



# DEADLY QUIZ!

- 1 Why is it hard to measure wind speed inside a tornado?
- 2 True or false – wildfires can be a good thing.
- 3 The eye of a hurricane extends to what height?
- 4 In which two oceans do most tsunamis occur?

(2)

- 1 Name four things that can trigger a tsunami.
- 2 What was the fastest tornado wind speed ever measured?
- 3 How much rain falls in a hurricane?
- 4 How often do meteor fragments the size of a small car hit Earth?

(3)

- 1 Are wild fires getting worse?
- 2 True or false – the biggest volcano on Earth is bigger than Mount Everest.
- 3 True or false – all northern hemisphere tornadoes rotate anti-clockwise.
- 4 How many earthquakes are there in Britain every year?

(4)

- 1** Tornadoes destroy all the instruments!
- 2** True! Many ecosystems rely on fires to remove old vegetation and return nutrients to the ground.
- 3** Often 50,000 ft. Passenger jets fly at around 35,000 ft.
- 4** The Pacific and Indian Oceans. (2)

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- 1** Yes. Some start naturally, but humans start most, by accident or on purpose.
- 2** True. But most of Mauna Loa, in Hawaii, is underwater.
- 3** False – although most do.
- 4** 200 to 300. But they are usually too small for us to feel.

(4)

- 1** Earthquake, landslide, volcanic eruption, meteor strike.
- 2** 318 mph!
- 3** Up to 9 trillion litres a day.
- 4** Several times a year. Most burn up completely in the atmosphere.

(3)

- 1 How wide is the eye of a hurricane?
- 2 What is a slab avalanche?
- 3 What happened at Tunguska, Siberia, in 1908?
- 4 What do you do to survive a tornado?

(5)

- 1 Do hurricanes spin clockwise or anti-clockwise?
- 2 Kimberlites are a rare kind of volcano. Their magma often contains which precious stone?
- 3 Can avalanches be controlled?
- 4 Is a tsunami one giant wave, or a series of giant waves?

(6)

- 1 What kills most people during a tornado?
- 2 What was the largest magnitude earthquake ever recorded?
- 3 True or false – wildfires can make trees explode.
- 4 Lightning heats the air around it – but how hot can it get?

(7)

- 1 What was the biggest volcanic eruption of the 20<sup>th</sup> century?
- 2 True or false – tornadoes only happen in the countryside.
- 3 What happens when volcanic ash mixes with river water?
- 4 True or false – the first person to name hurricanes named them after politicians he didn't like!

**1** Clockwise in the southern hemisphere, anti-clockwise in the northern hemisphere.

**2** Diamonds.

**3** Sometimes, if you stop snow from building up. But this is difficult and expensive.

**4** A series. The first wave is not always the most destructive.

(6)

**1** 20 to 30 miles wide.

**2** A hard slab of snow that slides downslope the way a dinner plate slides off a table. They are the most deadly kind of avalanche.

**3** An asteroid impact devastated an area larger than Greater London.

**4** Get underground. If you're driving, get out of your car. (5)

**1** Novarupta, in Alaska, 1912; it was nicknamed "the valley of ten thousand smokes".

**2** False!

**3** A lahar forms – a kind of mudflow, travelling downslope. They are extremely dangerous.

**4** True! Official naming started a few years later.

(8)

**1** Flying debris

**2** Magnitude 9.5, in Chile, 1960.

**3** True! Water inside trees can turn to steam so fast that the trees explode!

**4** Up to about 27,000°C. That's more than four times hotter than the surface of the sun.

(7)

- 1** How long are tsunami waves?
- 2** True or false – hurricanes can be stopped if they're sprayed with silver iodide.
- 3** What is the scientific name for the formation of tornadoes?
- 4** What is a flood basalt?

(9)

- 1** What magnitude was the biggest earthquake ever recorded in Britain?
- 2** What are hurricane hunters?
- 3** True or false – volcanoes release poisonous gases.
- 4** True or false – there are over 100 tornadoes in Britain every year.

(10)

- 1** What time of day do most tornadoes happen?
- 2** When the asteroid that killed the dinosaurs hit Earth, how fast was it going?
- 3** Hurricanes form over warm water – but how warm?
- 4** How hot can wildfires get?

(11)

- 1** How fast are hurricane winds?
- 2** What four clues suggest a tornado is nearby?
- 3** In tsunami waves, is just the surface water moving, or is the deeper water moving too?
- 4** In 1883 when Krakatau volcano (Indonesia) erupted, 36,000 people died. What killed them?

(12)

- 1 Magnitude 6.1, but it happened offshore.
- 2 Scientific planes that fly around and through hurricanes.
- 3 True. The main poisonous gases are sulfur dioxide, chlorine, fluorine, and carbon dioxide.
- 4 True! But most are so weak, no-one notices them. (10)

- 1 Up to 60 miles.
- 2 False. This was tried in the 1970s – it didn't work.
- 3 Tornadogenesis. There are many scientists studying this!
- 4 A lava flood covering an area several times the size of Wales. Humans haven't seen one of these huge eruptions – yet! (9)

- 1 74 mph to over 155 mph.
- 2 Dark, greenish sky; very low, rotating cloud (called wall cloud); large hailstones; a loud roar, like a freight train.
- 3 The deep water too.
- 4 Tsunamis triggered by the exploding volcano. (12)

- 1 In the afternoon and evening.
- 2 About 12 miles per second – that's about 20 times faster than a speeding bullet.
- 3 Water must be over 26°C.
- 4 The hottest part (the air just in front of a wildfire) can reach 800°C. (11)

- 1** True or false – when tsunamis hit land, they can travel up rivers.
- 2** What do you do if you're caught in a wildfire while hiking?
- 3** What's the difference between a hurricane, a cyclone, and a typhoon?
- 4** What is the most violent atmospheric storm?

