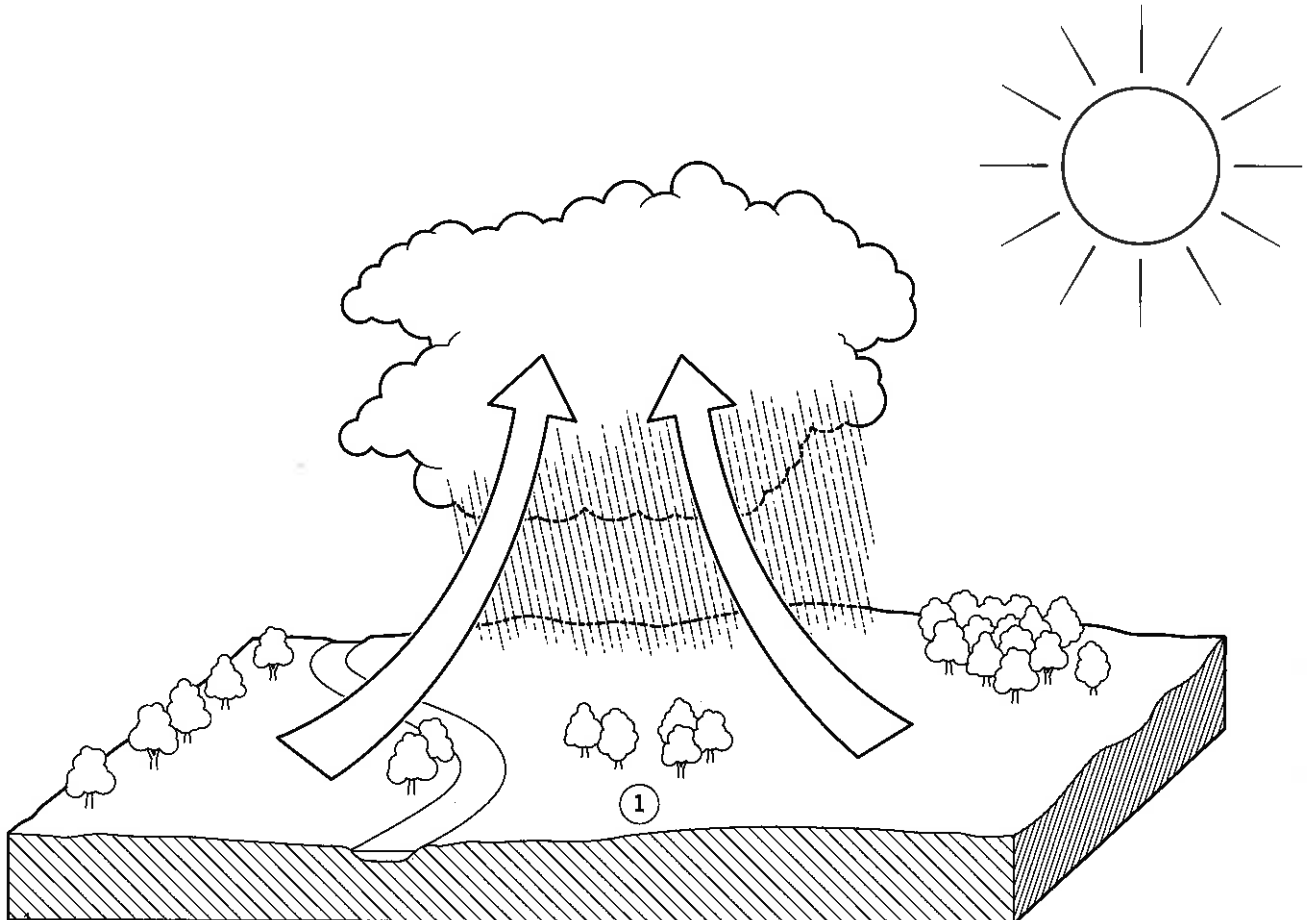
Convictional rainfall

Rain is caused by moist air rising and cooling. The three types of rainfall produced in this way are relief, convectional and frontal.

