PLATE TECTONICS PART 8 OF 9 · AGES 11–16

Earthquake and Volcano Myths

Eight things many people believe about earthquakes and volcanoes, and what geologists have found instead.

1

✕ MYTH **One day a big earthquake will make California fall into the sea.**

✓ FACT The sea floor is just lower land, so there is nowhere to fall. The Pacific Plate is sliding north-west past North America about as fast as fingernails grow.

2

✕ MYTH **Pets and other animals can warn us that an earthquake is coming.**

✓ FACT No reliable link has been found. Animals may feel the first, weaker waves slightly before people do, so it looks as if they knew.

3

✕ MYTH **Hot, still or stormy days are 'earthquake weather'.**

✓ FACT Earthquakes start many kilometres underground, out of the weather's reach. No link between weather and earthquakes has been found.

4

✕ MYTH **Scientists can predict when and where the next big earthquake will strike.**

✓ FACT No one has ever predicted a major earthquake's date, place and size. Scientists can only give the chance of one in an area over many years.

5

✕ MYTH **During an earthquake the ground can split open and swallow people.**

✓ FACT Faults do not gape open: the two sides slide past each other. Only shallow cracks form, where shaking makes loose ground slump or slide.

6

✕ MYTH **Earthquakes only ever happen at the edges of plates.**

✓ FACT Most do, but not all. Earthquakes also occur inside plates, such as the powerful New Madrid earthquakes in the central United States in 1811–1812.

7

✕ MYTH **Volcanoes only form where two plates meet.**

✓ FACT Hawaii's volcanoes are over 3,200 km from a plate boundary. They grew as the Pacific Plate passed over a hotspot, a very hot region in the mantle.

8

✕ MYTH **Lots of small earthquakes release the pressure and stop a big one.**

✓ FACT It would take about 32 magnitude 5s, or 1,000 magnitude 4s, to release the energy of one magnitude 6. There are never enough small ones.

Check the source

After every big earthquake, rumours of predictions spread online. A real prediction must give the date, place and size. If a claim is missing any of the three, it is not a prediction.

NEXT IN THE SERIES
9. Plate Tectonics Quiz: Earthquakes and Volcanoes

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