

Types of Volcanoes

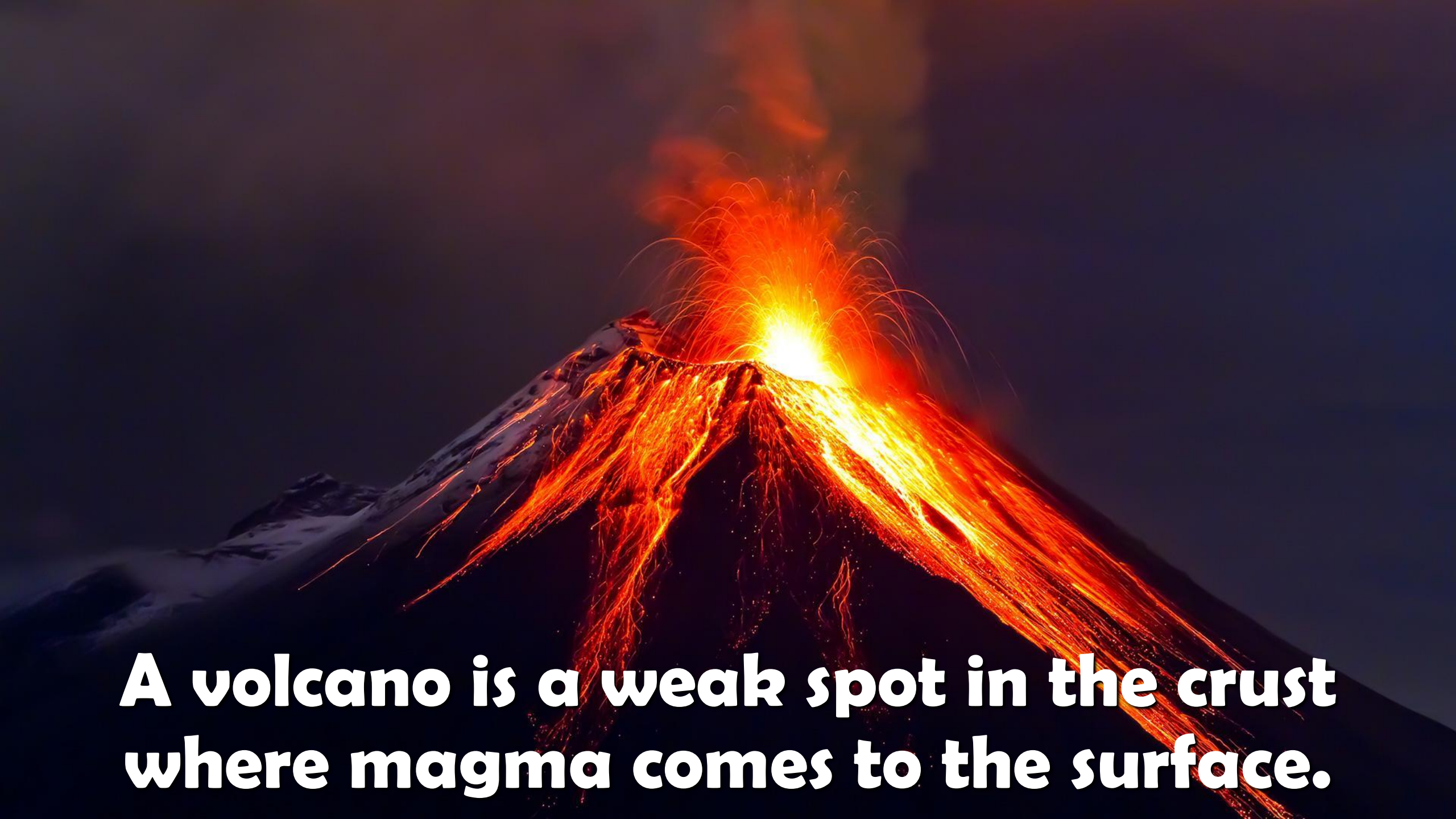
What is a volcano?

What are the 3 main types of volcanoes?

Can I describe each type of volcano?

