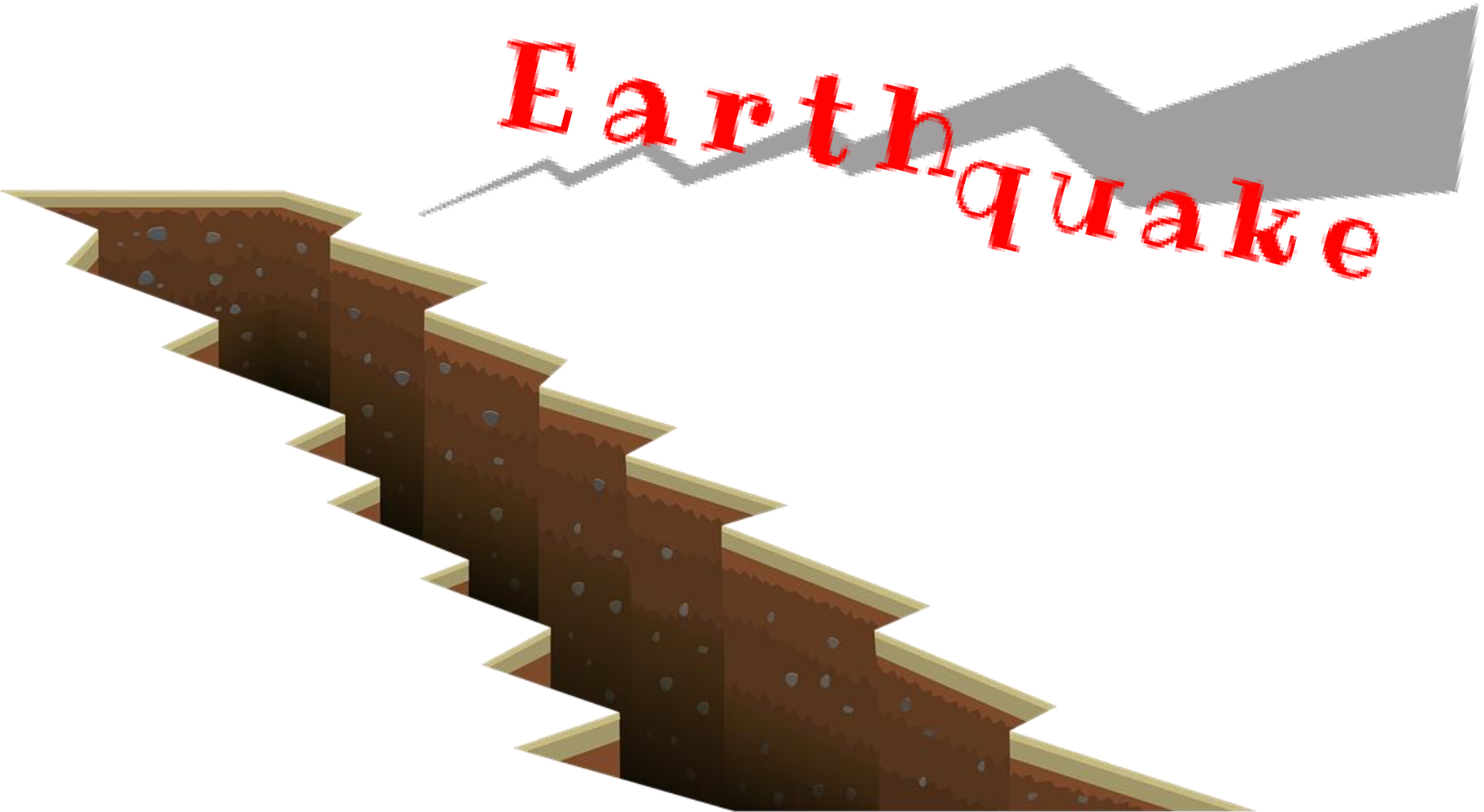


Earthquake



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ACKNOWLEDGEMENTS

<https://www.pinterest.es/pin/214695107213167051/> torn piece of paper

<https://pixabay.com/>

<https://www.freeimages.com/>

logos created at <https://logomakr.com/>

<https://www.sms-tsunami-warning.com/pages/richter-scale#X-21TthKjIU> Richter scale

<https://www.pinterest.es/pin/822469950680727902/> magnitude scale

<https://www.pinterest.es/pin/122441683599990755/> intensity scale

<https://en.wikipedia.org/wiki/Epicenter>

<https://www.sciencelearn.org.nz/images/352-seismic-waves> secondary & primary waves

