

Lesson 5: How Do Plates Interact With Each Other?

Activity 5.1: What Happens When Plates Move?

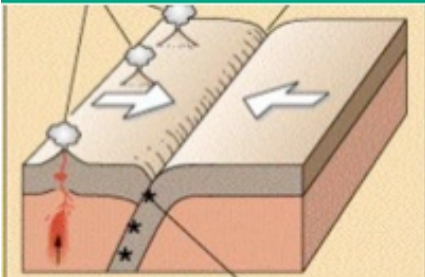
Reading 5.1: Ring of Fire

Activity 5.2: Two Types of Rocks Comprise Plates

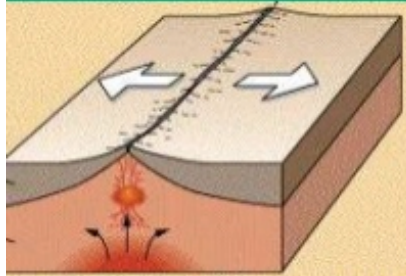
ACTIVITY 5.2 – TWO TYPES OF ROCK COMPRISE PLATES

What are three ways that plates can move?

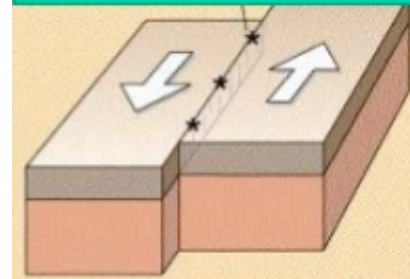
Convergent



Divergent



Transform



ACTIVITY 5.2 – TWO TYPES OF ROCK COMPRISE PLATES

What Will We Do? Page 54

We will investigate what happens at different plate boundaries and why.



Observations

1. What did you observe when you moved the towel plates toward each other?
2. Compare this simulation to the formation of mountains. [Animation](#)
3. When plates move toward each other, why do you think one plate sometimes slides underneath the other, while sometimes they do not move in this way?

Convergence

1. What are the two types of convergence that you have seen?
2. Why do you think that sometimes plates slide under other plates and sometimes they do not?
3. What would the earth look like if there were no water on its surface?

Properties of Continental Rock & Ocean Floor Rock

The following chart shows the approximate densities of continental and oceanic plate material.

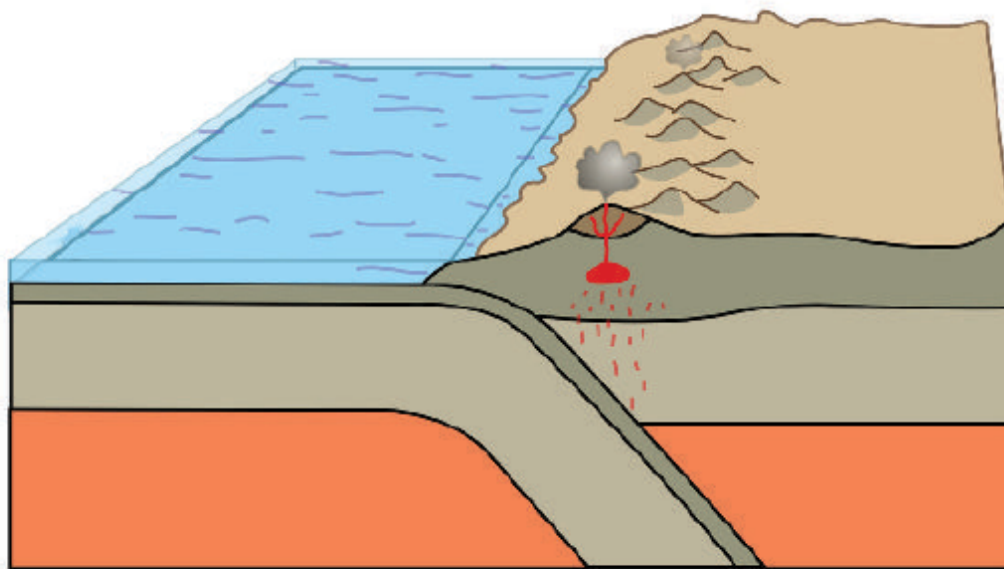
PLATE TYPE	ROCK TYPE	RELATIVE THICKNESS	ROCK DENSITY (APPROX)
Continental	Granite	Thicker	2.65 g/mL
Oceanic	Basalt	Thinner	3.01 g/mL

Continental? Ocean?