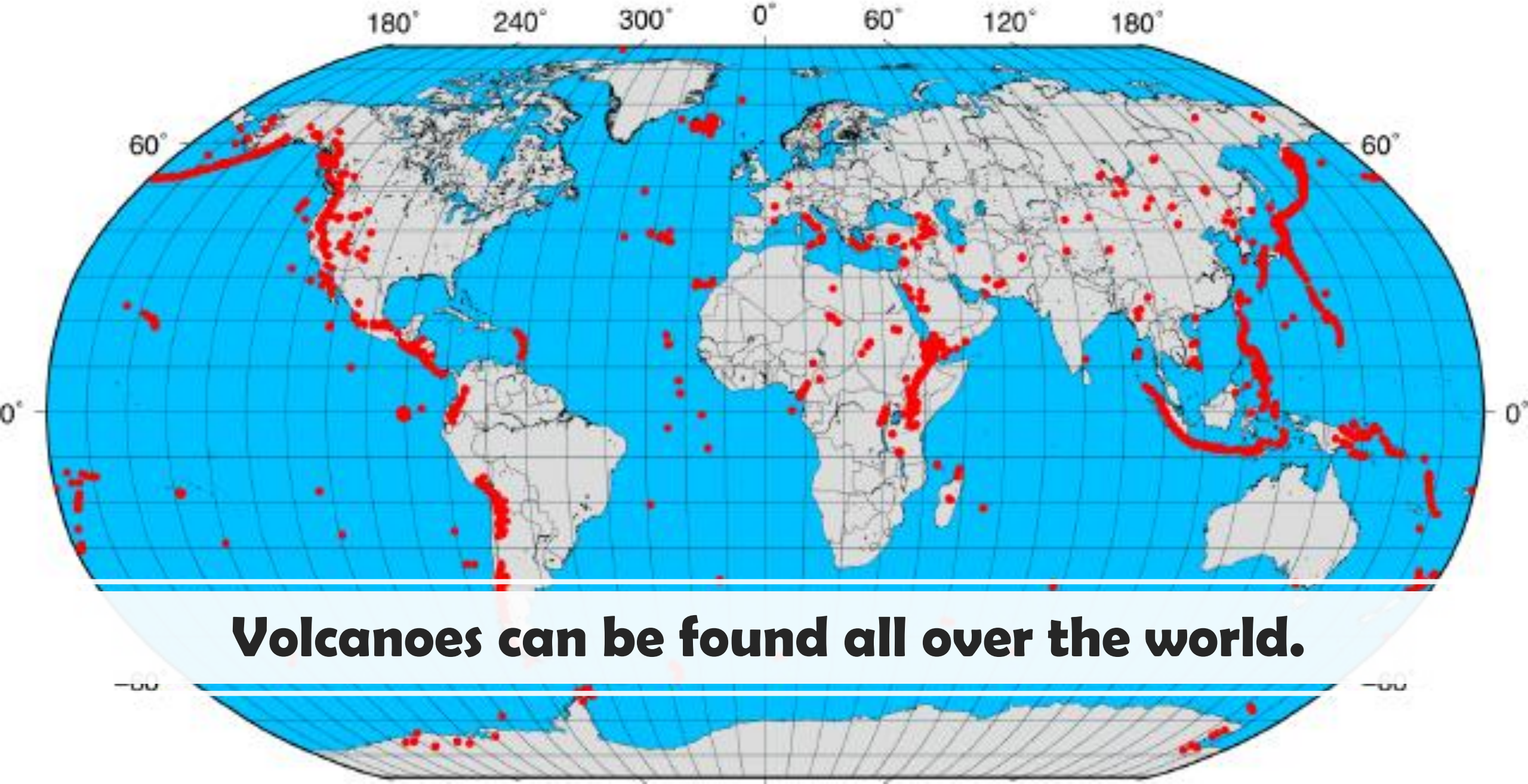
What are examples of each type of volcano?





A volcano is a weak spot in the crust where magma comes to the surface.

World Volcanoes



Volcanoes can be found all over the world.

