

DESTRUCTIVE FORCES

Destructive Forces

Weathering and Erosion

Weathering-the break down of rock

Erosion-the movement of weathered rock from place to place

Types of Weathering

Physical Weathering

- The breaking down of rock



Chemical Weathering

- The breaking down of rock as a result of chemicals



Destructive Forces

Wind

erosion

weathering



Destructive Forces

Water



Destructive Forces

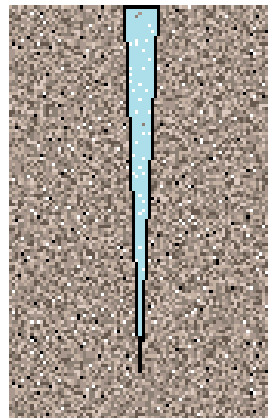
Ice (Glaciers)



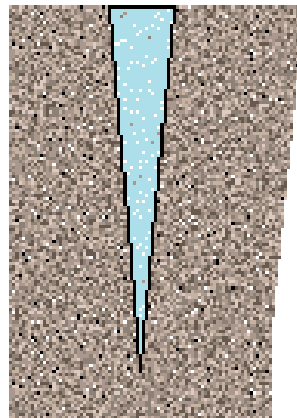
Destructive Forces

Ice

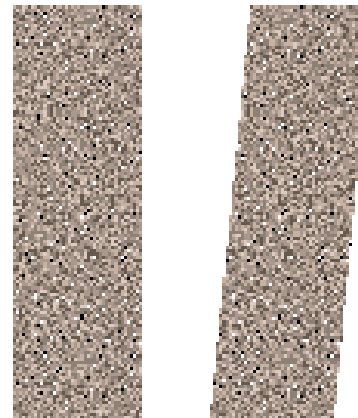
Frost Wedging



Water-filled
crack



Freezes to
ice



Breaks
Rock

Destructive Forces

Mount St. Helen-Volcano



6 8:32:47.0



7 8:32:53.3



8 8:33:03.7



9 8:33:18.8



Destructive Forces

Mount St. Helen's AFTER the eruption

11



Destructive Forces

Earthquakes



Destructive Forces

Tornadoes



HOW DO WE CONTROL DESTRUCTIVE FORCES?



Destructive Forces

Dam



Large barriers built across rivers and streams

Controls the flow of water

Used for human purposes such as generating electricity

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Groin



A wall created
to prevent
erosion on the
beach

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Beach Nourishment



Sand is pumped from the ocean floor onto the beach

Replaces eroded sand

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Contour Plowing



Plowing in a zig-zag pattern

Prevents water from flowing straight down

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Storm Drain Management



Drains excess water after storms so less erosion will occur.

