

WHAT'S GOING ON?



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?



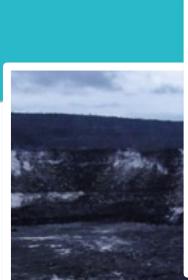
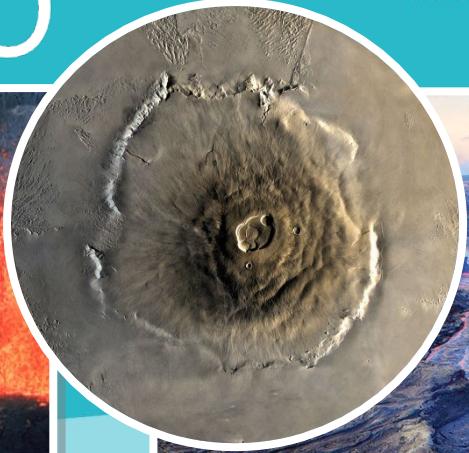
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VOLCANOES



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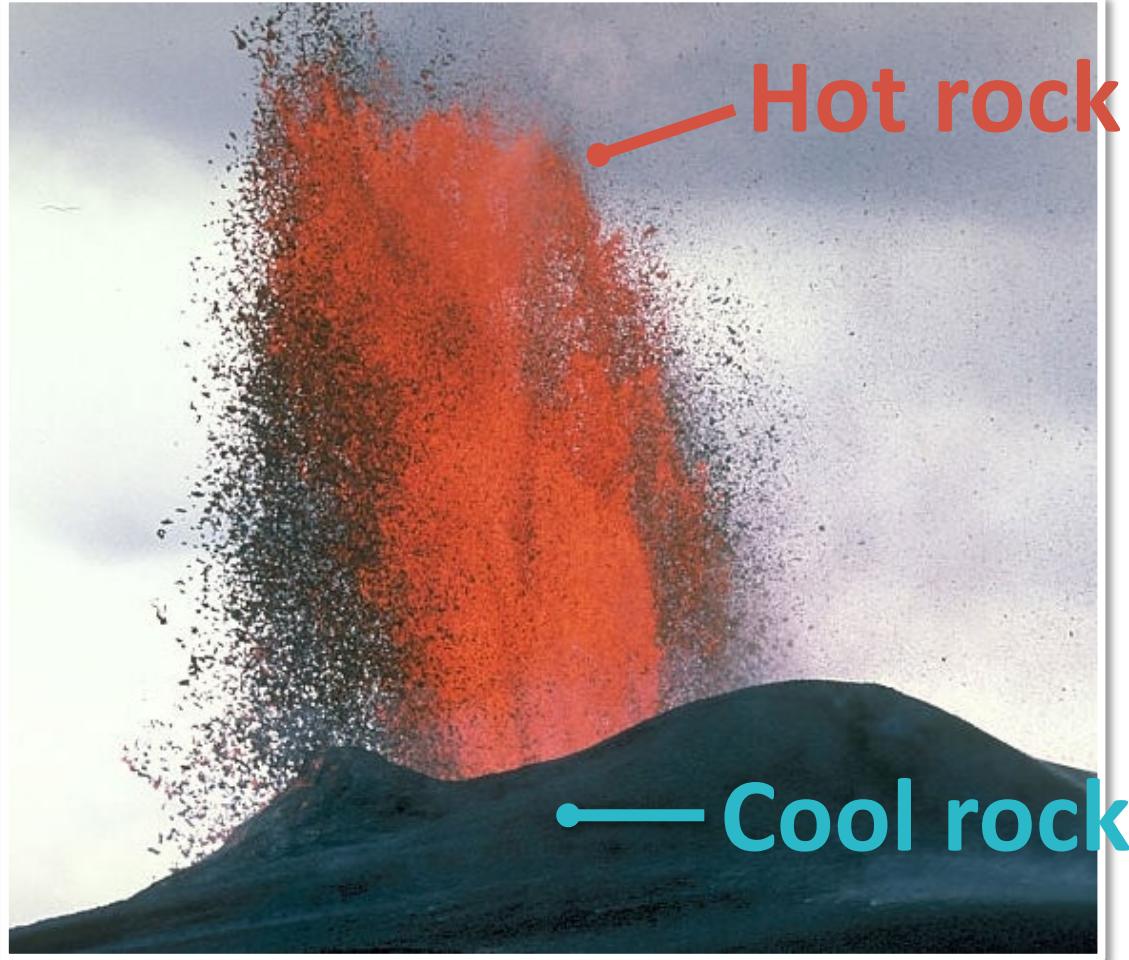


WHAT IS A VOLCANO?



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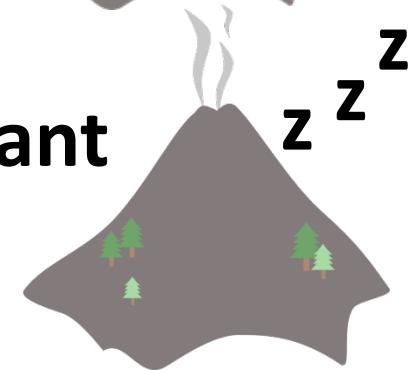
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Active