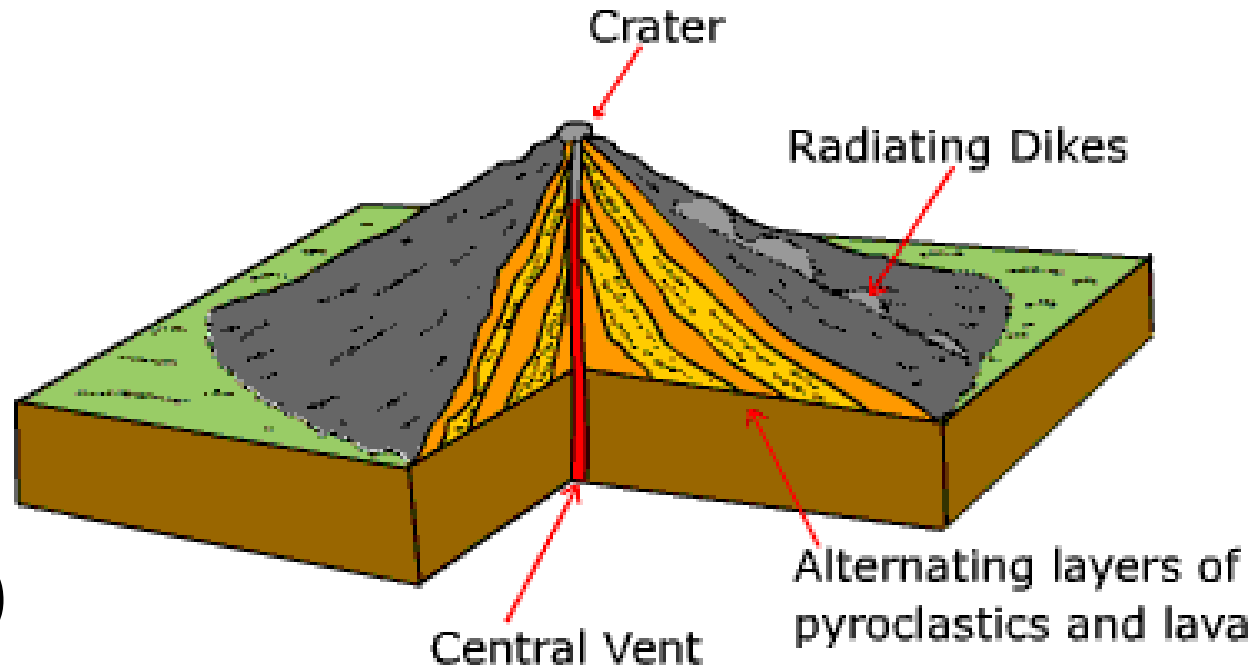
There are 3 Types of Volcanoes.