<https://www.livescience.com/37052-types-of-faults.html> San Andreas fault

<https://mammothmemory.net/geography/geography-vocabulary/tectonic-hazards/tectonic-plates.html> tectonic plates

<https://www.gfz-potsdam.de/en/gshap/> global seismic Hazard map

<https://i.pinimg.com/originals/74/dc/1f/74dc1f671b136177a289e1a92aedb9e8.png> stress

https://commons.wikimedia.org/wiki/File:Agiospavlos_DM_2004_IMG003_Felsenformation_nah_e.JPG#globalusage rock fold

<https://www.sciencelearn.org.nz/images/348-earth-folds> folds

<https://earthquake.usgs.gov/learn/glossary/?term=aftershocks> aftershock

https://en.wikipedia.org/wiki/File:NOAA_Tsunami_Animation-2016.webm tsunami 3D animation

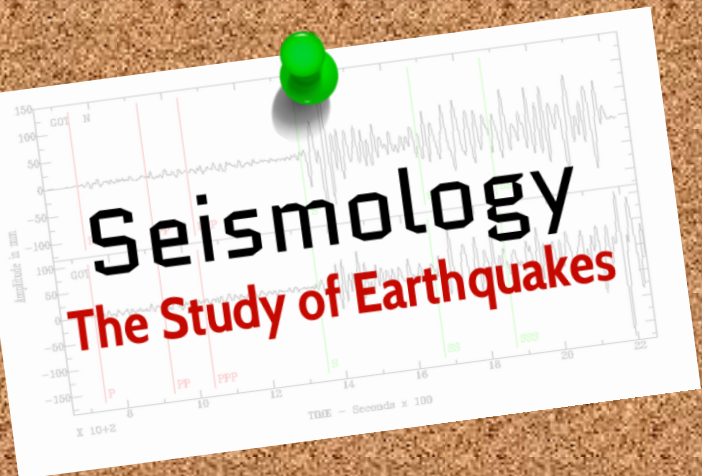


Basic concepts

EARTHQUAKE

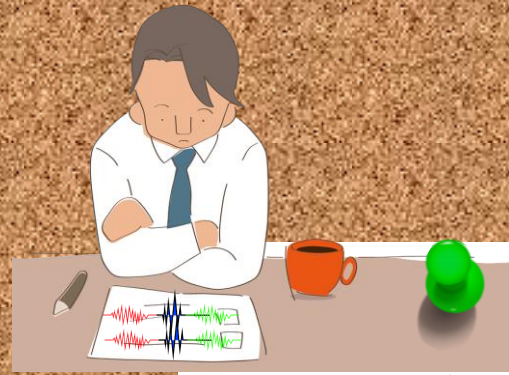
The shaking and trembling that results from the movement of rock beneath Earth's surface.





Seismology

The Study of Earthquakes



SEISMOLOGIST

Scientist who studies earthquakes

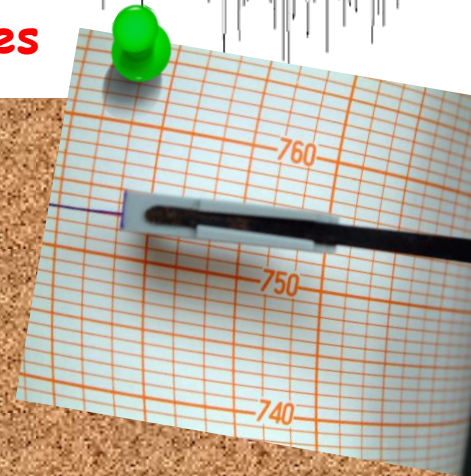
SEISMOGRAPH

Instrument used to measure and record the vibrations of seismic waves

A stylized seismogram with three distinct wave patterns: a red wave on the left, a blue wave in the middle, and a green wave on the right. A green pushpin is pinned to the top left of the paper.