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Levee



Embankment on the edge of a river

Prevents flooding and erosion

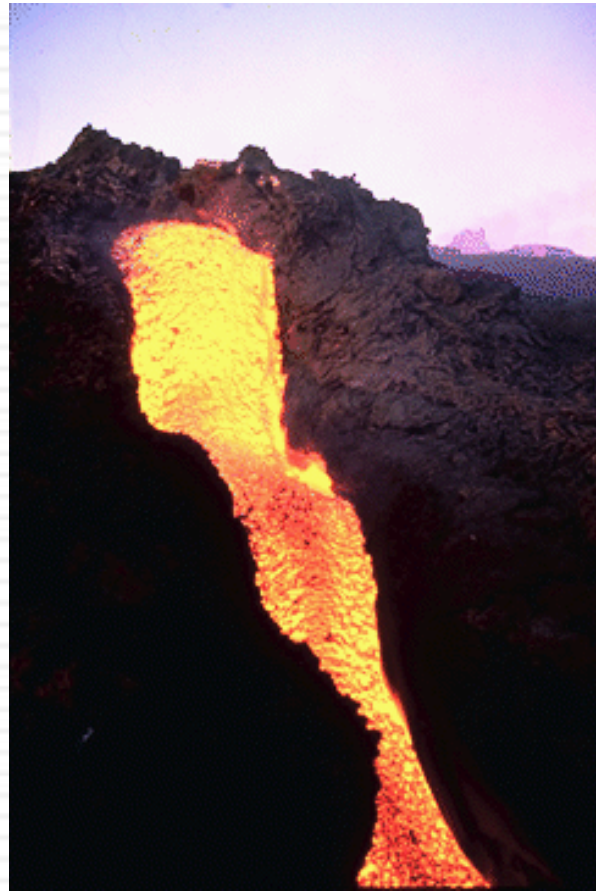
CONSTRUCTIVE FORCES

Constructive Forces

The process of forming NEW
land

Constructive Forces

Volcanoes



Volcanoes-RING OF FIRE



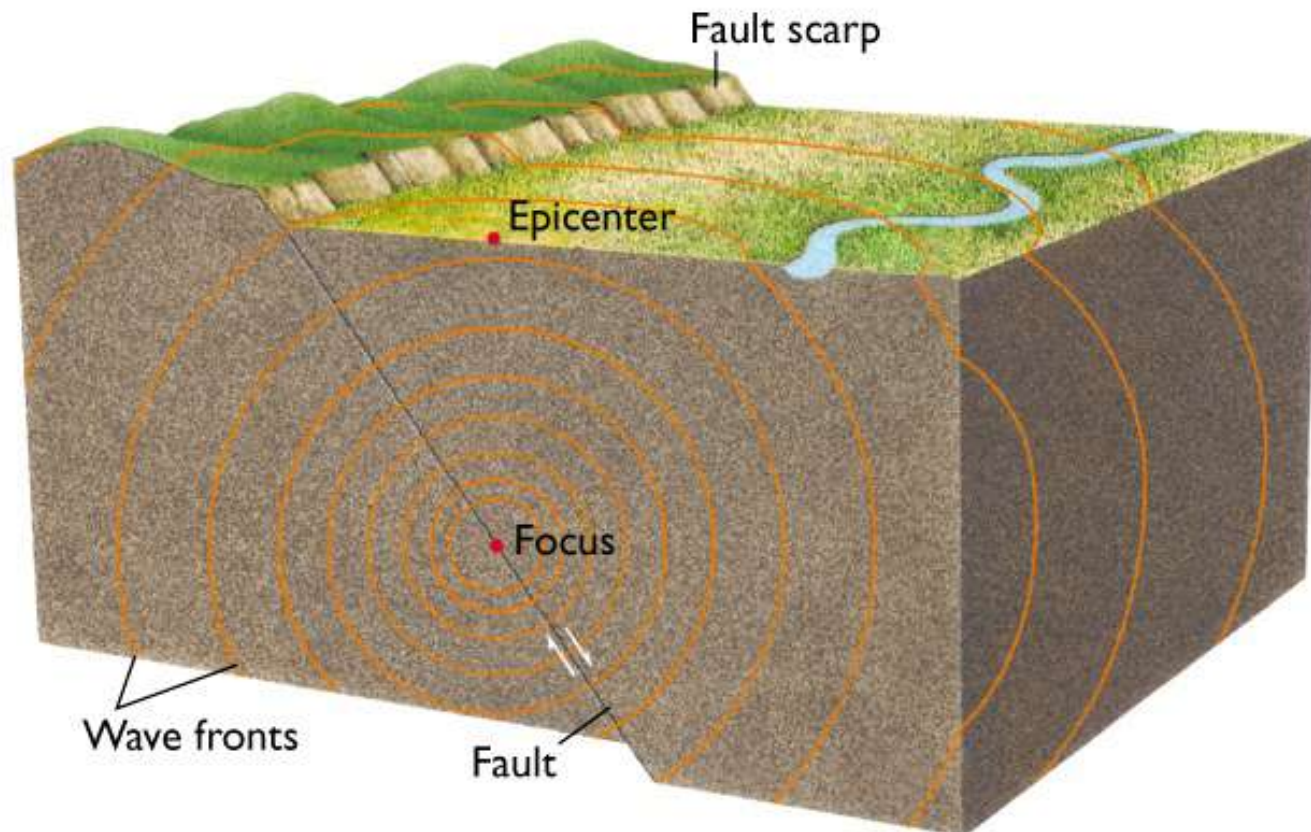