- Composite
- Shield
- Cinder Cone

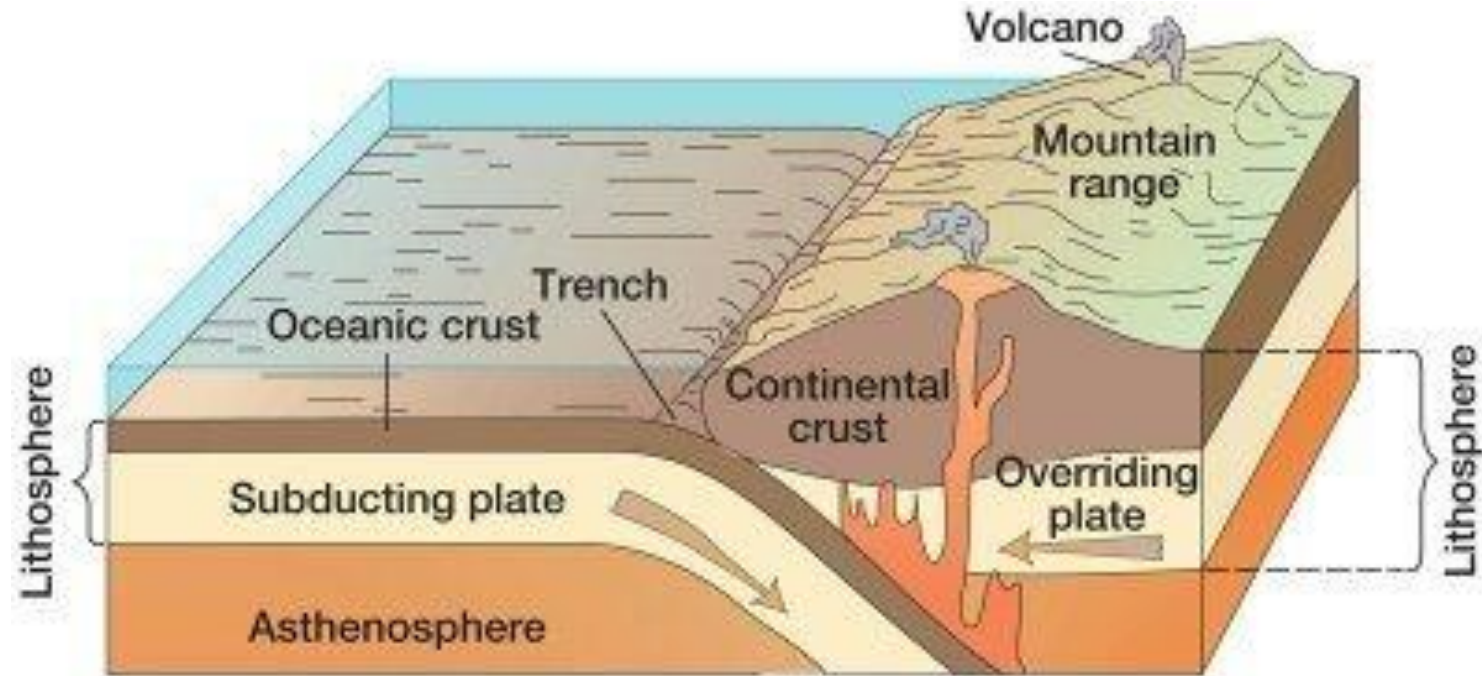
Composite Volcano

- Tall, symmetrical cone-shaped mountains in which layers of lava alternate with layers of ash
- Large (1-10 km across)
- Also called Stratovolcano



Composite Volcano

- Usually form near a subduction zone at a convergent boundary
- The oceanic plate slips under the continental plate squeezing magma to the surface



(a)

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Composite Volcano

Composite volcanoes grow with every eruption



- Known for their explosive eruptions, they can also have quieter ones
- Can erupt pyroclastic flows, which is a dense, fast-moving flow of fragmented rock, volcanic ash, and hot gases at high speeds.

Mount Rainier is a composite volcano southeast of Seattle in Washington.



It is amongst the most dangerous volcanoes in the United States.

Mt. Etna is a composite volcano in Italy.



Mt. Etna is the highest and most active volcano in Europe.