Dormant



Extinct

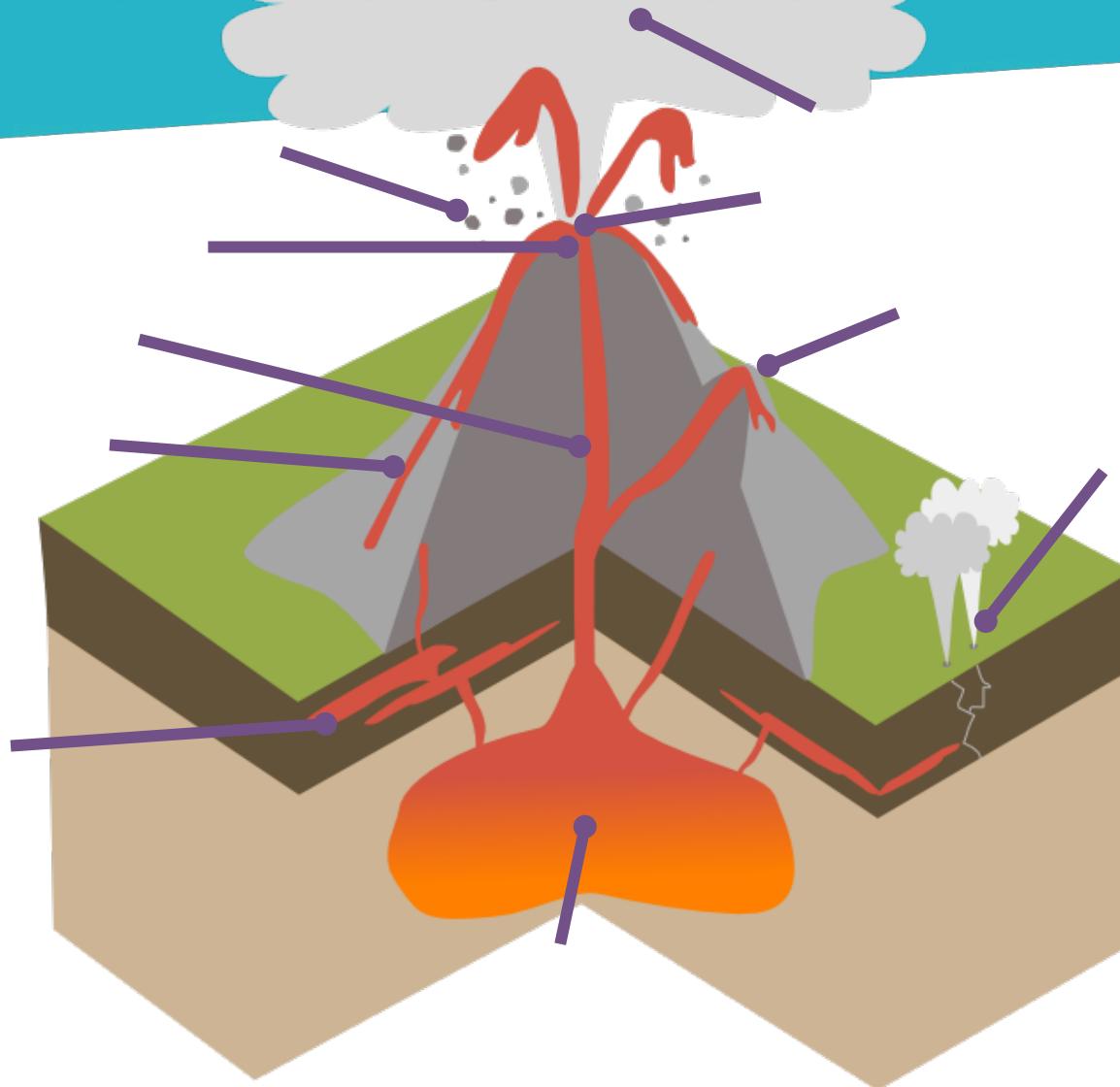


VOLCANO STRUCTURE



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Ash, steam & gas

Lava

Magma chamber

Crater

Geysers

Secondary vent

Sills

Volcanic bombs

Conduit

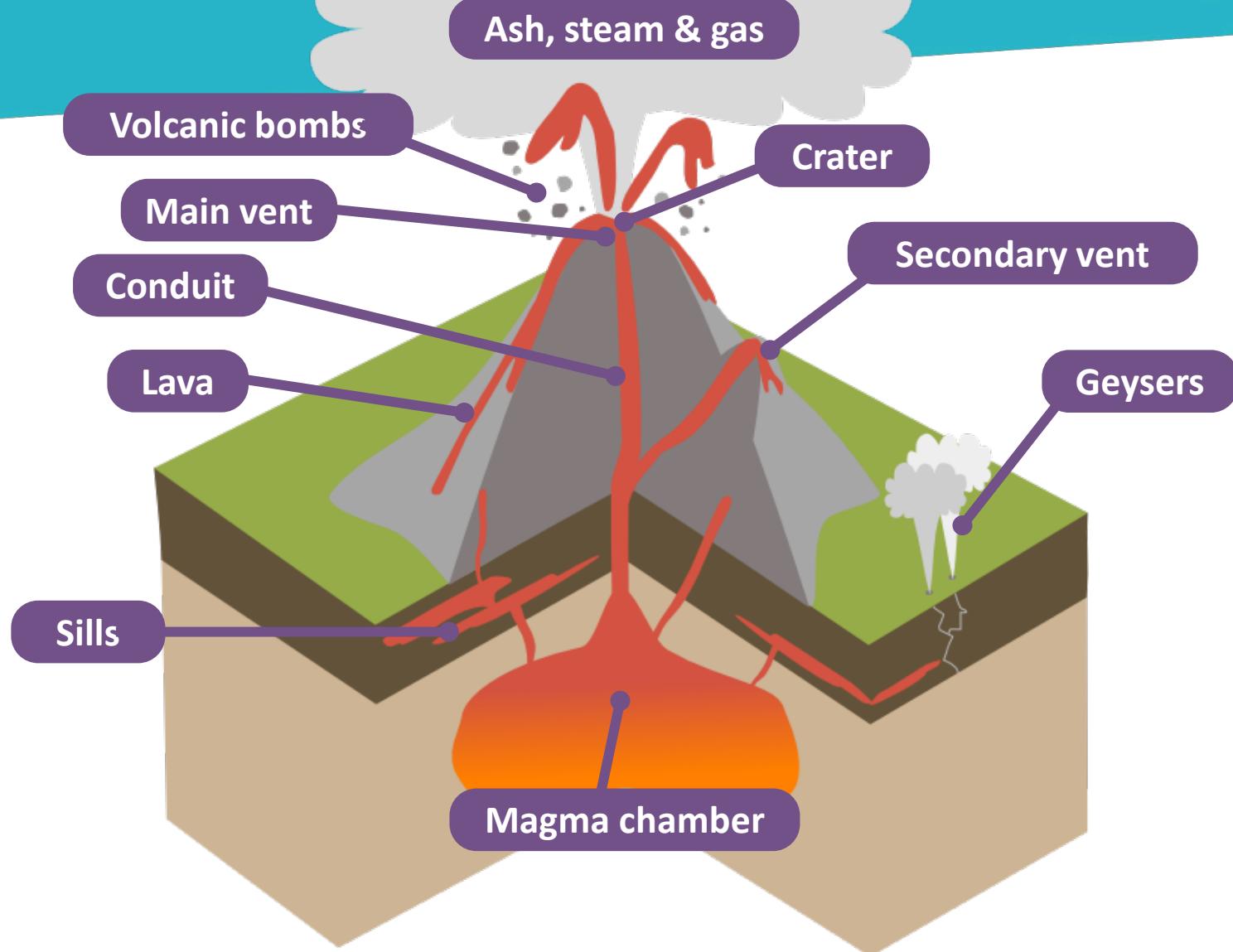