Constructive Forces

Earthquakes

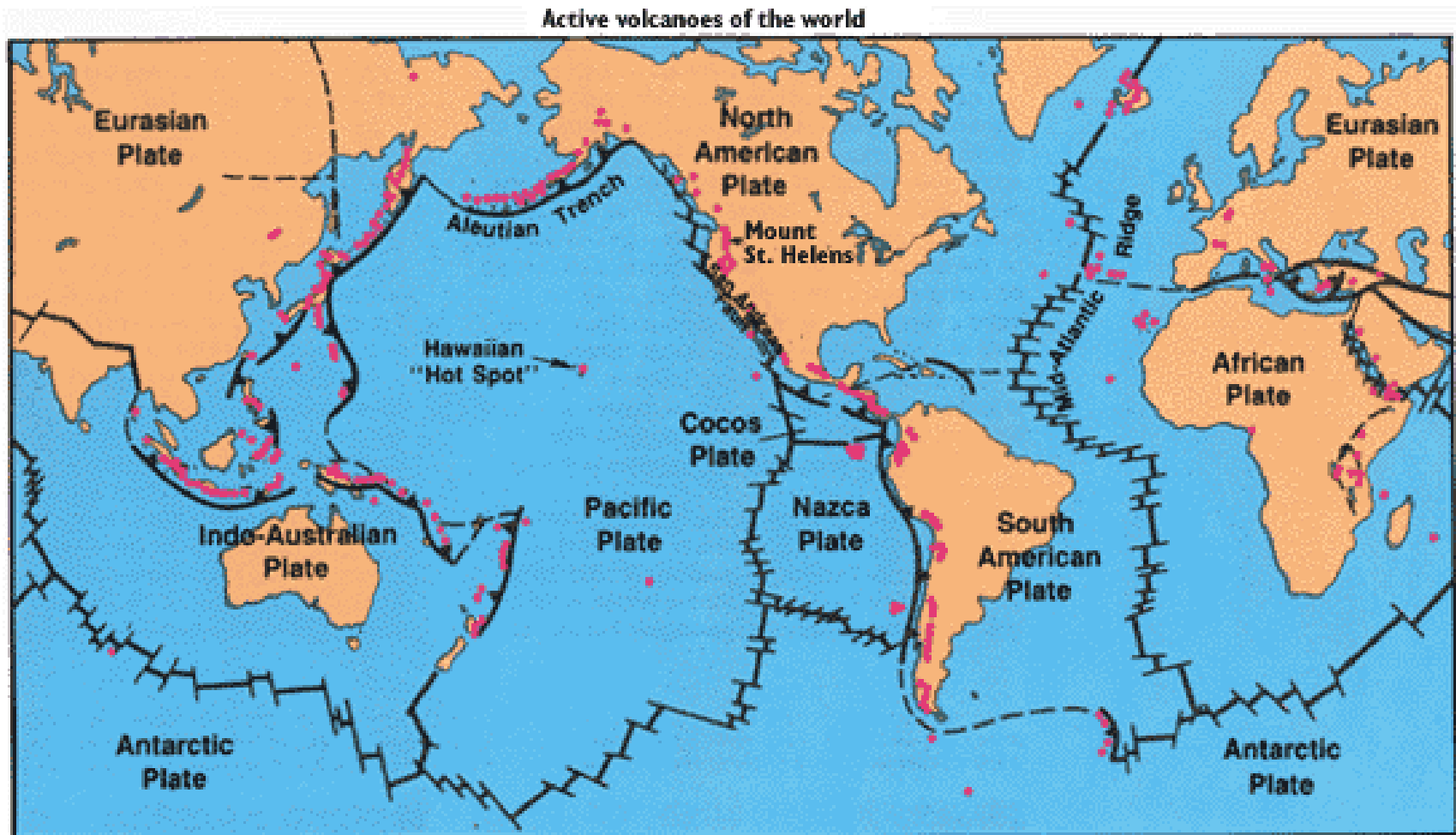


Constructive Forces

Earthquakes



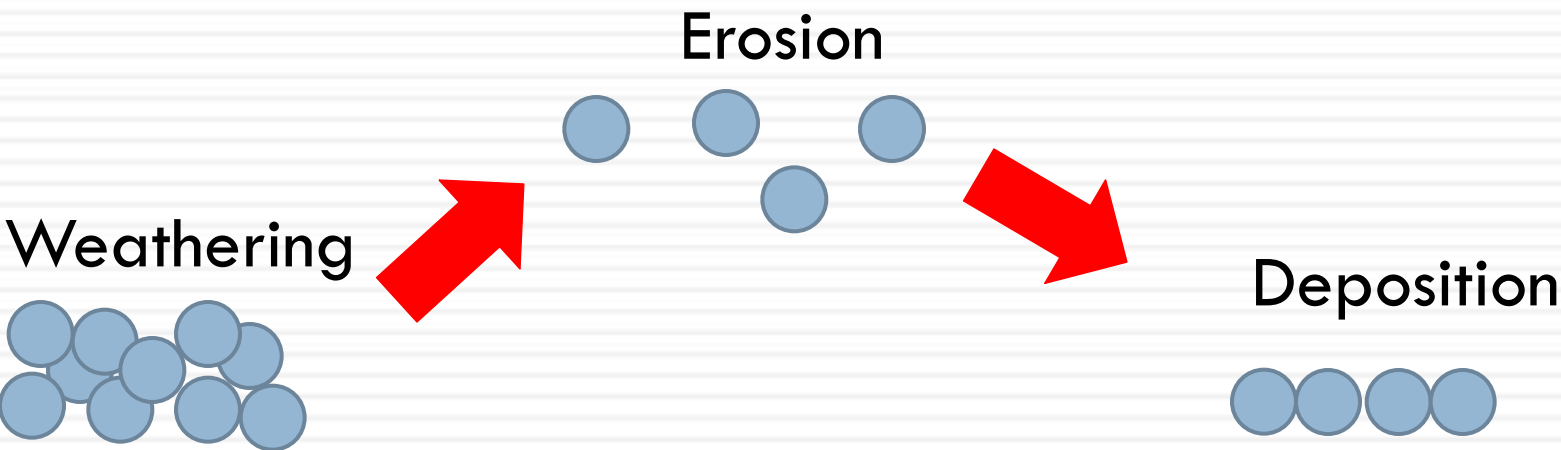
Earthquakes-Fault Lines



Constructive Forces

Deposition

After **weathering** and **erosion** occur, the final step is **deposition** (the sediment is placed somewhere else, forming new land).