Other Examples of Composite Volcanoes



Mt. Saint Helens

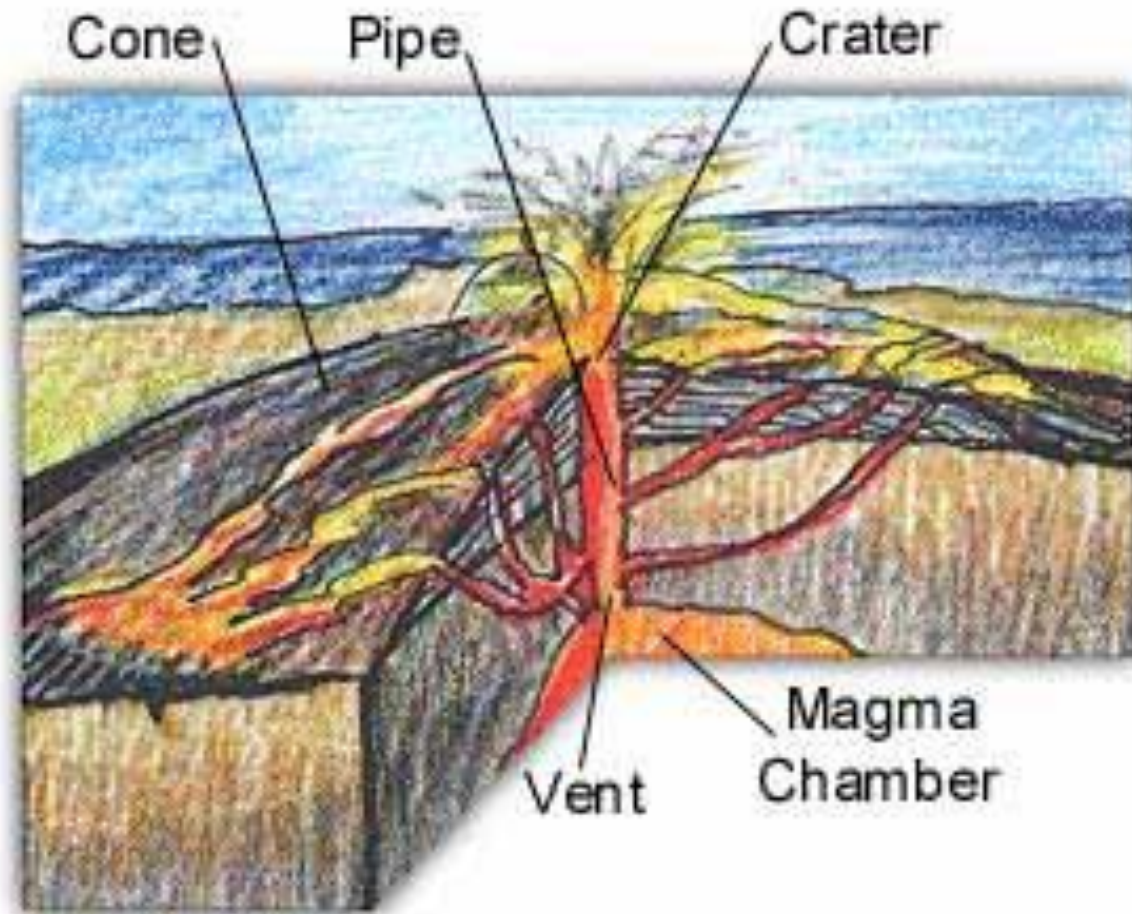


Mount Kilimanjaro



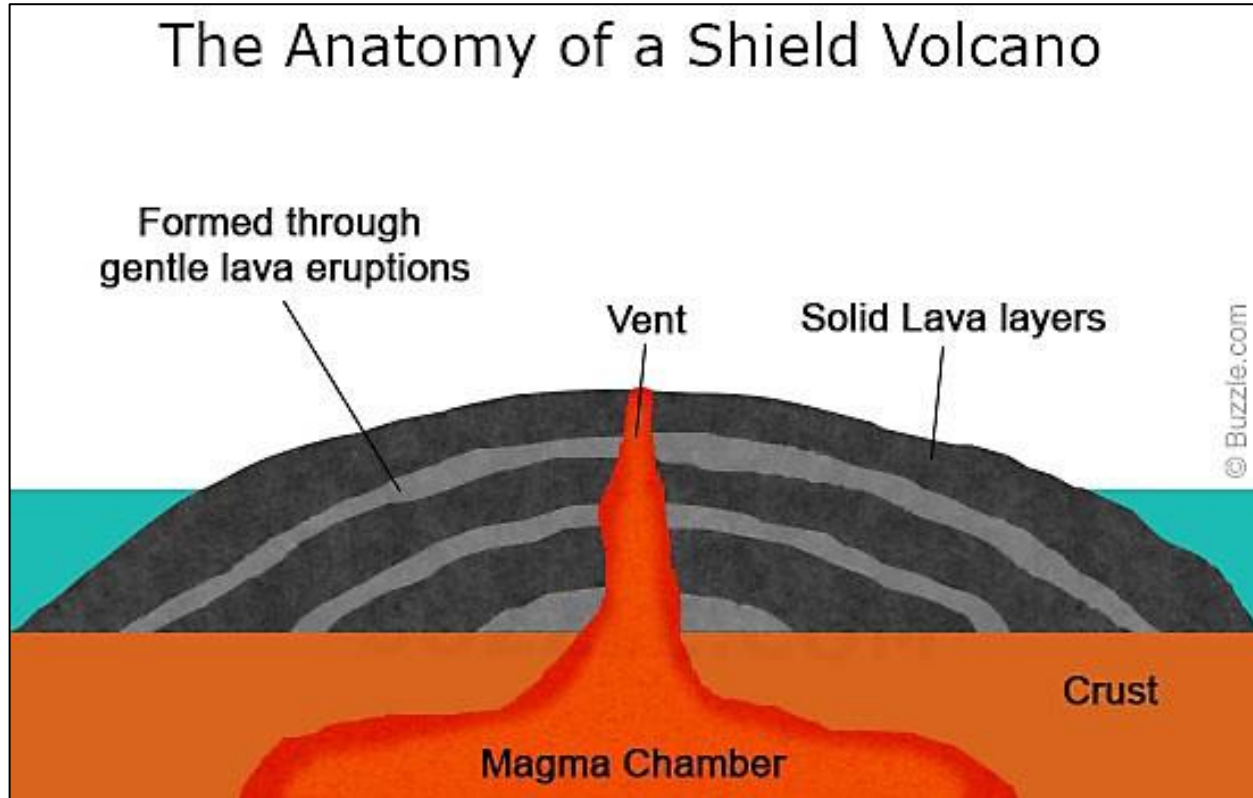
Stromboli

Shield Volcano



- Wide, gently sloping mountain
- Not steep; Slope at 15 degrees or less
- Largest volcanoes on Earth

Shield Volcano



- Usually form over Hot Spots in the ocean
- Characterized by relatively quiet eruptions with lava flows
- Runny, low viscosity lava

Hot Spot: area where magma in the mantle melts through the crust like a blow torch

Mount Kilauea is an active shield volcano in the Hawaiian Islands.