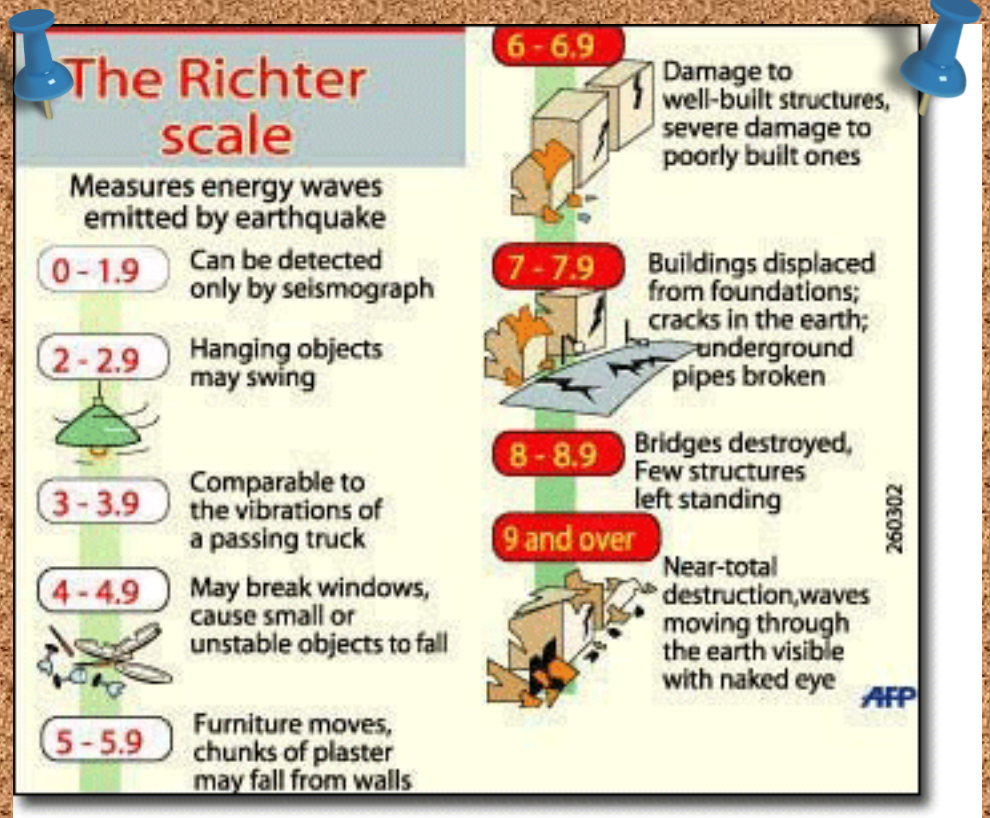
SEISMOGRAM

A tracing of earthquake motion that is created by a seismograph



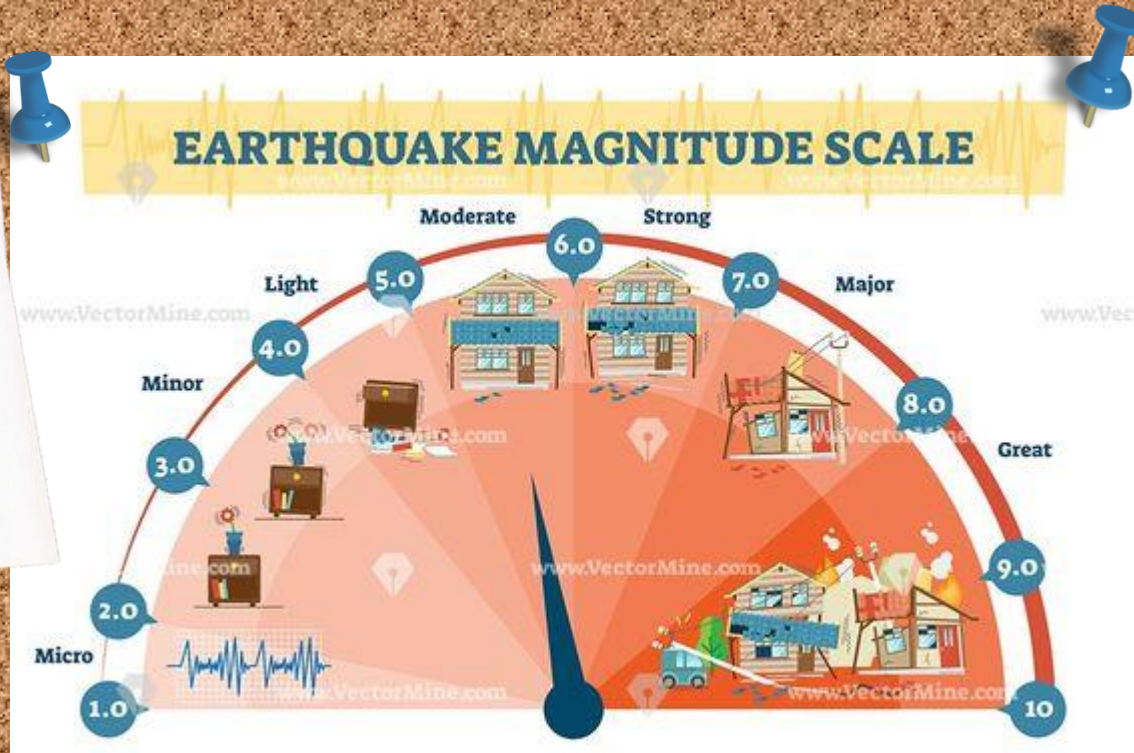
RICHTER SCALE

One of three rating scales used to measure earthquakes. It rates earthquakes according to the size of seismic waves measured by a seismograph.