Main vent

VOLCANO STRUCTURE



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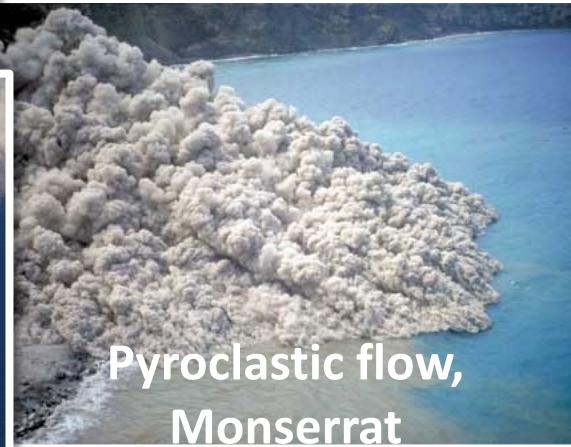


DIFFERENT TYPES OF ERUPTION



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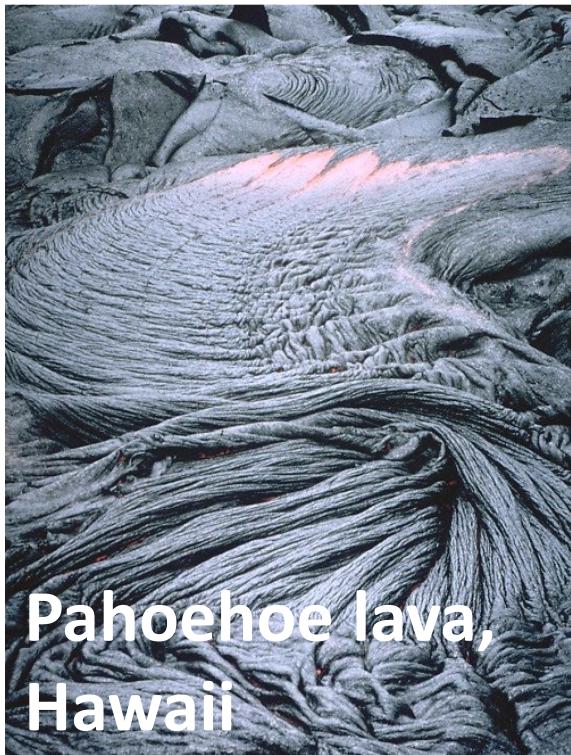


