



Year 4, Summer 1
Topic: Earthquakes
Why is the Earth So Angry?

Vocabulary

Earthquake- a sudden violent shaking of the ground, typically causing great destruction, as a result of movements within the earth's crust or volcanic action.

Inner Core-a hot, dense ball of (mostly) iron; centre layer of Earth

Outer Core-the layer surrounding the inner core of the earth; extremely hot liquid layer made of iron and nickel

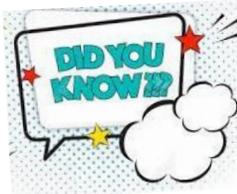
Mantle-lies between the Earth's thin outer layer, the crust and the super-heated outer core; widest layer

Seismic Wave- an elastic wave in the earth produced by an earthquake or other means.

Crust- the top layer of Earth; made up of Tectonic plates which support the land on Earth

Tectonic Plates-pieces of the rocky outer layer of the Earth known as the crust. These plates are constantly moving, and volcanoes and earthquakes are found at plate boundaries.

Tsunami- a long, high sea wave caused by an earthquake or other disturbance.



- The **Richter magnitude scale** is used to measure the size of **earthquakes**
- Many **earthquakes** occur around the **Pacific Ocean**. People who live there, in **countries** such as Japan, are used to **earthquakes** happening and build earthquake-resistant buildings that **sway with the shock waves** rather than fall down.

Worst Earthquakes of 21st Century



Living in an Earthquake Zone

What do I do?

DURING AN EARTHQUAKE YOU SHOULD:

If you are indoors, DROP and take COVER under a sturdy table or other furniture. **HOLD ON** to it and stay put until the shaking stops.

Stay clear of items that can fall and injure you, such as windows, fireplaces and heavy furniture.

Stay inside. You may be injured by breaking glass and falling objects if you run outside.

If you are at the coast, walk to higher ground away from the ocean as soon as it is safe for you to move.

If you are driving, move your car as far out of the normal traffic pattern as possible **and stop** if it is safe. Stay away from structures or objects that could fall on you, such as bridges, overpasses, light posts, power lines or trees. Stay inside your car.

If you are in the mountains, or near unstable slopes, be alert for falling rocks, trees, or landslides that could be loosened by the earthquake.



AFTER AN EARTHQUAKE YOU SHOULD:

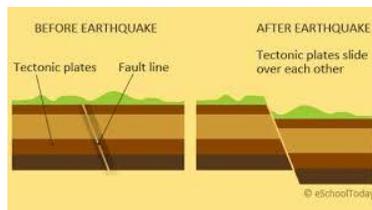
EVACUATE if you are in a TSUNAMI HAZARD ZONE. Walk inland or to higher ground as soon as it is safe to do so. Do not wait for official notification. Stay away from the coast until officials permit you to return.

Check for injuries. Do not move seriously-injured persons unless they are in immediate danger.

Check for hazards such as fires, gas leaks, downed utility lines and fallen objects.

Clean up any potentially harmful material spills.

Expect aftershocks. Aftershocks following large earthquakes can be large and damaging.



Tsunami Wave

What will I know about Earthquakes by the end of this topic?

- Earthquakes involve the powerful movement of rocks in the Earth's crust. The rapid release of energy creates seismic waves that travel through the earth.
- Almost 80% of all the planet's earthquakes occur along the rim of the Pacific Ocean, called the "Ring of Fire"; a region that encircles the Pacific Ocean and is home to 452 volcanoes (over 75 percent of the world's active and dormant volcanoes).
- The largest recorded earthquake in the world was a magnitude 9.5 in Chile on May 22, 1960. More recently, an earthquake that hit the Tohoku region of Japan on March 11, 2011, had a magnitude of 9.0 and killed over 15,000 people.
- A tsunami is a sequence of huge waves of water that usually occur in oceans or large lakes. Tsunamis are caused by disturbances within the surrounding areas; they are usually caused by underwater earthquakes, volcanic eruptions and landslides.
- Earthquakes can destroy communities, injure people and lead to deaths. Often earthquakes are only the beginning of the damage that can occur.
- The effects of an earthquake can be any or all of the following: buildings damaged and made unstable, burst water pipes that could result in water pollution, contamination and flooding; burst gas pipes potentially leading to explosions or fires; businesses, industries, homes and public buildings destroyed; transport links and emergency services disrupted.
- Other risks involve consequences to the landscape, environment and wildlife along with the risk of landslides and tsunamis.

Geographical Approaches we will be visiting this term:

- Places
- Patterns
- Communicate

