

Weather forecasting

Weather forecasting as a science is only 150 years old, but who started weather forecasts and how are they different today?

Robert FitzRoy was an amateur forecaster who started the UK's Meteorological Office. His first forecast in August 1861 in the Times newspaper was short but accurate. The first TV forecast in the UK was in 1936, but the biggest change was in the 1950s when they started to use weathermen and women and magnetic sun and clouds to place on the map. Now we have satellite pictures of the weather all over the world. None of this would be possible without Robert Fitzroy.

But sometimes forecasters get it wrong. There is a very famous case in the UK, where on 15 October 1987 the forecaster predicted that a hurricane in the US would not affect the UK, but the south-east of England then had its worst storm for nearly 300 years.

Before meteorology, people used common knowledge to predict the weather. 'Red sky at night; shepherd's delight, red sky in the morning; shepherd's warning.' is a common saying. It is fairly accurate in the UK, because a red sky in the west, where the sun sets, means good weather, but a red sky in the morning means the sun is reflecting off the rainclouds. This means there will probably be rain, which is bad weather for shepherds.

Several European countries have a saying predicting summer weather. For example in England we say if it rains on St Swithun's Day (15 July) there'll be rain for the next 40 days, but if it doesn't rain then it'll be dry for the same time. Summer weather patterns start in the first half of July and usually continue for the next few weeks, so this is true about 75% of the time. In France they have a similar saying about rain on St. Gervais' day (19 July) and in Germany the weather on 'seven sleepers' day (7 July) predicts the weather for the following seven weeks.

Nowadays supercomputers receive millions of bits of information about the weather 24 hours a day, but it is still difficult to predict the weather because of the famous 'butterfly effect'. This means if there is a small change in the air movement in one part of the world, for example a butterfly flapping its wings in China, it might cause a storm in the US. So two and three-day forecasts are much more reliable than five-day forecasts: those extra few days are enough for the weather to develop in a completely different way.

1 Which paragraph in the text (2–6) talks about each of the following?

- 1 Predicting the weather in summer paragraph _____
- 2 When weather forecasting started paragraph _____
- 3 Weather forecasting now paragraph _____
- 4 What a red sky means in the UK paragraph _____
- 5 A big mistake in forecasting in the UK paragraph _____

2 Here are some numbers from the article. Match them with the correct information. Then read the article quickly to check your answers.

24	1936	150	75	5	1861	1987	300	40	7
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- 1 Weather forecasting is _____ years old.
- 2 The first weather forecast in the UK was in _____
- 3 The first TV weather forecast in the UK was in _____
- 4 A forecaster predicted there would be no hurricane in the UK in autumn _____ , but he was wrong as some parts of England had the worst weather for _____ years.
- 5 There is a saying that if it rains on 15 July in the UK, it'll rain for the next _____ days. This is true _____ per cent of the time.
- 6 In Germany they say if it rains on 7 July, it'll rain for _____ weeks.
- 7 Now forecasters get information about the weather _____ hours a day.
- 8 _____-day forecasts are not as reliable as two or three day predictions.

3 Match the meanings below to the following words from the text.

accurate amateur common knowledge delight hurricane meteorology

- 1 used about someone who does something because they enjoy it and not as their job (adj) _____
- 2 the scientific study of weather (noun) _____
- 3 correct or true in every detail (adj) _____
- 4 a violent storm with extremely strong winds and heavy rain (noun) _____
- 5 something that everyone knows (noun) _____
- 6 a feeling of great happiness or pleasure (noun) _____

4 There are several phrases to talk about how sure we are that something will happen. Match the phrase to the percentage.

might probably won't will will probably won't

- 100% It _____ happen.
 75% It _____ happen.
 50% It _____ happen.
 25% It _____ happen.
 0% It _____ happen.

5 Now use some of the phrases above to complete the sentences below. You can use a phrase more than once and sometimes more than one phrase is possible.

- 1 It's impossible for five-day forecasts to say accurately that there _____ be rain.
- 2 In the UK we say that a red sky in the morning means there _____ be rain.
- 3 If it is dry on 15 July in England, there _____ be rain for forty days.
- 4 Summer weather patterns start in the first half of July in Europe, so the weather then _____ be the same for the next few weeks.
- 5 Because of the 'butterfly effect', a small change in the air movement in one part of the world _____ cause a storm thousands of miles away.

6 Now use the phrases from exercise 4 to make some predictions about your country or a country you know well.

7 Discuss these questions with your partner(s).

- What did you find interesting or surprising about weather forecasting?
- Is it important in your country to know what the weather will be like? Why / Why not?
- How accurate is the weather forecast in your country/another country you know well?
- Would you like to be a weather forecaster? Why / Why not?

Glossary

butterfly effect (*noun*) – the idea that a very small change in one part of a system can have a very big effect on another part of the system

flap (*verb*) – if a bird's wings flap, or if the bird flaps them, they move quickly up and down

predict (*verb*) – to say what you think will happen in the future

reflecting (*noun*) – if sunlight reflects off clouds, the sunlight shines back off the clouds

reliable (*adj*) – you can trust that reliable information is correct

saying (*adj*) – a well-known statement about what often happens in life

shepherd (*noun*) – a man who looks after sheep as a job

weather forecast (*noun*) – a report on possible / probable weather in the future

wing (*noun*) – one of the parts on a bird that move up and down when it flies. Birds have two wings.