TYPES OF LAVA

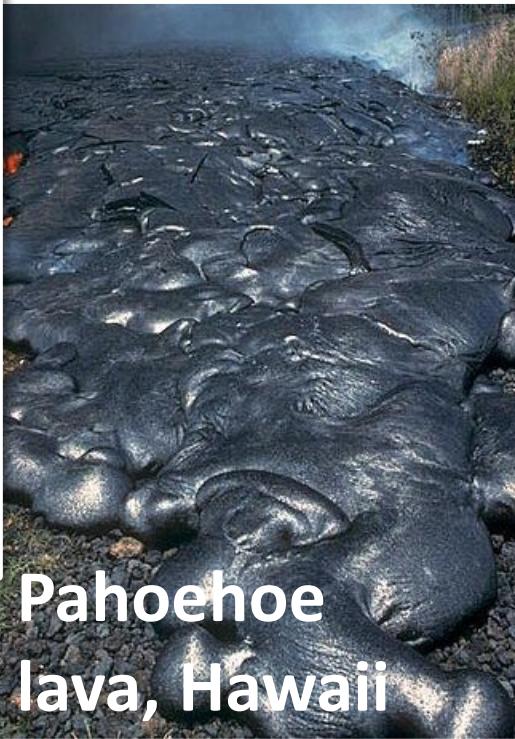


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Pahoehoe lava,
Hawai'i



Pahoehoe
lava, Hawaii



'A'a lava, Guatemala

Photo: Librex/CC-By-2.0



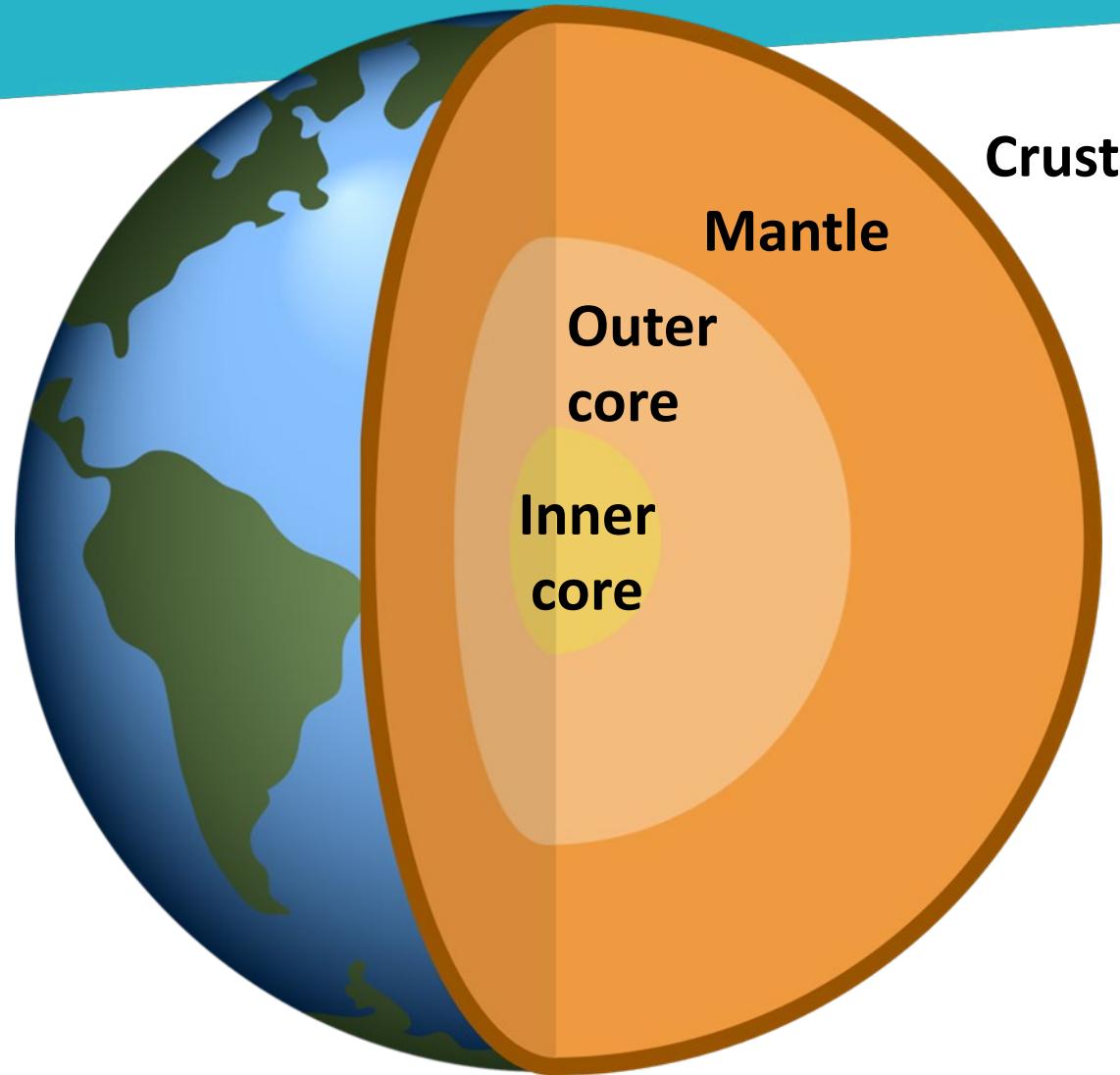
'A'a lava, Hawaii

STRUCTURE OF THE EARTH



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WHERE DO VOLCANOES FORM?



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Eurasian
plate

Caribbean plate

Nazca plate

Antarctic plate

Pacific plate

North American
plate

South American
plate

Indian plate

African plate

Australian
plate

Arabian
plate

WHERE DO VOLCANOES FORM?



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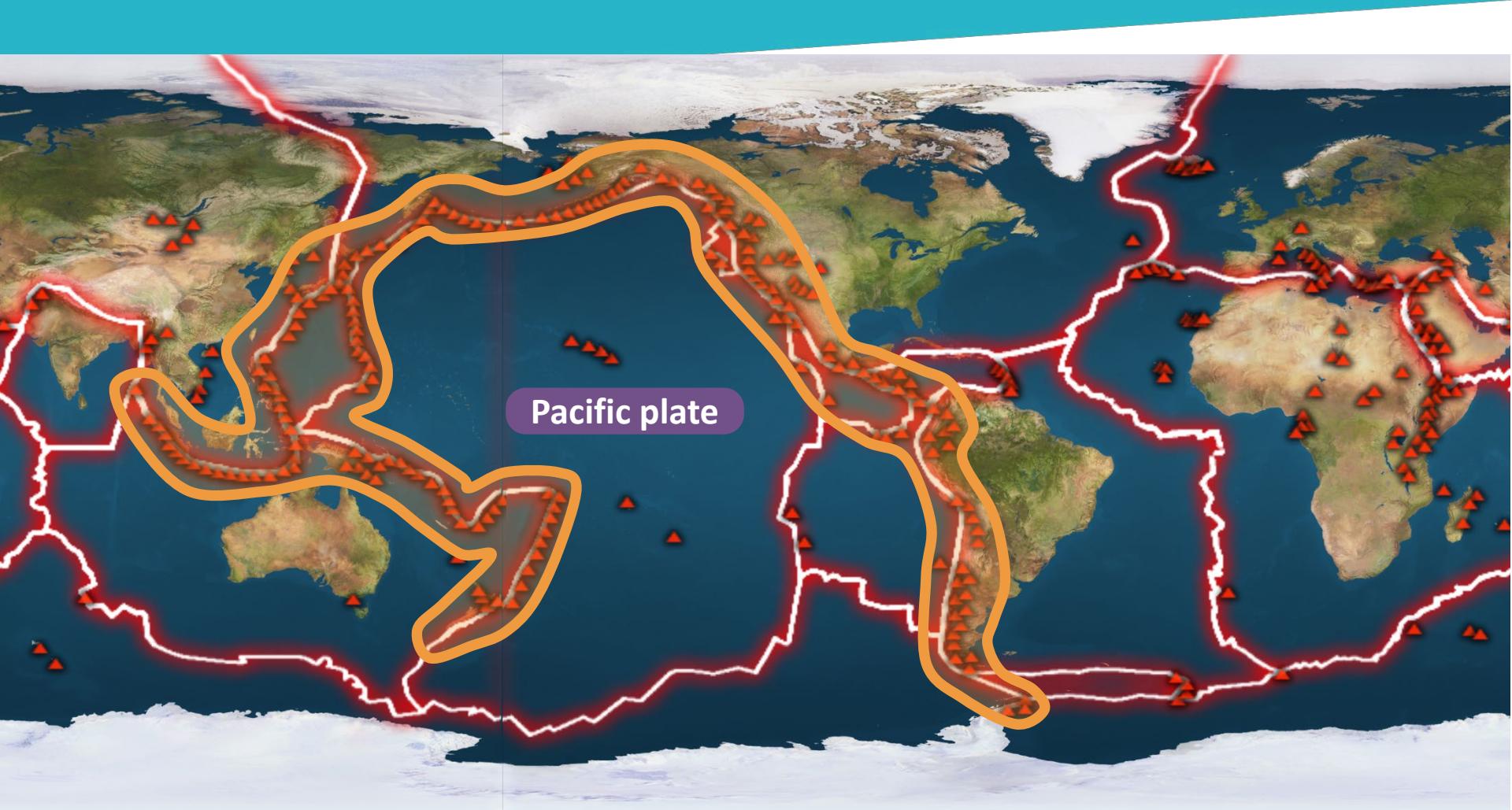