**It erupted
from 1983 to
2018!**

Olympus Mons on Mars is the largest volcano in the solar system.

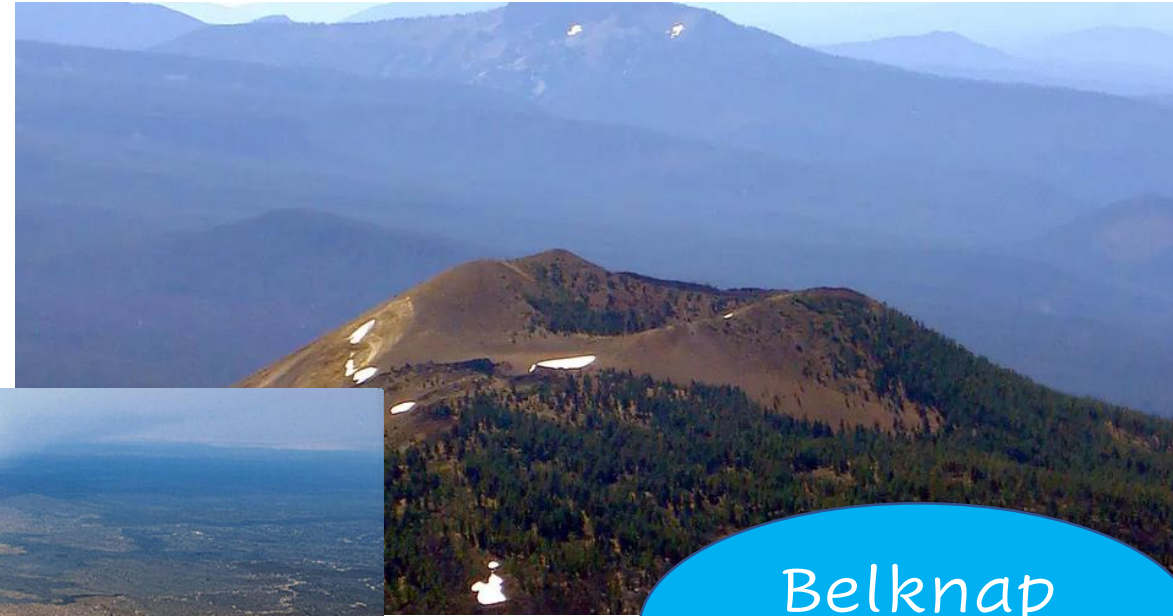


Olympus Mons is a shield volcano.