Constructive Forces

Deltas



New land
is formed

- A triangular area at the mouth of a river
- Sediment/debris (rocks, sand, dirt) are deposited
- Occurs right before the river goes into a larger body of water
- WHY? Because the water slows down, so the sediment/debris falls

Constructive Forces

Sand Dunes



- Sand is carried in the wind
- When the wind stops, the sand drops
- New land is formed when the sand drops creating sand dunes (deposition)

Constructive Forces

Flood Plains

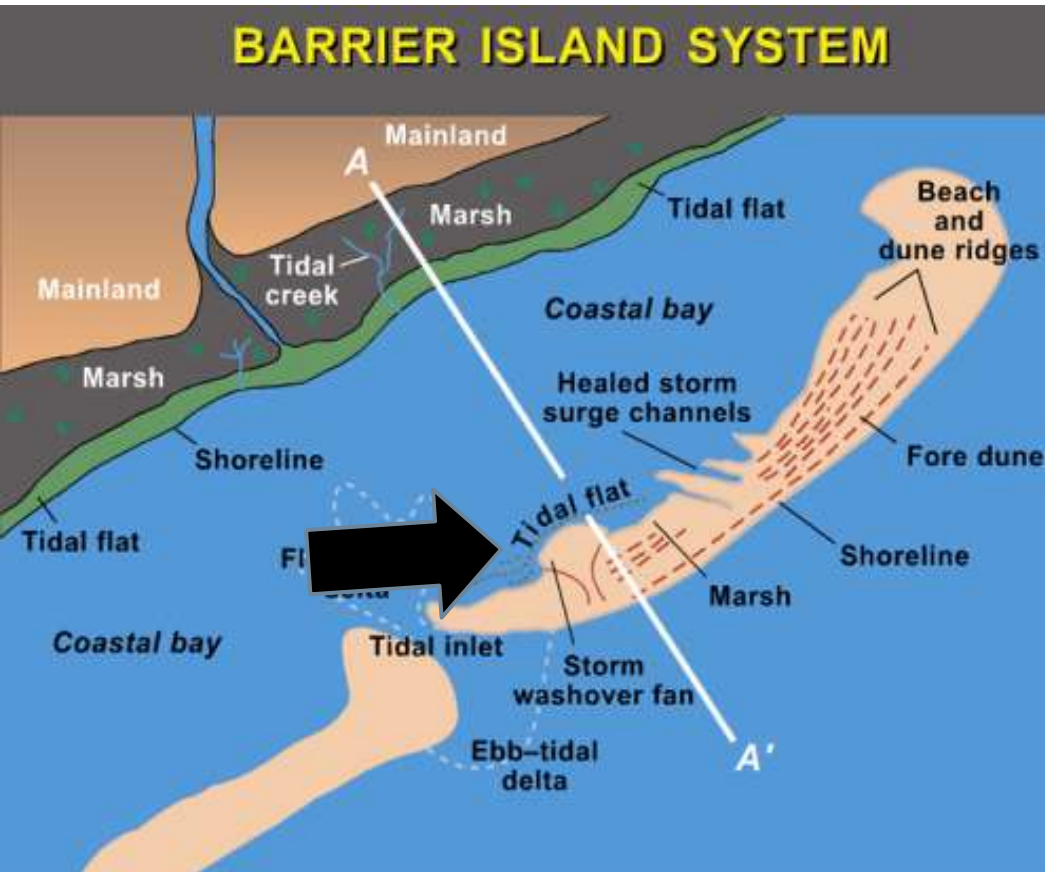


New land
is formed

- A river floods taking sediment/debris (rocks, sand, dirt) with it
- The water floods onto the surrounding land
- When the water recedes, the sediment/debris (rocks, sand, dirt) stay forming **NEW LAND (deposition)**

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Barrier Island



- Sand, dirt, and rocks erode off the main land because of waves
- The waves deposit the sand, rocks, and dirt creating an island (deposition)
- This creates new land!

Constructive Forces

Longshore Current



- As a wave hits the beach the longshore current, pushes it sideways
- This water then picks up sand/rocks/dirt and carries it along the shore
- As the wave recedes, it drops the sand/dirt/rocks (deposition) creating new land!!!