PACIFIC RING OF FIRE



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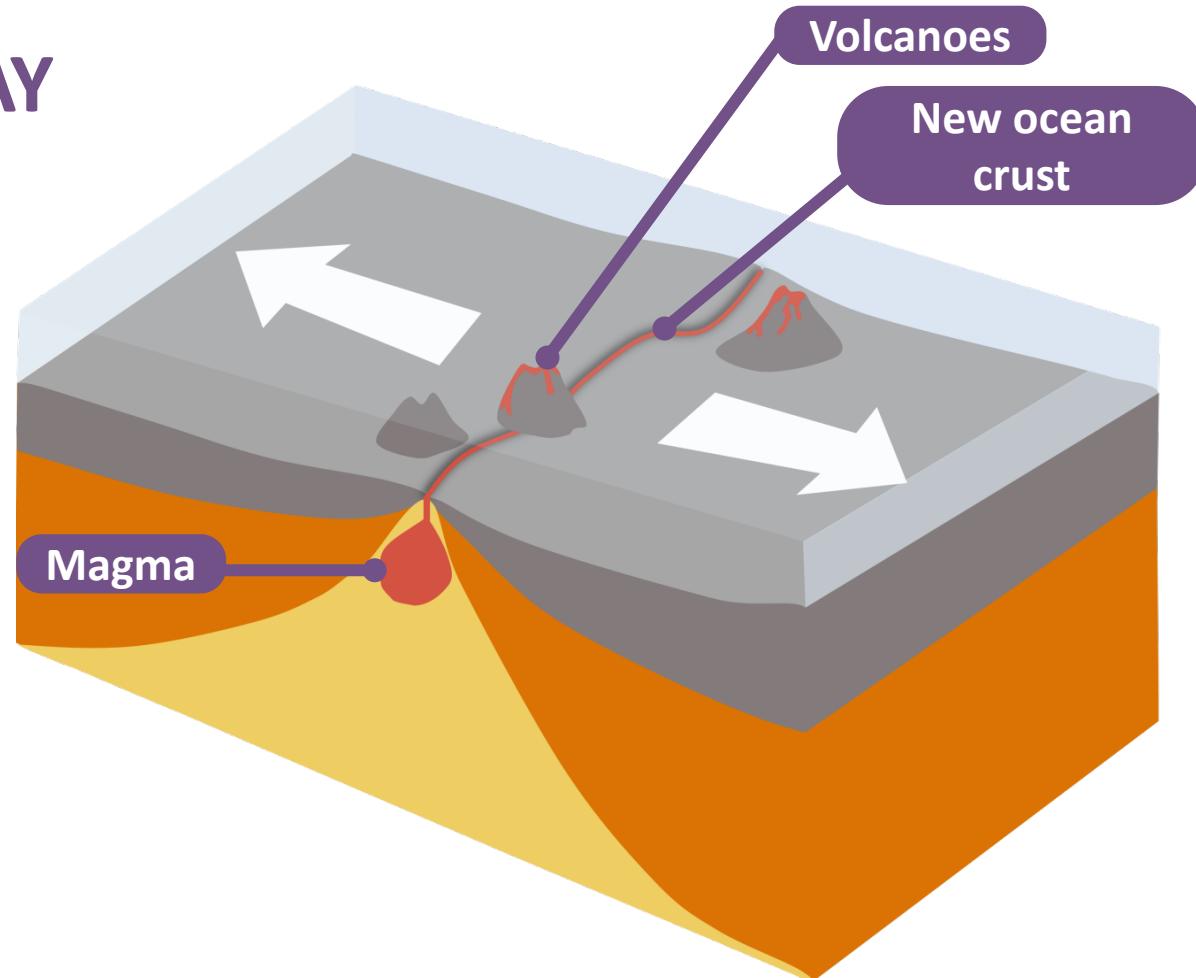
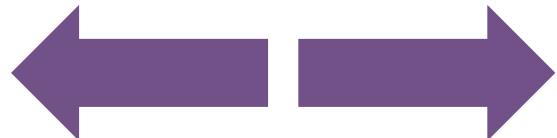
HOW DO VOLCANOES FORM? CONSTRUCTIVE BOUNDARY



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Plates moving AWAY
from each other



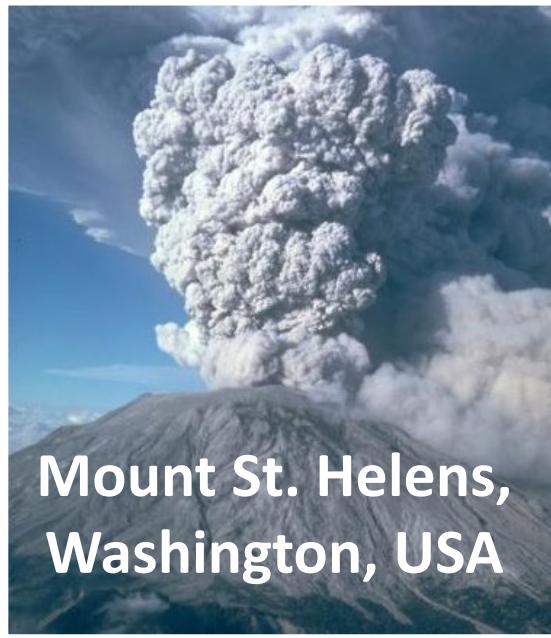
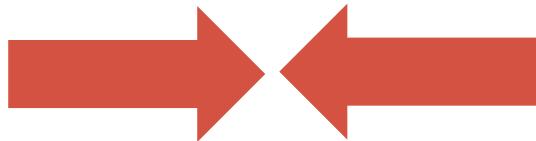
HOW DO VOLCANOES FORM? DESTRUCTIVE BOUNDARY