MAGNITUDE

Measure of an earthquake's strength based on seismic waves and movement along faults.



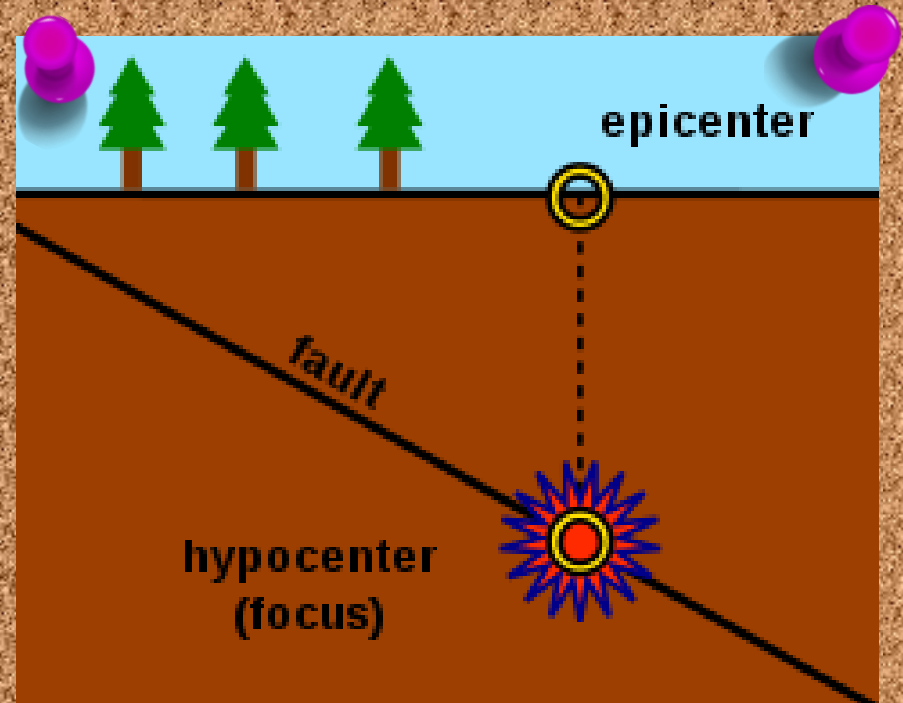
INTENSITY

A measure of the degree to which an earthquake is felt by the people and the amount of damage caused by the earthquake.

	Intensity 0	Imperceptible to people.
	Intensity 1	Some people in the building feel it.
	Intensity 2	Many people in the building feel it. Some people awoken, if the quake strikes at night.
	Intensity 3	Felt by most people in the building. Some people are frightened.
	Intensity 4	Many people are frightened. Some people try to escape from danger. Most people awoken, if the quake strikes at night.
	Intensity 5 lower	Most people try to escape from danger. Some people find it difficult to move.
	Intensity 5 upper	Many people are very frightened and find it difficult to move.
	Intensity 6 lower	Difficult to keep standing.
	Intensity 6 upper	Impossible to keep standing and to move without crawling.
	Intensity 7	Thrown around by the shaking. Impossible to move at will.

The point on Earth's surface directly above an earthquake's starting point, or focus.

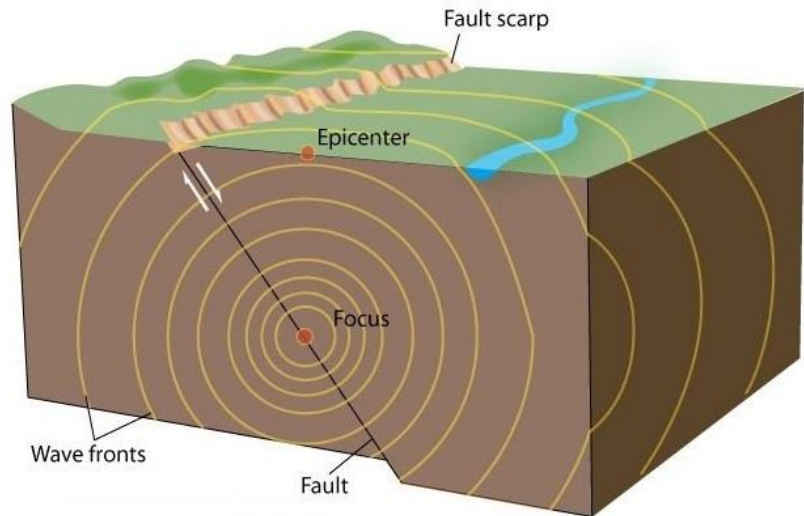
EPICENTER



SEISMIC WAVE

Vibration that moves out from the force in all directions carrying the energy of an earthquake away from the focus, through Earth's interior and across the surface.