Other Examples of Shield Volcanoes



Rangitoto



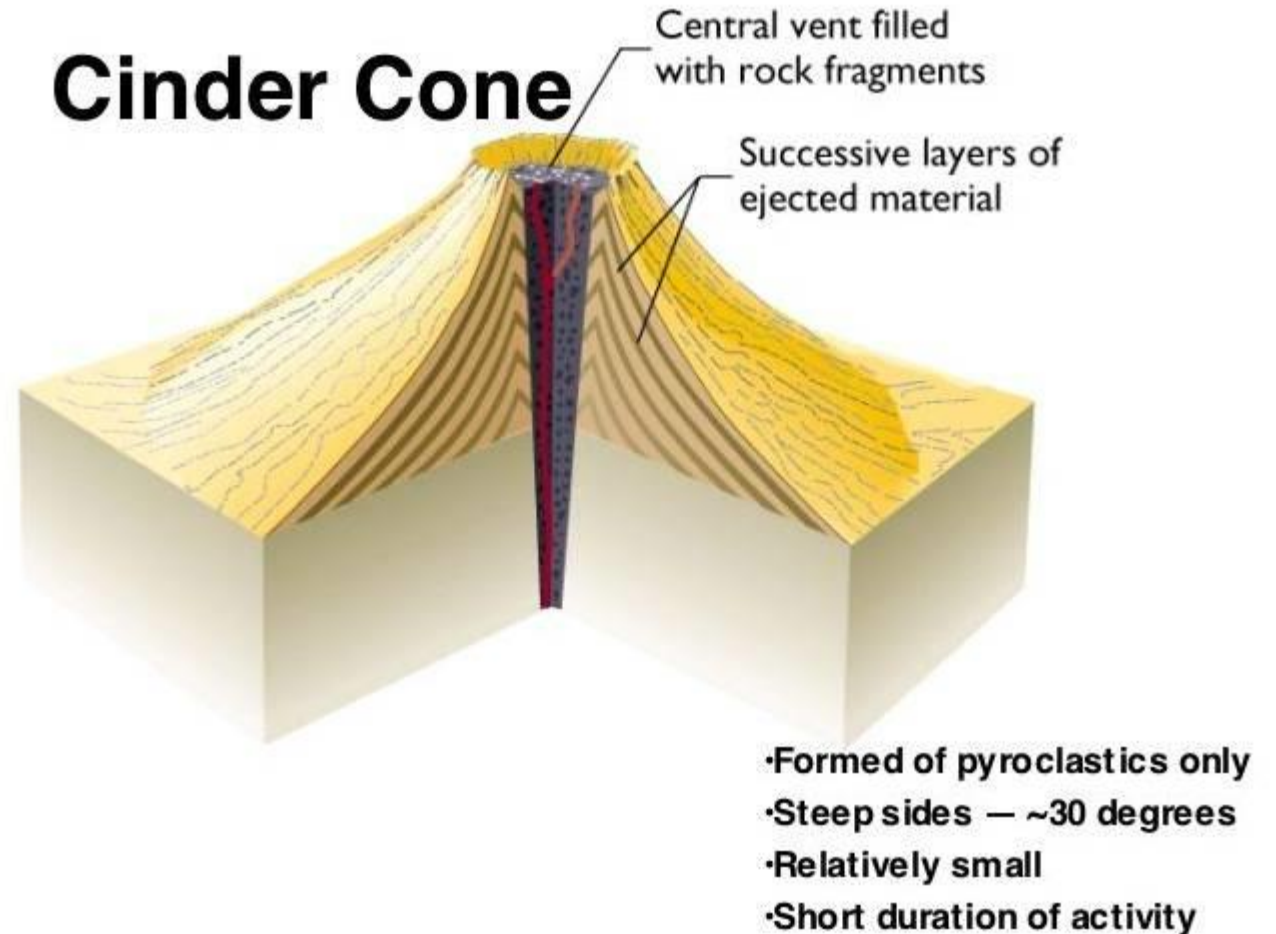
Belknap volcano



Erta Ale

Cinder Cone Volcano

- Steep cone-shaped hill or mountain with loose volcanic material around vent
- Smallest volcano
 - less than 300 m or 1000 ft high
- Relatively steep slopes
 - 30 - 40 degrees



Cinder Cone Volcano



- Usually form on or near a larger volcano
- Most common type of volcano
- Smallest volcano

Cinder Cone volcanoes are known to erupt cinder blocks.



A cinder block is a solid rock fragment that is ejected during an explosive eruption.

**Greater
than 64 mm
in diameter**



Sunset Crater erupted about 1085 A.D. In 1920, a Hollywood producer wanted to simulate an eruption from its vent.



This led to the establishment of the Sunset Crater Volcanic National Monument to protect it.

Pu`u ka Pele
is a cinder
cone volcano
located on
the
southeast
flank of
Mauna Kea.