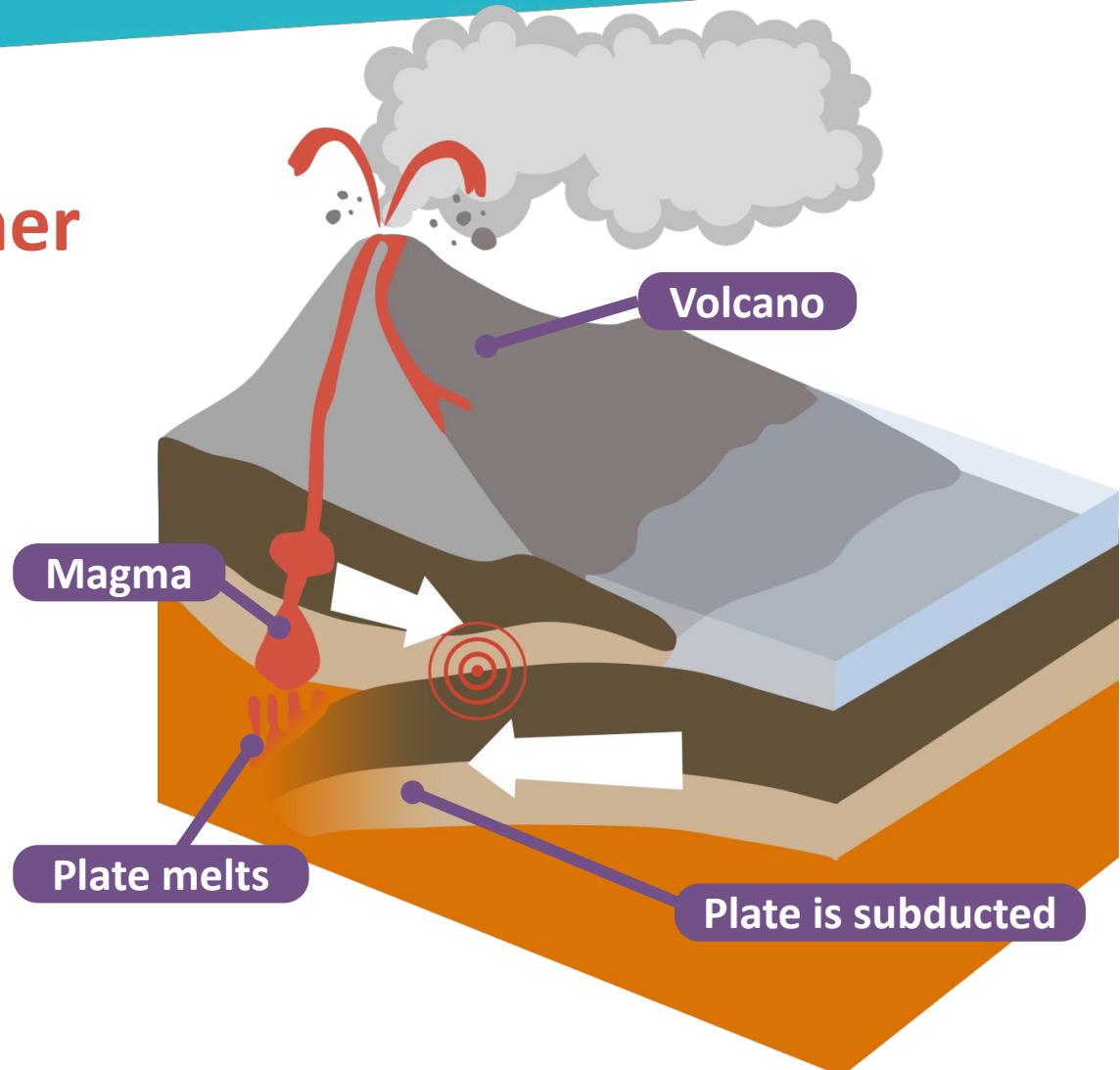
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Plates moving
TOWARDS each other



Mount St. Helens,
Washington, USA



HOW DO VOLCANOES FORM? HOT SPOTS



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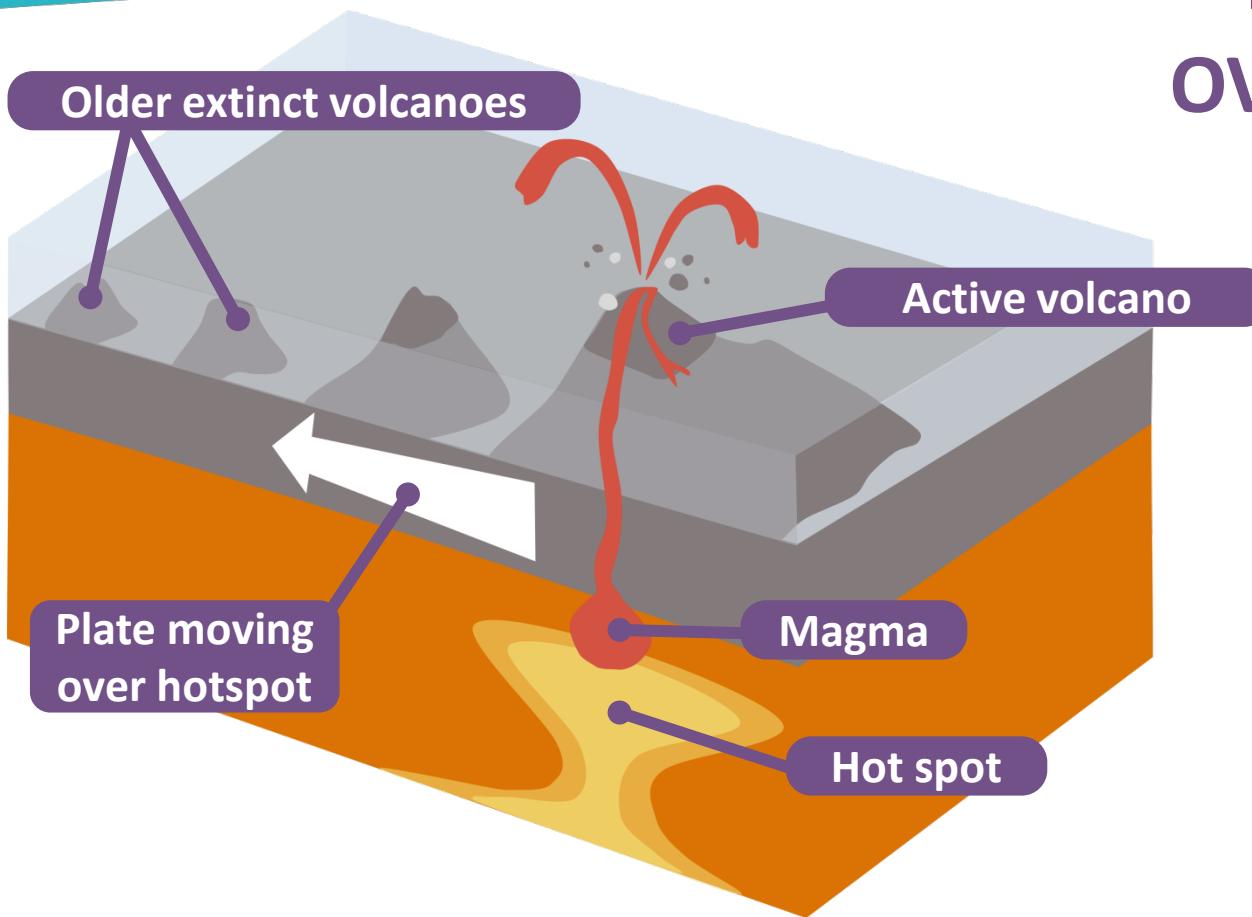
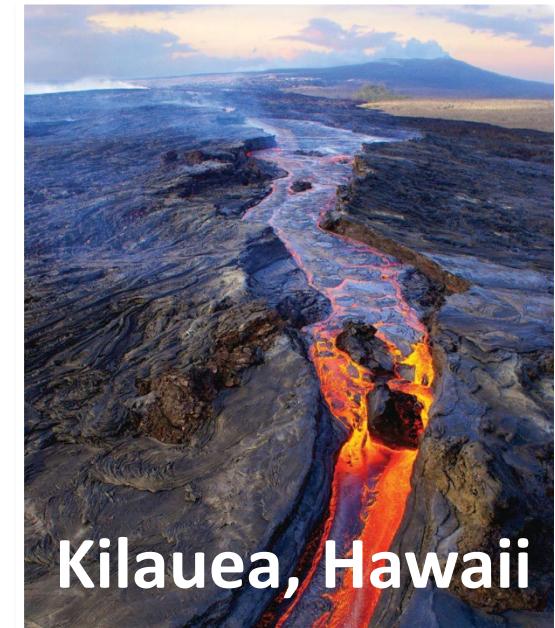