Convictional rainfall is more likely to form in the summer than in the winter and is more likely to fall inland than on the coast.

The statements below describe what happens when we get convictional rainfall. Number the statements in the correct order. It has been started for you. Add your numbers to the correct places on the sketch below.

Order	
	As it cools down, the water vapour in it condenses to form tiny water droplets.
	This warm air rises as a convection current.
1	On very warm days the sun's heat warms the ground.
	As the air rises, it cools.
	The tiny droplets of water form clouds.
	The air above the ground is warmed.
	Sometimes the convection currents are very strong and produce very tall clouds and heavy rainfall with thunder and lightning.
	Droplets in the cloud join together to form larger droplets, which fall as rain.



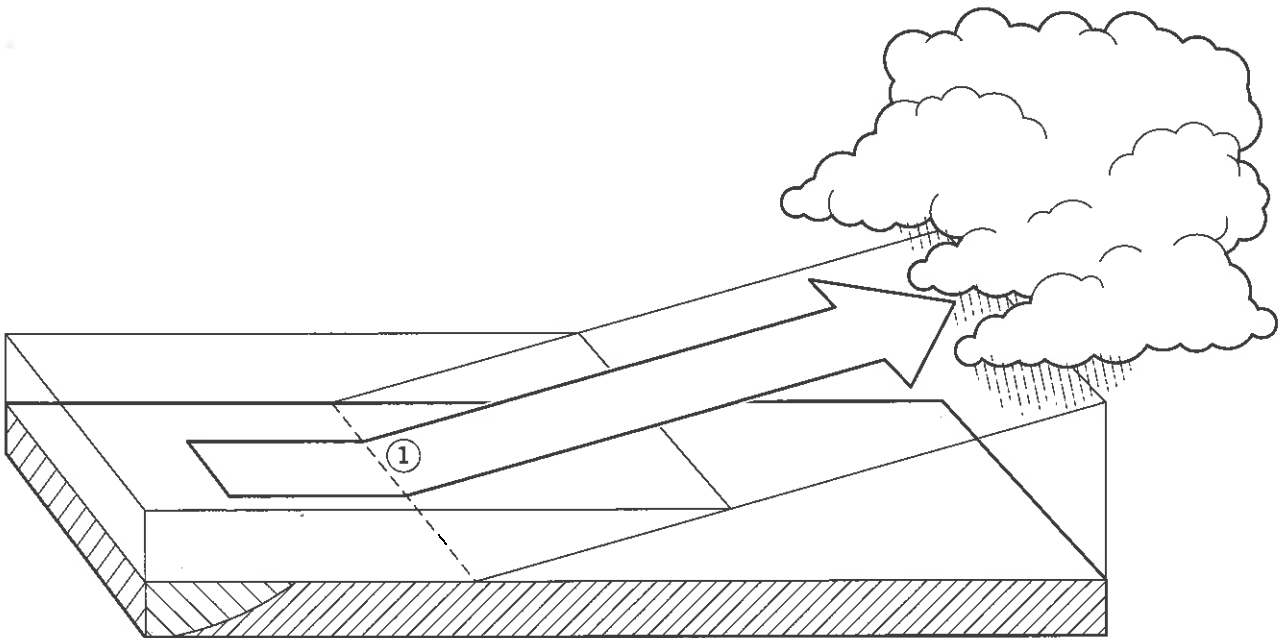
Frontal rainfall

Rain is caused by moist air rising and cooling. The three types of rainfall produced in this way are relief, convectional and frontal.

Huge blocks of air at different temperatures move around the earth over sea and land. The place where warm air and cold air meet is called a front. Frontal rainfall is very common in Britain throughout the year and especially in winter.

The statements below describe what happens when we get frontal rainfall. Arrange the statements into the correct order and label the sketch.