Other Examples of Cinder Cone Volcanoes



Parícutin



Lava Butte



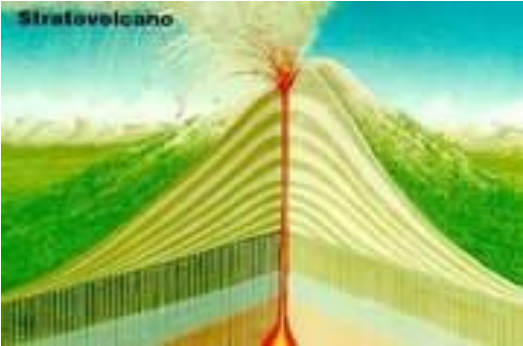
Cerro Negro

Types of Volcanoes Table

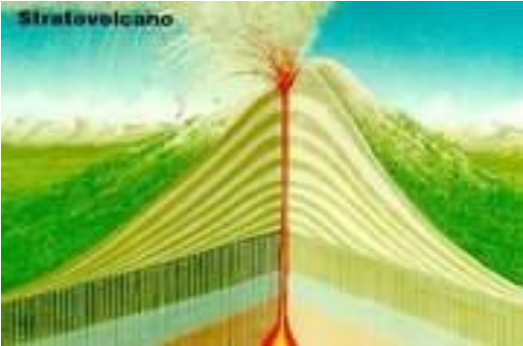
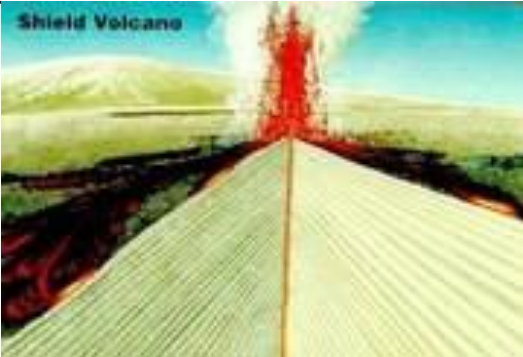
Type of Volcano	Write a description of the volcano.	Example	Draw a model of the volcano.
Composite Volcano			
Shield Volcano			
Cinder Cone Volcano			

Can you fill this diagram in?

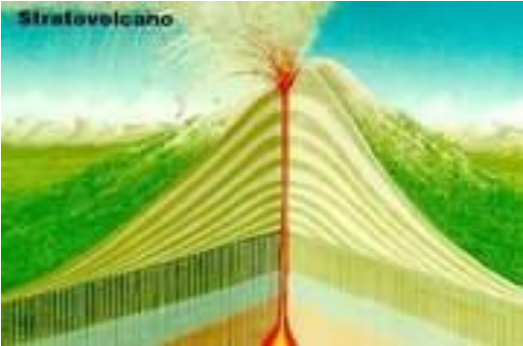
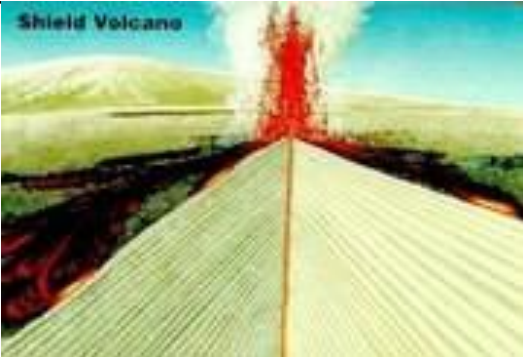

Types of Volcanoes Table

Type of Volcano	Write a description of the volcano.	Example	Draw a model of the volcano.
Composite Volcano	Tall, symmetrical cone-shaped mountain with layers of lava and ash. Explosive and quiet eruptions. Can erupt pyroclastic flow. Form at subduction zones.	Mt. Rainier, Mt. Saint Helens, Mt. Etna	
Shield Volcano			
Cinder Cone Volcano			

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Composite Volcano	Tall, symmetrical cone-shaped mountain with layers of lava and ash. Explosive and quiet eruptions. Can erupt pyroclastic flow. Form at subduction zones.	Mt. Rainier, Mt. Saint Helens, Mt. Etna	 A cross-sectional diagram of a stratovolcano. It shows a tall, conical mountain with distinct horizontal layers of alternating light and dark colors, representing different layers of lava and ash. A central vent extends from the top to the base, with a red plume of smoke or ash rising from it. The surrounding landscape is green and hilly. The text 'Stratovolcano' is written in the top left corner of the image.
Shield Volcano	Gently sloping mountain with quiet eruptions. Largest of all volcanoes. Often form at hot spots.	Mt. Kilauea, Rangitoto, Mauna Loa, Erta Ale	 A cross-sectional diagram of a shield volcano. It shows a broad, gently sloping mountain with a central vent. A red plume of smoke or ash rises from the vent. The surrounding landscape is flat and green. The text 'Shield Volcano' is written in the top left corner of the image.
Cinder Cone Volcano			

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Shield Volcano	Gently sloping mountain with quiet eruptions. Largest of all volcanoes. Often form at hot spots.	Mt. Kilauea, Rangitoto, Mauna Loa, Erta Ale	
Cinder Cone Volcano	Steep, cone-shaped hill or mountain that can erupts pyroclastic material, ash, and cinders. Smallest volcano and most common.	Sunset Crater, Paricutin, Cerro Negro	

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*And though I have the gift of prophecy, and
understand all mysteries, and all knowledge; and
though I have all faith, so that I could remove
mountains, and have not charity, I am nothing.
1 Corinthians 13:2*