Plate moving
OVER a HOTSPOT

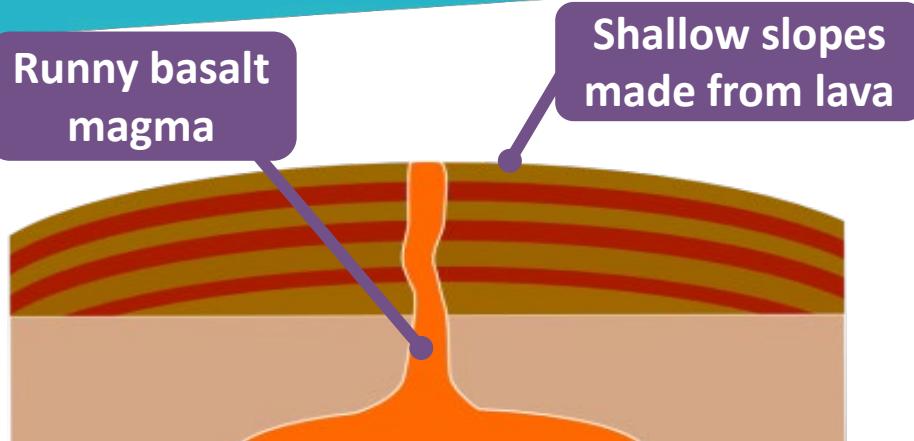


TYPES OF VOLCANOES: SHIELD VOLCANOES



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Kilauea lava lake,
Hawaii



Wolf Volcano, Galapagos
Islands



Erta Ale Volcano, Ethiopia

Photo: filippo_jean/CC-BY-2.0



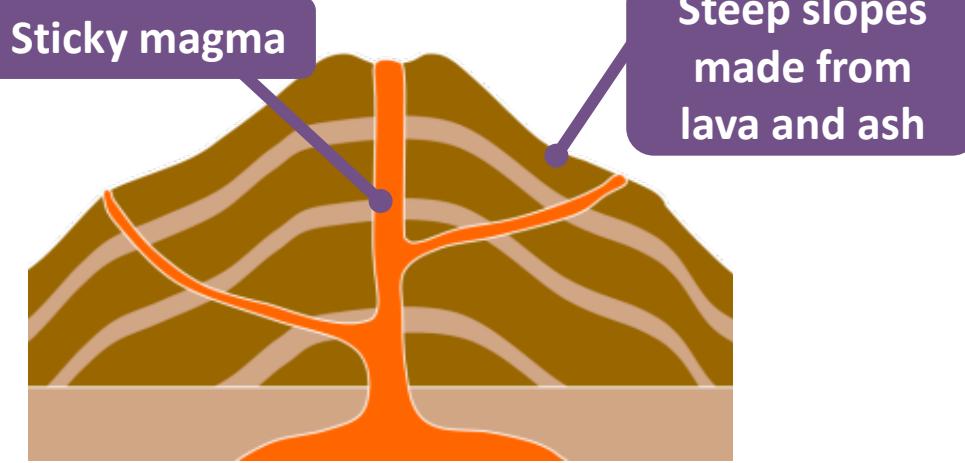
Olympus Mons on Mars

TYPES OF VOLCANOES: COMPOSITE VOLCANOES



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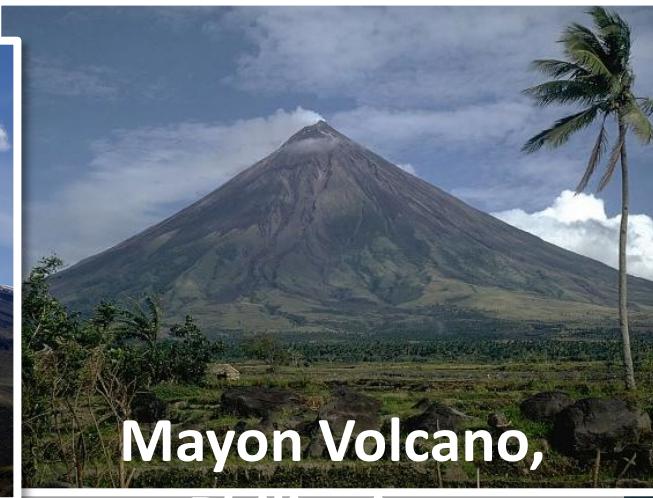
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Mount Fuji, Japan



Cotopaxi, Ecuador



Mayon Volcano,
Philippines



Mount St. Helens,
Washington, USA

NATURAL HAZARDS



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NATURAL HAZARD:
a natural event that
might harm people
or the environment



Volcanic gas sampling,
Mount Baker,
Washington



Road destroyed by
lava flow, Hawaii photo



Pyroclastic flows
Mount Mayon,
Philippines



Volcanic ash,
Papua New Guinea



House damaged by a
lahar, Mount St Helens

WHY DO PEOPLE LIVE NEAR VOLCANOES?



