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Answers

Quiz: Weather hazards

This short quiz could be used as a brief introductory activity to begin discussion about weather hazards and their impacts. It's designed to help students understand weather hazards and generate discussion. The correct answers are given below, along with some additional information.

Answers

- 1 The correct answer is B, 80–100. The long-term average is 85. There were 104 in 2020 and only 68 in 2010. About 70% occur in the northern hemisphere.
- 2 The correct answer is C, tornadoes. These are most common in mid-latitude areas over land that is flat and continental (farther from the sea). They are most likely to form due to an interaction between cold air and warm air, such as polar and tropical air over the US mid-west.
- 3 The correct answer is D, wildfire. Very dry air (low humidity) is a major risk factor creating 'fire weather' conditions. In the western USA strong, dry, hot Santa Ana winds from the east dramatically increase fire risk in California.
- 4 The correct answer is B, a hurricane. Specifically, Hurricane Ian that struck Cuba and Florida in September 2022. The physical scale, duration and multiple hazards (wind, storm surge, rain) mean that tropical cyclones frequently have very high economic losses.
- 5 The correct answer is B, floods. Storms (depressions, cyclones) accounted for 28%, drought 8% and wildfire 4%. This is based on a dataset of over 3,000 natural disasters jointly held by the UN Office for Disaster Risk Reduction, the Centre for Research on the Epidemiology of Disasters (<https://www.cred.be/>). Floods can have many causes including heavy rain, storm surge coastal flooding and snowmelt. Floods are not directly caused by atmospheric motion so are often classified as 'hydrometeorological' rather than specifically 'weather'.
- 6 The correct answer is C, mid-latitude depressions (extratropical cyclones, European windstorms). These low-pressure weather systems can bring storm-force winds and very heavy rain or snow, which leads to flooding. The 1987 Great Storm, 1990 Burn's Day storm and Storm Eunice in 2022 resulted in losses (in today's money) of approx. £6 billion, £4 billion and £0.4 billion respectively.
- 7 The correct answer is D, tornadoes. The scale, which ranges from F0 to F5, was introduced in 1971 and measures the damage caused by a tornado which is strongly linked to wind speed. F5 has an indicative windspeed of 261–318 mph. A newer version, the Enhanced Fujita scale, was introduced in 2007 and is used in some countries such as the USA and Canada.
- 8 The correct answer is B, decreasing. According to the World Meteorological Organisation 'Deaths decreased almost threefold from 1970 to 2019. Death tolls fell from over 50 000 deaths in the 1970s to less than 20 000 in the 2010s.' see: [here](#).

9 The correct answer is C, heatwaves. Both the 2003 and 2022 European heatwaves are estimated to have caused 50,000+ 'excess deaths'. This is when mortality (death) rate is unusually high for a period, and this is attributed to an event such as a heatwave. But the deaths cannot be directly attributed to the impact of the heatwave. The specific number of deaths is an open debate.

10 The correct answer is a female name beginning with 'G' such as Grace, Greta or Gina. This is because tropical cyclones/hurricanes and severe mid-latitude depressions are named by organisations such as the Met Office and United States National Hurricane Center according to pre-written lists of names in alphabetical order. Between 1945 and 2000 exclusively female names were often used. The exact naming conventions vary in different parts of the world. Storm naming in the UK and Ireland began in 2015.

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