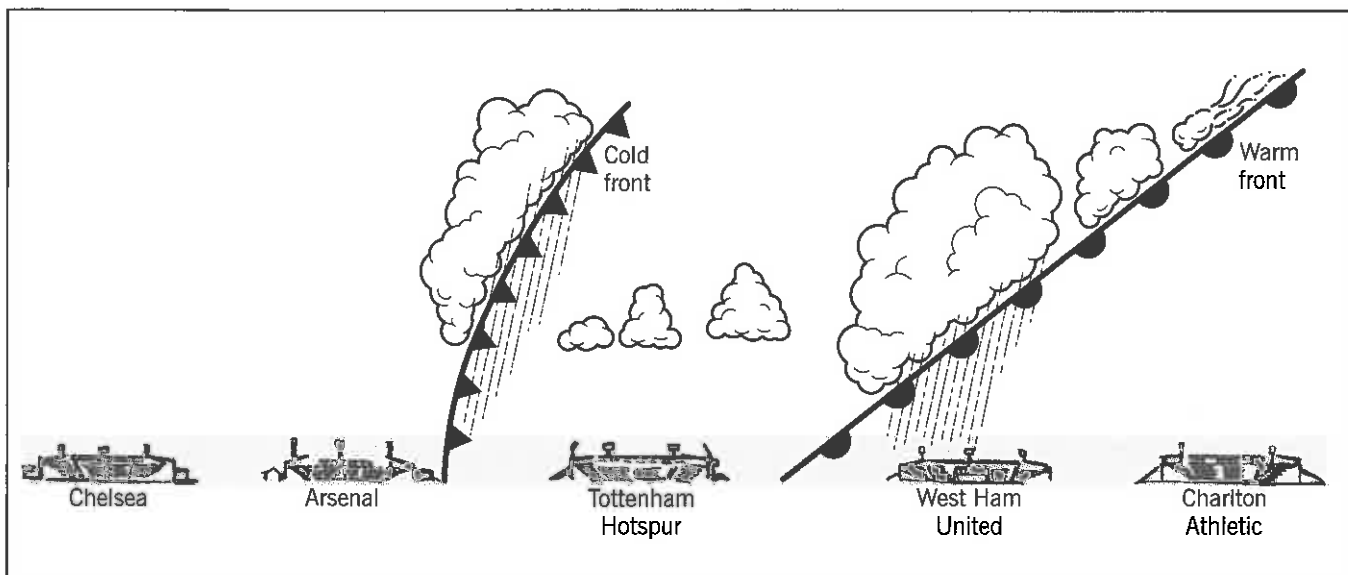
Order	
	As it cools down, water vapour in it condenses to make tiny water droplets.
	Droplets in the cloud join together to form larger droplets, which fall as rain.
	At the front, the lighter warm air rises up and over the colder, heavier air.
	As the warm air rises, it cools down.
	The zone where they meet is called a front.
1	Sometimes a mass of warm air meets a cold one.
	The tiny droplets of water form a gently sloping bank of clouds.
	When warm air and cold air meet, they do not mix.



Forecasting the weather – depressions

Depressions are low pressure areas and bring stormy winds, cloud and rain. They are the most common weather systems affecting the British Isles.

The diagram below shows a depression over London on Saturday 5 April at 3:45 pm, half time for the football matches at the five grounds.



1 Study the diagram above to find out which team each person below supports.

It is quite cold but very sunny. I can see only a few small clouds high in the sky. I thought the weather forecast was rain! I support _____

It is cold but at least it has stopped raining and the sky is clearing. I got very wet walking here from the car park. I support _____

It is quite warm and dry now with only a few clouds in the sky. But it was cloudy during the first half. Time to put away the brolly. I support _____



2 It is 7 am on Saturday 5 April. There is a cold front approaching London. Write the weather forecast for a local radio station.

It is cold and wet now, but it was warm and cloudy when I arrived at the football stadium. I wish I'd brought my coat! I support _____

It got windy and started drizzling just before kick-off. It rained all during the first half and now I am very wet and very cold! I support _____