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VOLCANO MONITORING



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**Tiltmeter on Mauna
Loa, Hawaii**



**GPS receiver at Newberry
volcano, Oregon, USA**

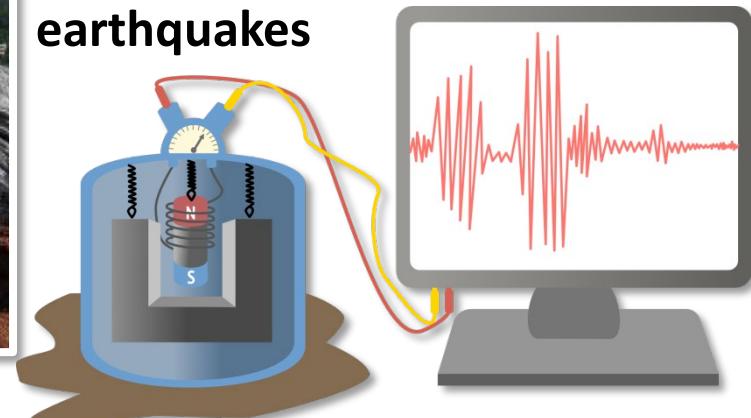
Photo: USGS

Fumaroles, Sicily

Benjamín Núñez González/ CC-BY- S.A 4.0



**Seismometer for detecting
earthquakes**

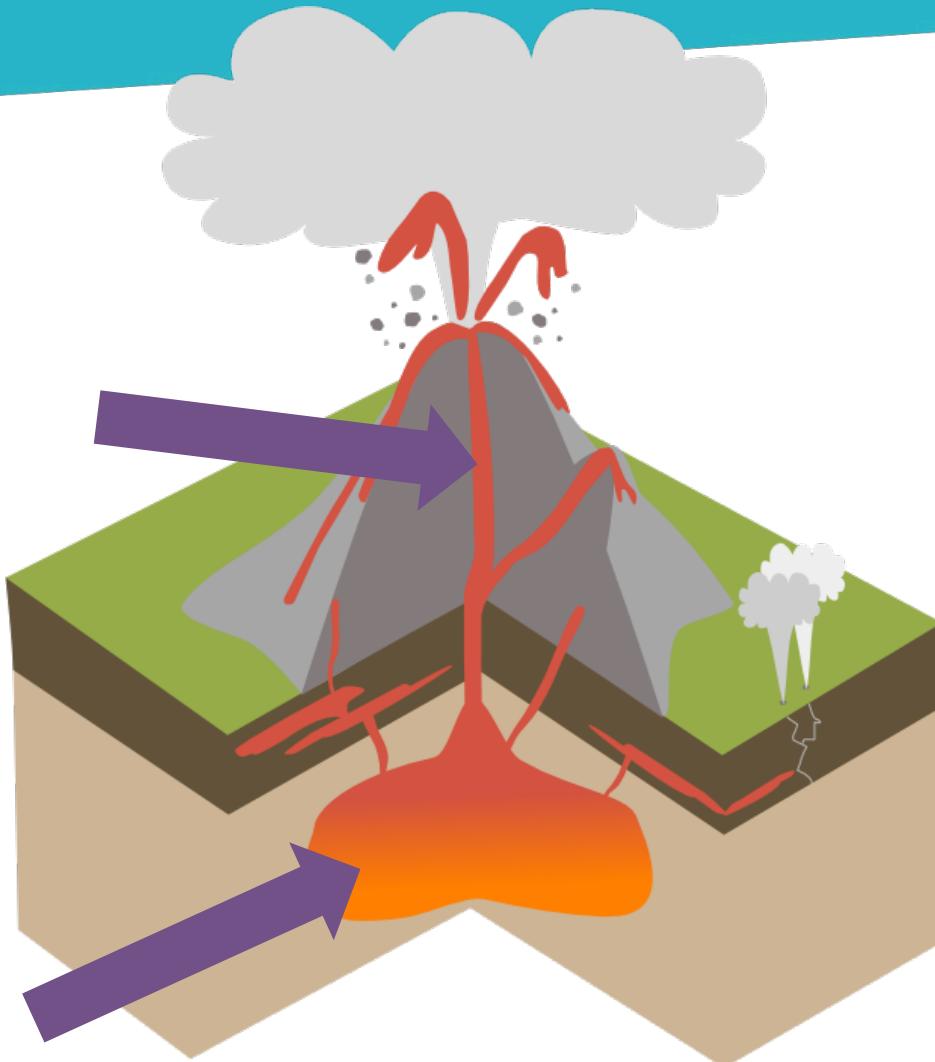


VOLCANOES QUIZ



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**What are the arrows on
the diagram pointing
towards?**

**Magma chamber
and geyser**

**Magma chamber
and conduit**

**Ash cloud and
conduit**

VOLCANOES QUIZ

What is a dormant volcano?

One that is
erupting lava

One that hasn't
erupted recently (in
the last 10,000 years)

One that is
erupting ash



VOLCANOES QUIZ



**Where can volcanoes
occur? (2 answers)**

**Above hotspots in
the mantle**

**At destructive
plate boundaries**

**At conservative
plate boundaries**

VOLCANOES QUIZ



What type of eruption is happening here?

Effusive eruption

Explosive eruption

Shield eruption

VOLCANOES QUIZ

**What is this
geologist sampling?**

Magma

'A'a lava

**Pahoehoe
lava**



VOLCANOES QUIZ



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**Which of these is a
composite volcano?**

Shallow slopes,
shield shaped

Steep slopes,
cone shaped

Crack in the
ground



VOLCANOES QUIZ

**What sometimes
forms inside a
volcano crater?**

Hotspot

**Magma
Chamber**

Lava lake



VOLCANOES QUIZ



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**Which of these are
not natural hazards
that can be caused
by volcanoes?**

Lahars

Pyroclastic
flows

Hurricanes

VOLCANOES QUIZ



Which of these is NOT a positive reason for living near a volcano?

Volcanic ash can disrupt air travel

Volcanoes can attract tourists to areas, which creates jobs

Volcanic ash and lava break down over time to provide nutrients for the soil

VOLCANOES QUIZ



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**What instrument is used
to monitor ground
surface changes?**

Seismometer

Tiltmeter

Microscope