- Tell your partner what represents continental plate material and what represents ocean!



Ocean Floor Rock and Continental Rock



ocean

volcano

ocean floor plate

continental plate

magma

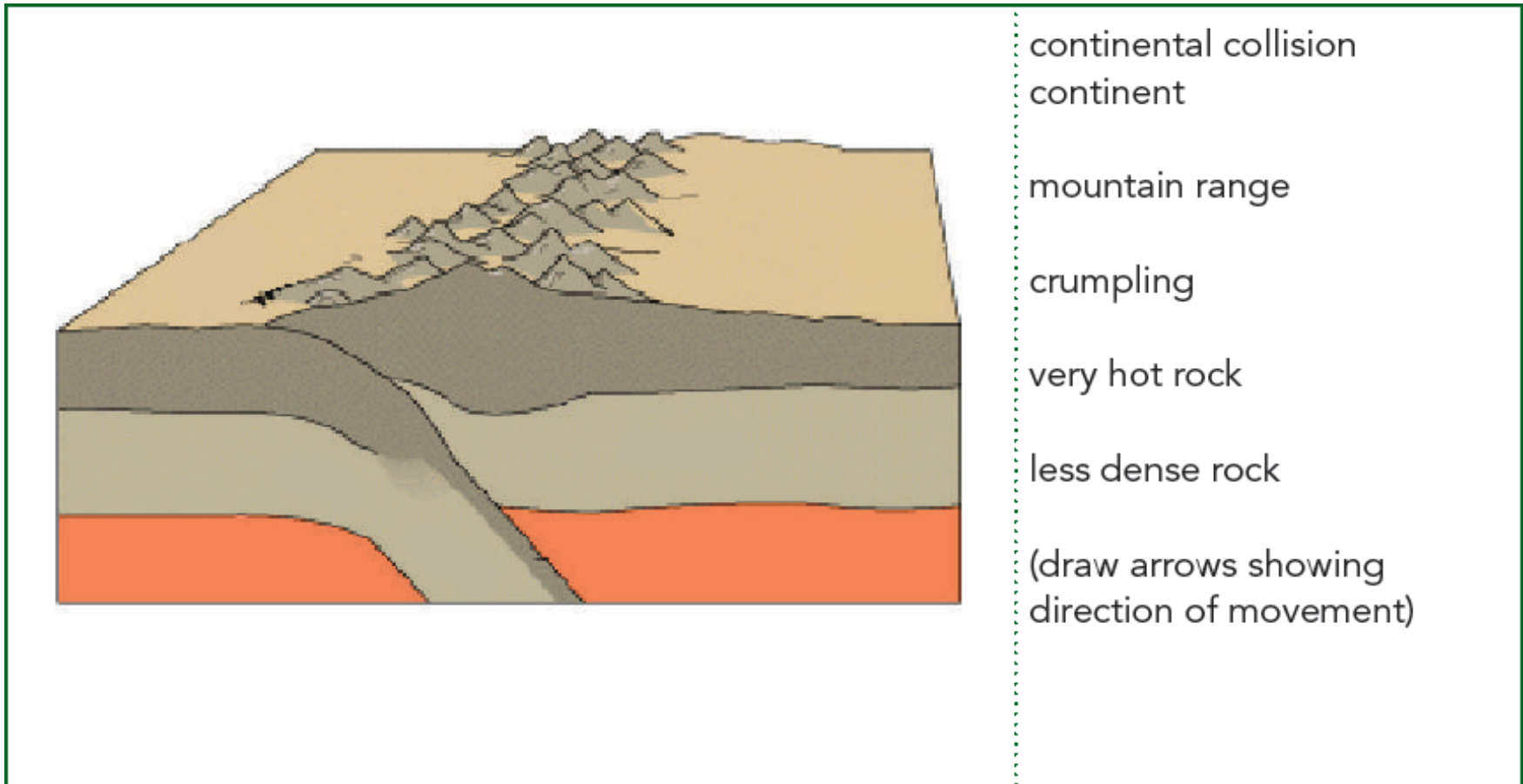
very hot rock

dense rock

less dense rock






(draw arrows showing
direction of movement)