Seismic waves radiate from the focus of an earthquake



S-Wave

a seismic wave that causes particles of rock to move in a side-to-side direction.

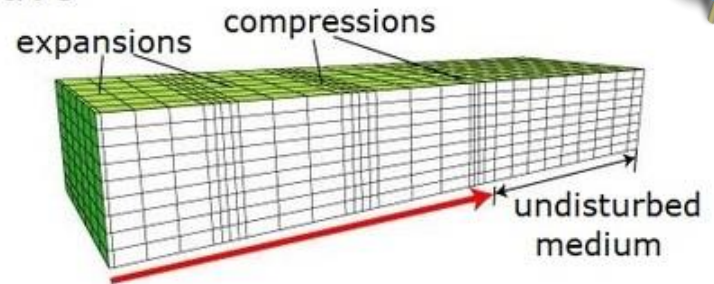
P-Wave

A seismic wave that causes particles of rock to move in a back-and-forth direction

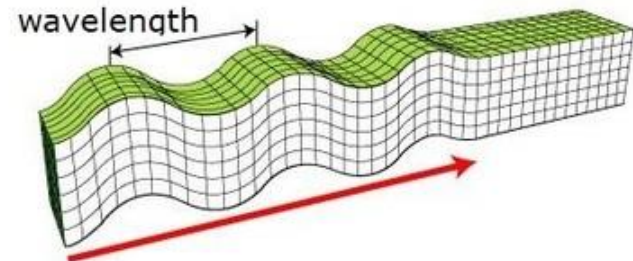
Shear wave/Secondary wave
Pressure wave/ Primary wave