(13)

- 1** What hazard causes a storm surge?
- 2** Why are boats at sea safe from tsunamis?
- 3** Does lightning strike the same place twice?
- 4** True or false – earthquakes deeper than about 400 miles don't happen.

(14)

- 1** True or false – tornadoes only live for a few minutes.
- 2** How do you avoid being struck by lightning?
- 3** Are there volcanoes on the Moon?
- 4** When is the Atlantic hurricane season?

(15)

- 1** What is an "outbreak" of tornadoes?
- 2** True or false – earthquakes can be predicted.
- 3** What three things are needed to start a fire?
- 4** What happens when lava runs into the sea?

(16)

- 1** Hurricane. Strong wind pushes the sea up onto land, causing flooding.
- 2** In open ocean, tsunamis are often less than 30 cm high. They only rise up near land.
- 3** Yes! It's attracted to tall or high objects, like trees or TV aerials. Skyscrapers are often struck several times in one storm.

**4** True. (14)

**1** True.

**2** Clear an area of fuel (vegetation), lie down, and cover yourself with something unlikely to burn.

**3** Location. They are local names for tropical cyclones.

**4** Tornado. (13)

- 1** When many tornadoes form from one thunderstorm.
- 2** False. We know where they are most likely to happen, but not when.
- 3** Fuel (such as grass or wood), oxygen, and heat.
- 4** Lava haze, called laze, is produced. It's a cloud of hydrochloric acid.

(16)

**1** True. Most last less than 10 minutes; only the very biggest last for more than an hour.

**2** Shelter in enclosed buildings or inside cars (don't touch the metal). Don't stand under a tree! In the open, crouch low, but don't touch the ground except with your feet.

**3** Yes, but we don't think they are active any more.

**4** June to November



**1** True or false – earthquakes happen on the moon.

**2** Which Disney™ film was used to campaign for wildfire awareness?

**3** Where are tornadoes most common?

**4** How fast do tsunami waves travel?

(17)

**1** True or false – avalanches can be triggered by loud noise.

**2** Do earthquakes make noise?

**3** Why is volcanic ash bad for aeroplanes?

**4** How long do hurricanes live?

(18)

**1** True or false – tsunamis slow down before they hit land.

**2** How many earthquakes happen each year?

**3** Is the atmospheric pressure in a hurricane unusually low or unusually high?

**4** What do you do if you're caught in an avalanche?

(19)

**1** How fast do tornadoes move forward?

**2** True or false – just before a tsunami hits, the sea retreats, leaving the beach exposed.

**3** Which is worse – a Category 1 hurricane, or a Category 5 hurricane?

**4** What volcanic rock can float on water?

(20)

- 1 False! Unless it's extremely loud, like explosive going off at close range.
- 2 No, but they make buildings shake, and that is noisy.
- 3 It melts and sticks to the parts inside the jet engine, causing engine failure.
- 4 Up to 3 weeks.

(18)

- 1 True, but they're called moonquakes. They are smaller and less common than on Earth.
- 2 *Bambi*™.
- 3 In a part of the US called Tornado Alley; they have an average of 800 per year.
- 4 Up to 500 mph – the same as a passenger jet.

(17)

- 1 30 mph on average. The slowest hardly move at all, the fastest can reach 70 mph.
- 2 Often true. But sometimes the sea rises suddenly instead.
- 3 Category 5. Categories are based on wind speeds.
- 4 Pumice. It's foamy lava, so it's mostly bubbles.

(20)

- 1 True. But they are still fast, up to 100 mph.
- 2 About half a million are detected, but four-fifths are too small to be felt by humans.
- 3 Unusually low
- 4 "Swim" upward as hard as you can before the snow settles; as the avalanche slows down, clear breathing space, then punch upward through the snow.

**1** True or false – wildfires didn't happen until about 400 million years ago.

**2** What is the biggest volcano ever discovered?

**3** True or false – men are four times more likely to be struck by lightning than women.

**4** How are tornadoes detected?

(21)

**1** True or false – volcanic eruptions can send ash over 17 miles up into the atmosphere.

**2** How fast can avalanches move?

**3** What is a supercell thunderstorm?

**4** What was the worst hurricane disaster?

(22)

**1** How wide are hurricanes?

**2** How high are tsunamis when they hit land?

**3** What is “earthquake weather”?

**4** True or false – volcanoes can explode sideways as well as upwards.

(23)

**1** What was the deadliest earthquake ever?

**2** Do all tropical storms grow into hurricanes?

**3** When will the Yellowstone supervolcano erupt again?

**4** How do you survive a tsunami?

(24)

**1** True.

**2** Up to 80 mph.

**3** An storm organized around a rotating column of air. They produce tornadoes.

**4** Bangladesh, 1970. Storm surges killed over half a million people.

(22)

**1** True! Fires need oxygen, and Earth's atmosphere didn't have enough.

**2** Olympus Mons, on the planet Mars.

**3** True! It's because men are often outdoors holding metal objects like golf clubs or umbrellas.

**4** A special kind of radar (Pulse-Doppler) can detect them just before they form.

**1** China, in 1556. It killed about 830,000 people.

**2** No, only about half do.

**3** No-one knows! But it is being carefully watched, so there'll be plenty of warning.

**4** Find high ground or a high building. Remember more waves could be coming, so stay high until you're told it's safe.

(24)

**1** Often over 400 miles wide.

**2** Most are less than 10 ft (single-decker buses are about 10 ft).

**3** A myth! Weather is not linked to earthquakes.

**4** True. It's called a lateral or directed blast.

(23)