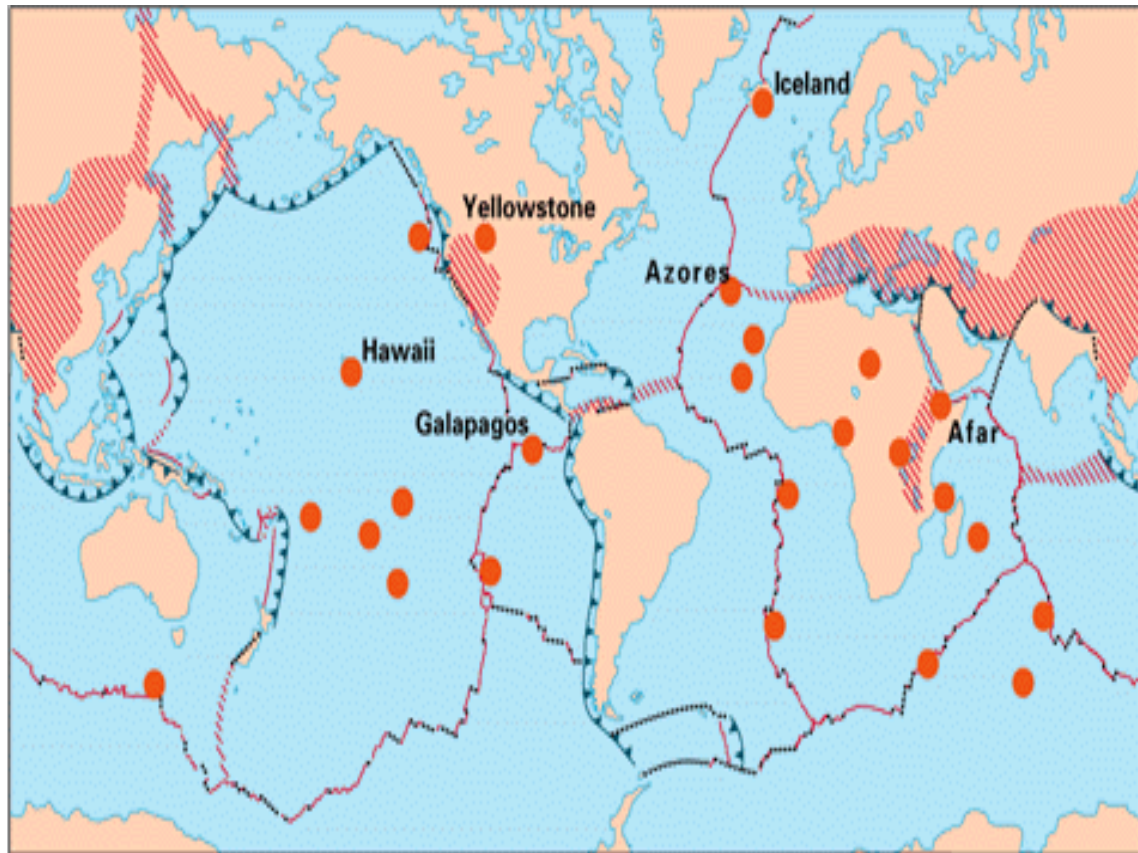
Continental Rock and Continental Rock



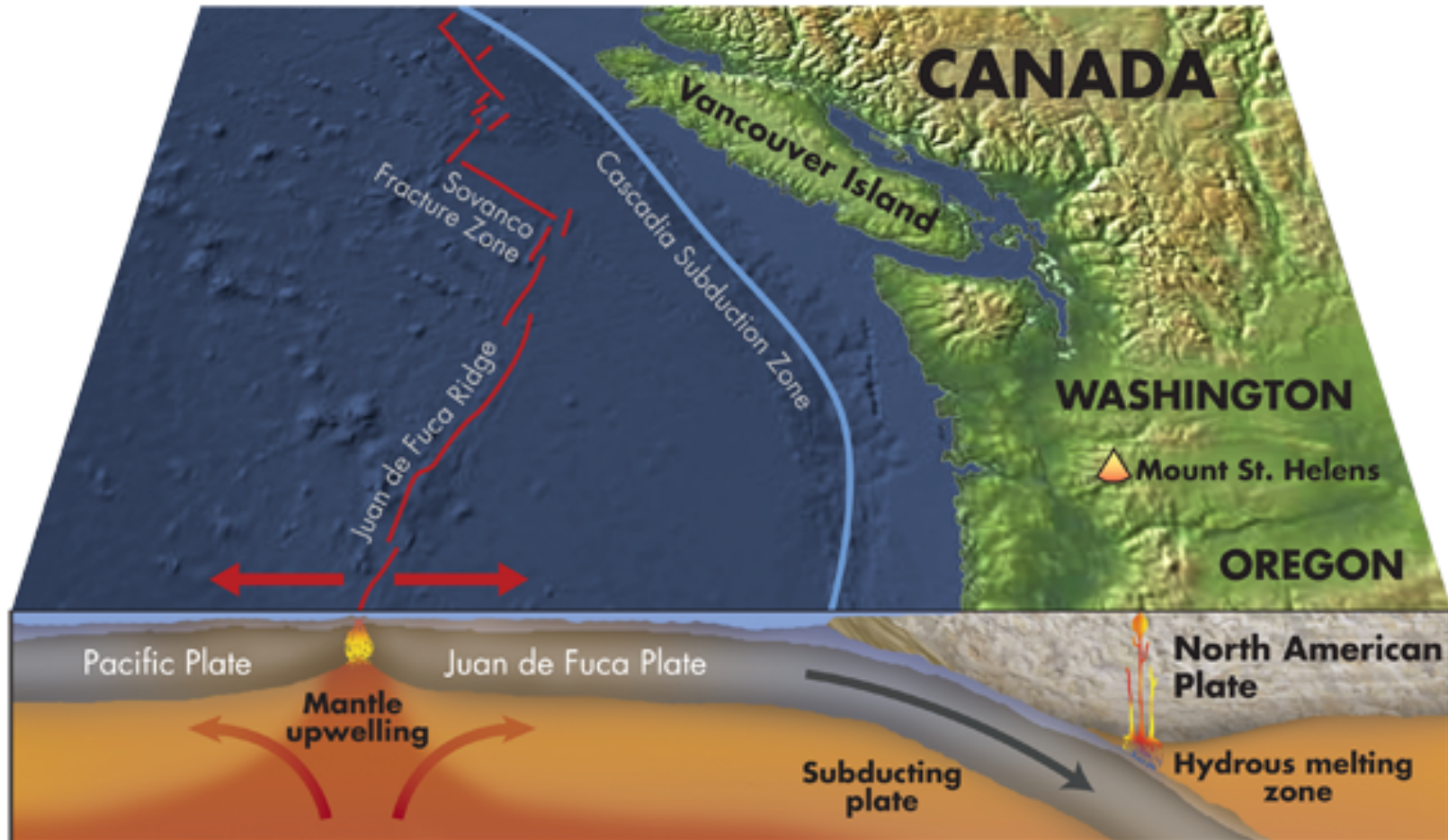
Map of Plate Boundaries

EXPLANATION

-  Divergent plate boundaries—
Where new crust is generated
as the plates pull away from
each other.
-  Convergent plate boundaries—
Where crust is consumed in the
Earth's interior as one plate
dives under another.
-  Transform plate boundaries—
Where crust is neither produced
nor destroyed as plates slide
horizontally past each other.
-  Plate boundary zones—Broad
belts in which deformation is
diffuse and boundaries are not
well defined.
-  Selected prominent hotspots



Cascadia Subduction Zone



Close to home west coast 😊



Source: U.S. Geological Survey

THE SEATTLE TIMES



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