iao, University of Waikato, www.sciencelearn.org.nz

P wave

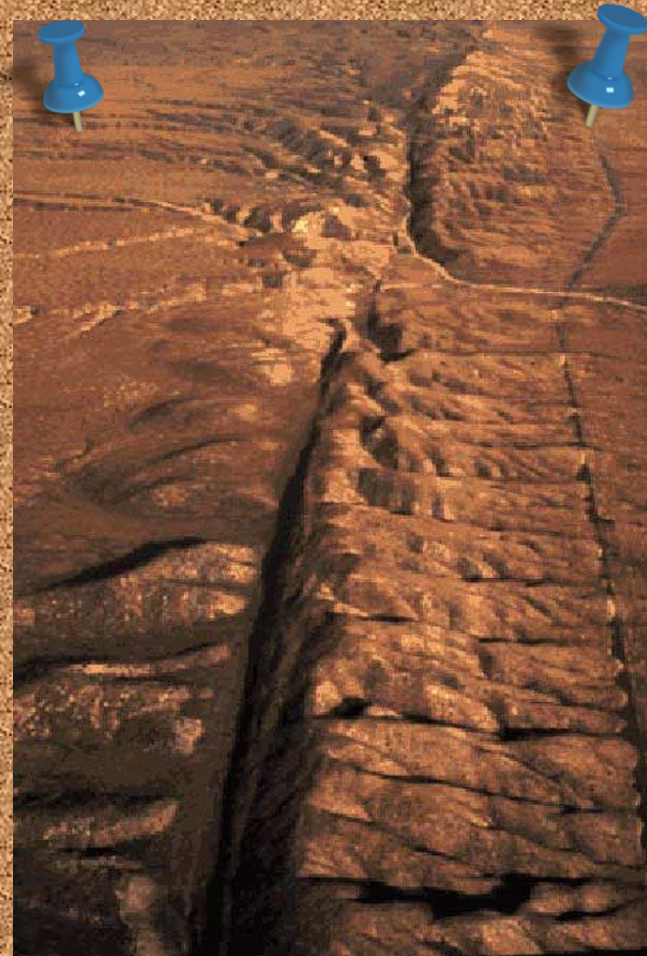


S Wave



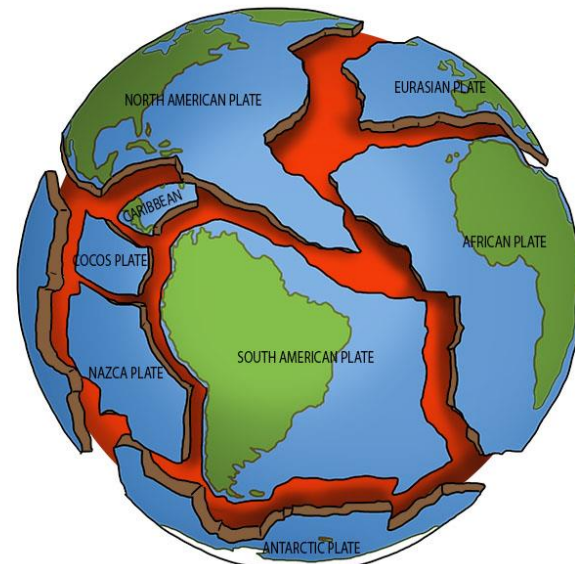
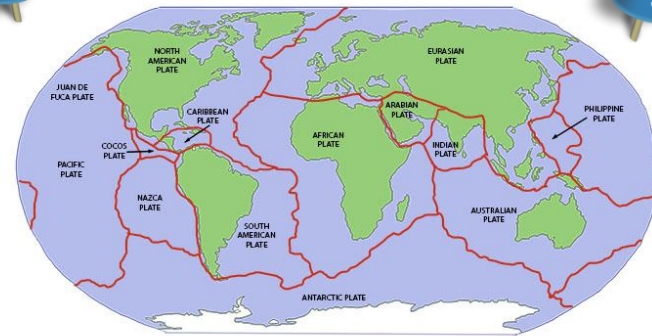
A break in the Earth's crust along which blocks of the crust slide relative to one another.

FAULT



Giant pieces of the Earth's thin, outermost layer that move around on top of a layer of plastic rock.

TECTONIC PLATES

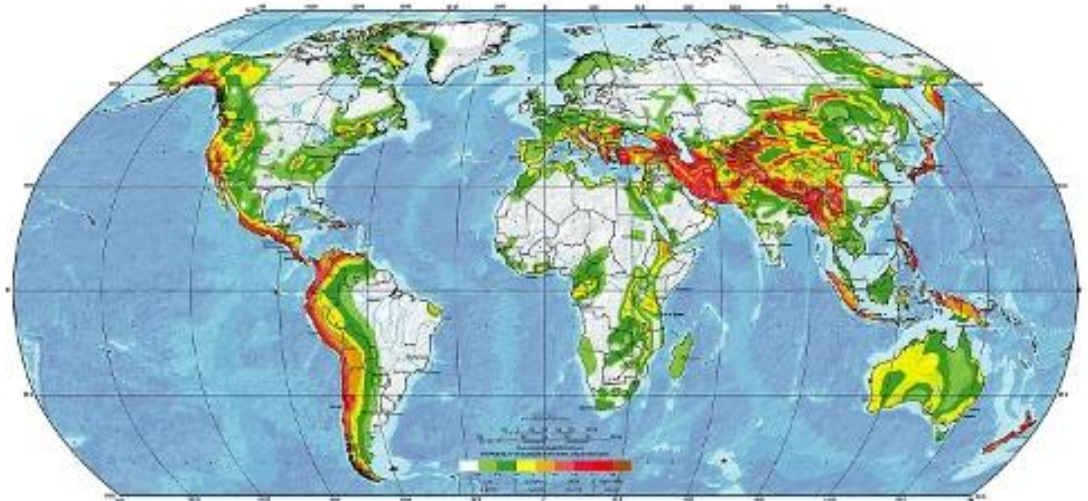


SEISMIC HAZARD

A measurement of how likely an area is to have damaging earthquakes in the future.

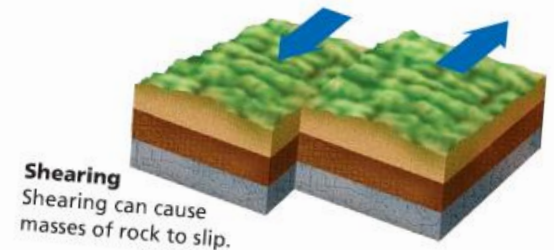
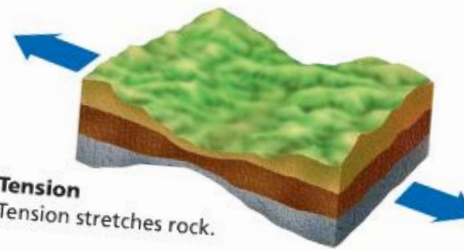
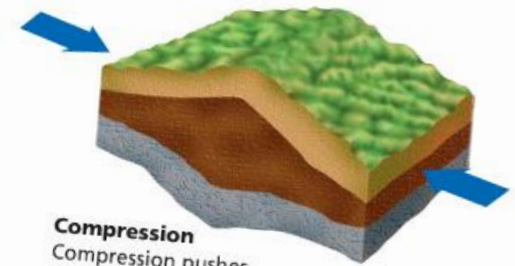
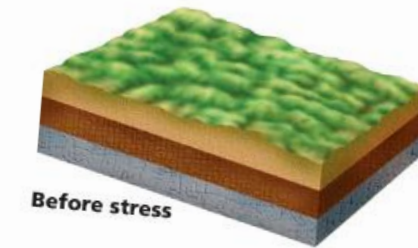
GLOBAL SEISMIC HAZARD MAP

