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Activity

Quiz: Carbon sinks and stores

This short quiz could be used as a brief introductory activity to begin discussion about climate change and COP meetings. It partners the Essential Topic Update in GEOGRAPHY REVIEW Vol. 38, No. 4. It is designed to help students understand issues around global temperature increased, carbon emissions and COP meetings. The correct answers are given below, along with some additional information.

- 1 The correct answer is C, Conference Of the Parties. COP meetings, held annually, are the decision-making meetings of the UNFCCC (United Nations Framework Convention on Climate Change) treaty.
- 2 The correct answer is B, +1.5 C. This temperature has been exceeded in a number of months, and by some measures in 2024. However, individual months and years do not constitute 'climate' as this is a 30-year mean.
- 3 The correct answer is D, 1995. It was held in Berlin, Germany. This was the first climate change conference after the UNFCCC treaty was signed at the 'Earth Summit' in Rio in 1992.
- 4 The correct answer is D, the IPCC reports on climate science. There have been 6 IPCC Assessment Reports (ARs) since the 1990s. Scientists working on IPCC ARs collate published scientific knowledge to provide a highly detailed summary of climate change science (the IPCC does not do its own scientific research).
- 5 The correct answer is A, Brazil. Note that if the EU is considered as a bloc it is in fourth place (the EU negotiates emissions reduction targets as a bloc). Of the top 10 emitters in 2023 only the USA, Russia and Japan have lower emissions than they did in 1990. China's emissions in 2023 were 300% higher than on 1990 and India's almost 200% higher.
- 6 The correct answer is D, 2024. This is based on World Meteorological Organization data analysis that can be found here: www.tinyurl.com/bdym77sb

Other organisations, such as NOAA in the USA produce different results although NOAA also ranks 2024 as the warmest year on record.

- 7 The correct answer is B, 30–35 gigatonnes per year. This is a large reduction from the current level of around 55 gigatonnes. The world would need to take annual emissions back to levels last seen in the 1980s.
- 8 The correct answer is A, -51%. By some measures the UK is in the 'top 10' of countries in terms of GHG emissions reductions since 1990. Much of this is due to transitioning away from coal (coal is no longer used for electricity generation) and because of deindustrialisation (loss of the steel industry etc). Detailed GHG data by country can be found here: www.tinyurl.com/3ma7vc5c

9 The correct answer is C. Scientists, environmentalists and some national delegations criticised the choice of 'oil rich' nations as a COP host, although this had happened before e.g. Doha, Qatar in 2012. European countries have hosted most COPs, but there does seem to have been a move to widen the range of locations.

10 The correct answer is B, +2.6°C. As of 2025 most countries are not meeting their agreed emissions reduction targets – called NDCs (Nationally Determined Contributions) so the pathway is toward +2.6°C. Even if all NDCs were being fully met the current pathway leads to +2.2°C, not +1.5°C.