What is a fault?

A fracture in the earth where movement has occurred.

What is the difference between an epicenter and a focus?

The focus of an earthquake is found directly on the fault, this is located inside of the earth's Crust.

The epicenter of an earthquake is located directly above the focus on the Earth’s surface.

What causes vibrations and the release of heat in earthquakes?

Elastic rebound

During an earthquake, how does the ground surface move?

The Earth’s surface during an earthquake can move in any direction.

What is an aftershock and what is the foreshock?

Vibrations and tremors that occur before an earthquake-Foreshocks

Vibrations or tremors that occur after an earthquake-Aftershocks

What is the difference between a P-wave and an S wave? What is an L wave (surface wave)?

P-waves - The first waves to arrive, can travel through solids and liquids, called primary waves.

S-waves - The second waves to arrive, can only travel through solids, called secondary waves.

L-waves - The last waves to arrive, the most instructive all the ways, called surface waves.

What is the minimum number of seismic stations that is needed to determine the location of an earthquakes epicenter? Why?

3, using the distance between a seismic station and the earthquake epicenter is determined from the arrival times of the P and S wave.

An earthquakes magnitude is a measurement of what?

It's power, the size of seismic waves it produces.

The scale most widely used by scientists for measuring earthquakes.

Moment magnitude scale. It measures the moment magnitude increases.

The Richter scale determines the strength and distraction that it can occur.

What instrument is used to record seismic waves?

Seismograph

How much of an increase in wave amplitude do we see in earthquakes? Explain using Richter scale.

Each level increases by 10. 5.4 to 6.4 = 10x 5.4 to 7.4 = 100x 5.4 to 8.4 = 1000x

What affects the amount of destruction caused by earthquake vibrations?

The design of structures.

The intensity and duration of the vibrations.

The nature of the material on which structures are built.

What is a succession of ocean waves set in motion by a submarine earthquake?

Tsunami

In areas where on consolidated settlements are saturated with water, earthquakes can turn stable soil into a fluid through a process called what?

Liquefication.

How can earthquakes cause damage in fires?

Seismic waves can break gas lines, water lines, and electrical lines.

What are some ways to stay safe during an earthquake?

Stay low to the ground.

Cover your head and neck with your arms.

Indoors, crouch against and inner wall.

What is a transform fault boundary?

It is when two plates grind past each other without destroying or producing lithosphere.

What is a convergent boundary?

It is when two plates move together, causing one plate to descend into the mantle beneath the other plate.

What is a Divergent boundary?

It is when two plates move away from each other, causing new rock to be formed.

A divergent boundary at two continental plates can result in a?

Rift valley. The red sea is a divergent boundary that is creating a rift valley.

What forms when on oceanic plate is forced beneath another plate?

A subduction zone

Deep ocean trenches are associated with?

Subduction zones

What is the difference between volcanic island arcs and continental volcanic arcs?

Volcanic island arcs are associated with convergent oceanic-oceanic boundary

Continental volcanic arcs are associated with convergent oceanic-continental boundary

Where are most transform faults found?

The joining of two segments of a mid-ocean ridge

The thermal convection that drives plate motion is caused by?

The unequal distribution of heat. (Convection currents)

How can we determine if I volcanoes eruption will be Explosive or if Effusive?

The temperature of the magma. The composition of the magma (silica). By looking at the amount of dissolved gases in the magma.

What are the three different types of lava flows and what makes them different?

Aa - jagged and sharp

Pahoehoe - wrinkled and ropey

Pillow lava - rounded mounds, usually occurs under water.

As the temperature of lava increases?

Its viscosity decreases.

What is a volcanic bomb?

A piece of semi molten rock ejected as glowing lava.

What are pyroclastic materials?

The particles produced in volcanic eruptions.

What is the most abundant gas associated with volcanic activity?

Water vapor.

What is the difference between a Shield volcano, Cinder cone, and Composite volcano?

The Shield volcano is the largest volcano, usually occurs of the ocean floor, it produces islands, and has an effusive eruption.

The Cinder-cone volcano is fairly small (300 m), can be found in groups, is mainly made of pyroclastic ash with lava, and can erupt for weeks.

A Composite volcano is the largest volcano on land, usually with beautiful surroundings, are made of alternating layers of Ash and lava, have violent eruptions.

What are some of the parts of a volcano?

Vent (chimney), conduit (pipe), magma chamber, crater, cone

What is a caldera?

A large depression in a volcano; usually occurs once a volcano has become dormant.

How are intrusive igneous bodies classified?

By their size, shape, and their relationship to the surrounding rock layer.

Sill - A horizontal intrusion in the rock layer

Dike - A vertical intrusion when magma cross cuts the rock layer.

What is the largest intrusive igneous body called?

Batholith

An increase in the pressure exerted on the rock causing its melting temperature to what?

Increase.

What are the volcanic landforms at divergent ocean plate boundaries are?

Ocean ridges.

Where are most active volcanoes on earth located?

The ring of fire (shark bait who ha ha)

The igneous activity in Yellowstone National Park is associated with what tectonic setting?

Intraplate volcanism (hot spot). Will also except Convergent oceanic - oceanic plate boundary.

The Hawaiian Islands are associated with what type of volcanism?

Intraplate volcanism (hot spots)

This is when hot mantle plumes (magma) rises toward the surface within a plate. This is not found at a plate boundary.