Produced by the Global Seismic Hazard Assessment Program (GSHAP),
a major initiative of the United Nations World Decade of Natural Disaster Prevention, conducted by the International Geophysics Program.
Global map compiled by D. Gochi, J. Gochi, K. Gochi, and P. Gochi
1995



STRESS

A force that acts on rocks to change its shape or volume.



FOLD

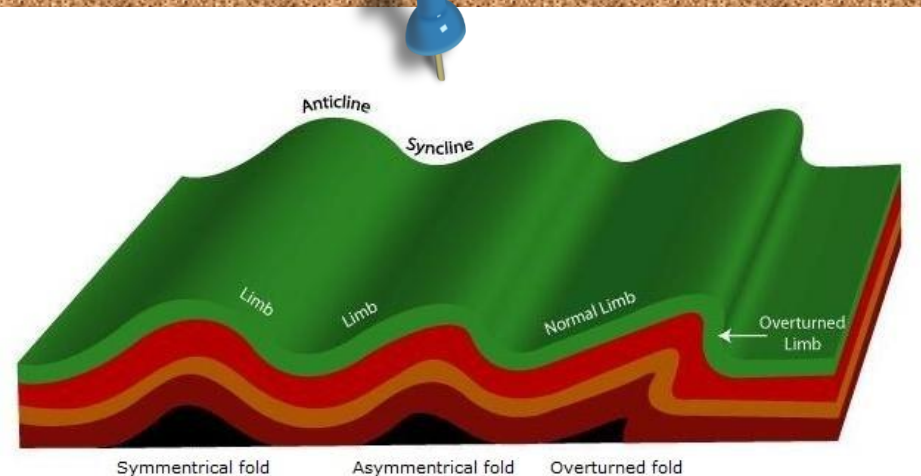
A bend in rock that forms when compression shortens and thickens part of the crust.

anticline

A fold that bends upward in an arch.

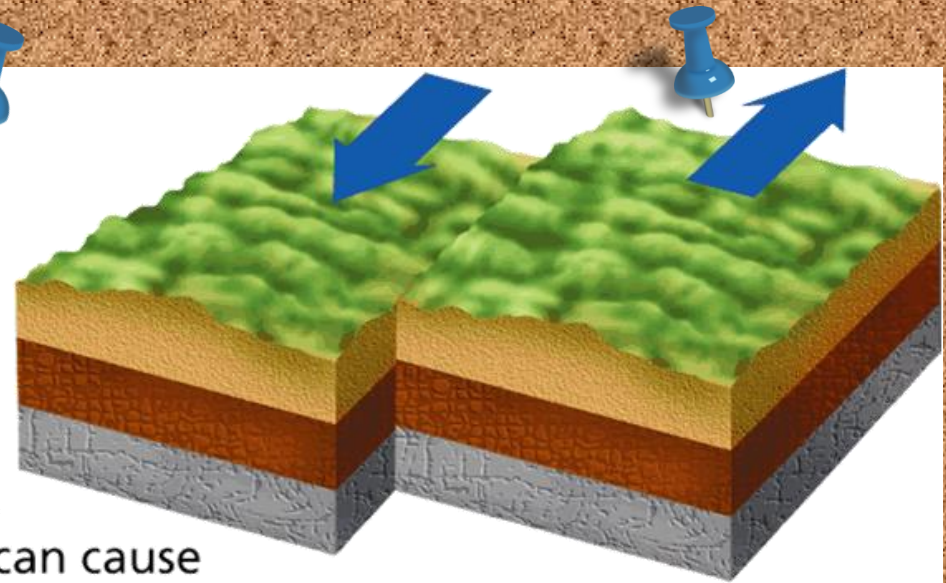
syncline

A fold that bends downward in the middle to form a bowl.



SHEARING

A kind of stress that pushes a mass of rock in two opposite directions.

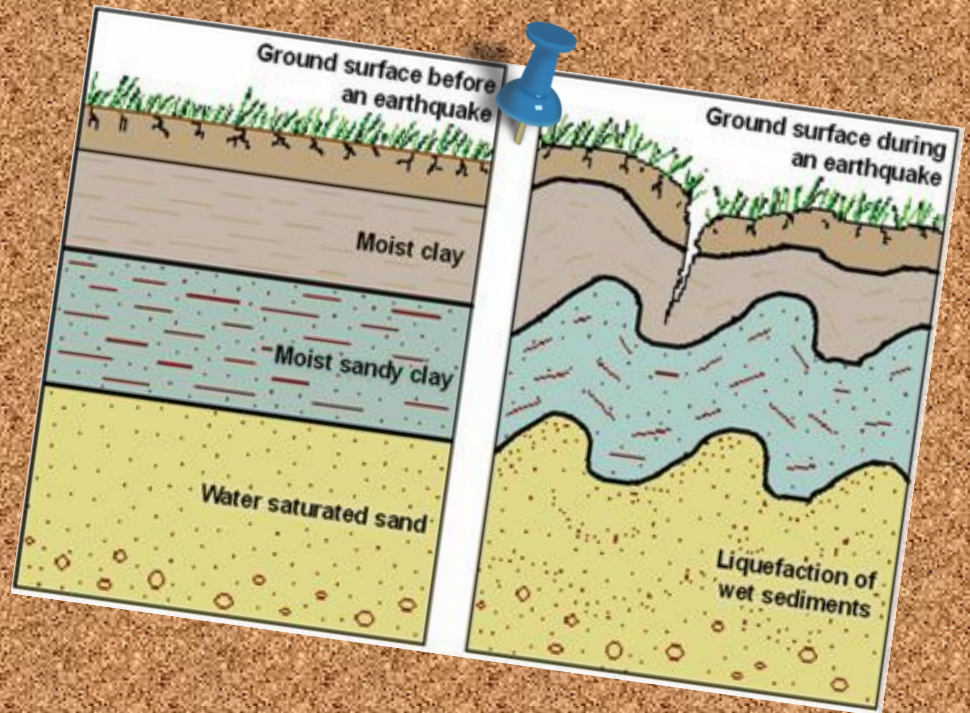


Shearing

Shearing can cause masses of rock to slip.

LIQUEFACTION

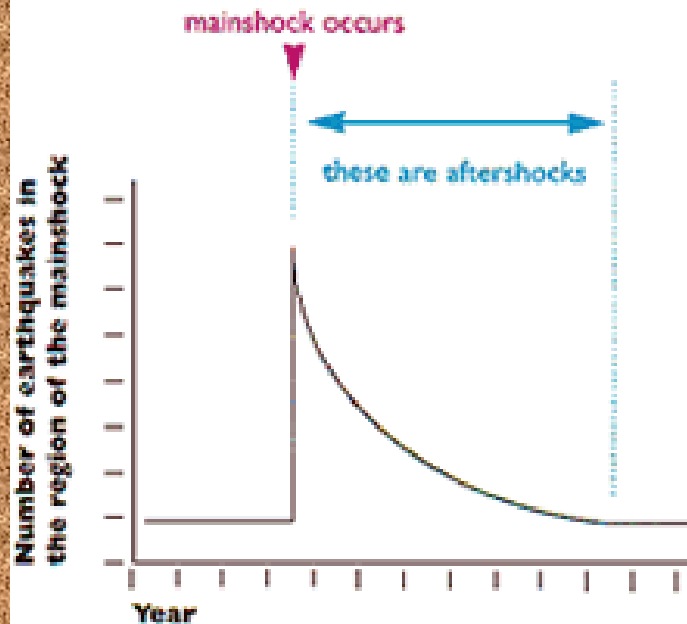
Soft, loose soil turns into liquid mud due to violent shaking of earthquake.



A smaller earthquake that occurs after a larger earthquake in the same area.

AFTERSHOCK

How do we know it's an aftershock?



TSUNAMI

A large wave that originates from the earthquake's epicenter and rushes across the ocean.

Click on this link to watch a 3D tsunami animation

https://en.wikipedia.org/wiki/File:NOAA_Tsunami_Animation-2016.webm



**Extra information on
earthquakes on this
webpage**

**US Geological Survey.
Science for a
Changing World**

**For *Earthquake
Glossary* click on the
link**

**[https://earthquake.usgs.gov/
/learn/glossary/?term=fault](https://earthquake.usgs.gov/learn/glossary/?term=fault)**