

Take Out:

- Pencil
- Notebook
- Glue stick

Steps to Ready:

1. Take out supplies.
2. Glue in “Faults” as page 38 in NB
3. Glue in “Unit 4: Earth’s Forces” as page 39 in NB
4. Update your Table of Contents.

You Need:

- 1) Agenda
- 2) Notebooks

When You Sit Down:

- 1) Write the learning goal

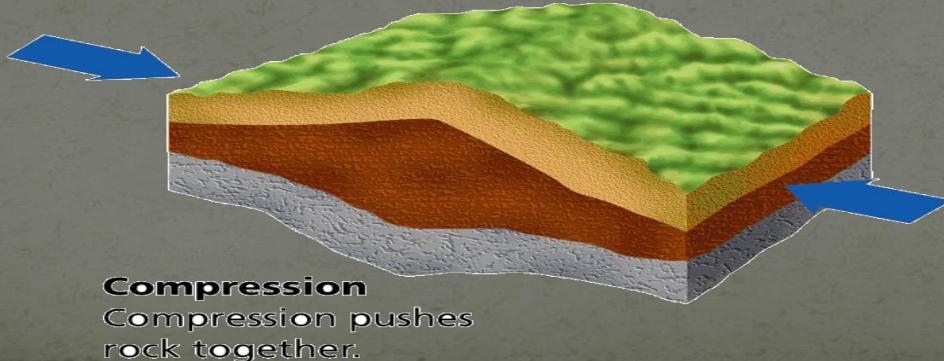
Learning Objective:

Today, we will identify and describe the different types of faults.

Pair-Share

How does compression affect rock?

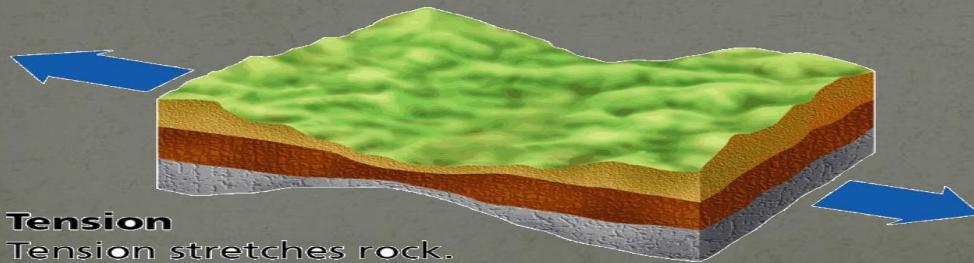
Compression is a type of stress that squeezes rock until it folds or breaks.



Pair-Share

How does tension affect rock?

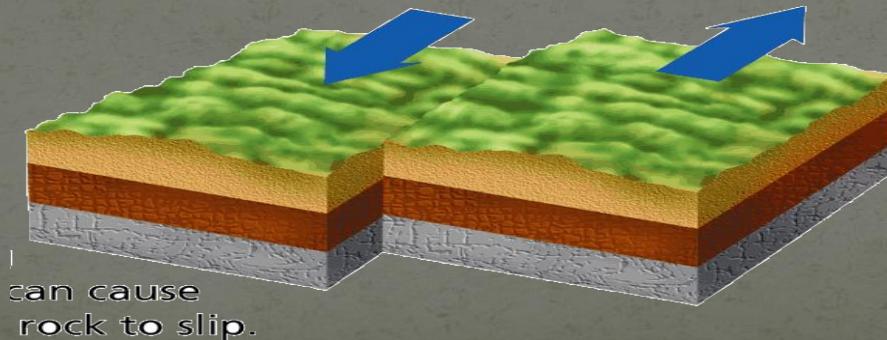
Tension stretches rock so it becomes thinner in the middle until it cracks or breaks.



Pair-Share

How does shearing effect rock?

Shearing pushes two chunks of rock in opposite directions.



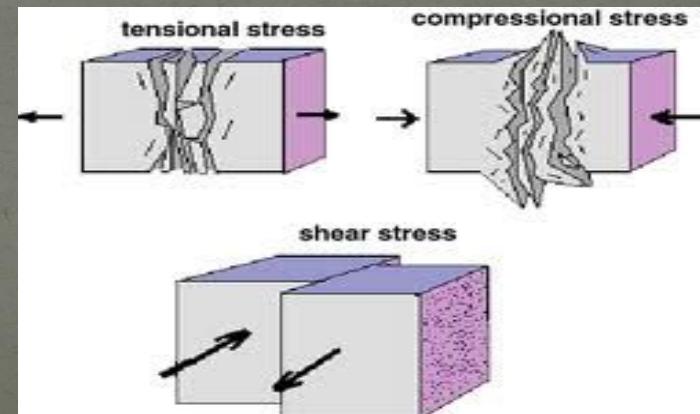
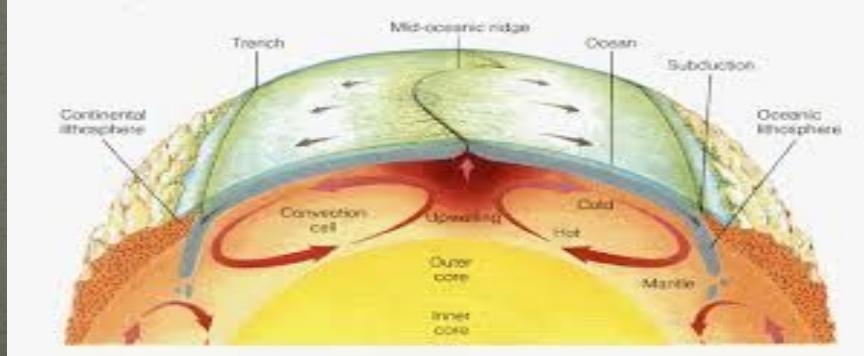
What is a fault?

A fault is a break or crack in the crust where earthquakes occur.



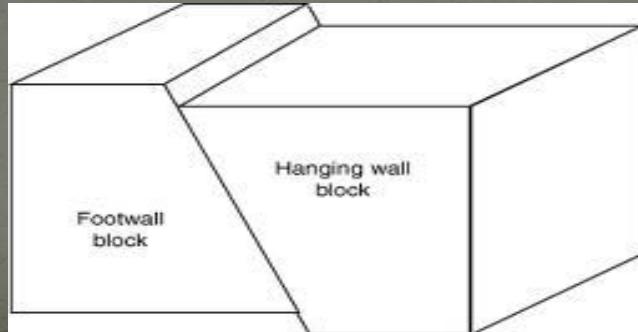
How Faults Form:

1. Convection currents in the asthenosphere move plates.
2. Plate motion causes stress to build (increase)
3. Stress causes faults (cracks in the lithosphere)



Parts of a Fault

- Most faults have two parts:
 1. Hanging wall – block of rock on top
 - The hanging wall is wider at the top.
 2. Footwall – block of rock on bottom
 - The footwall is wider at the bottom.



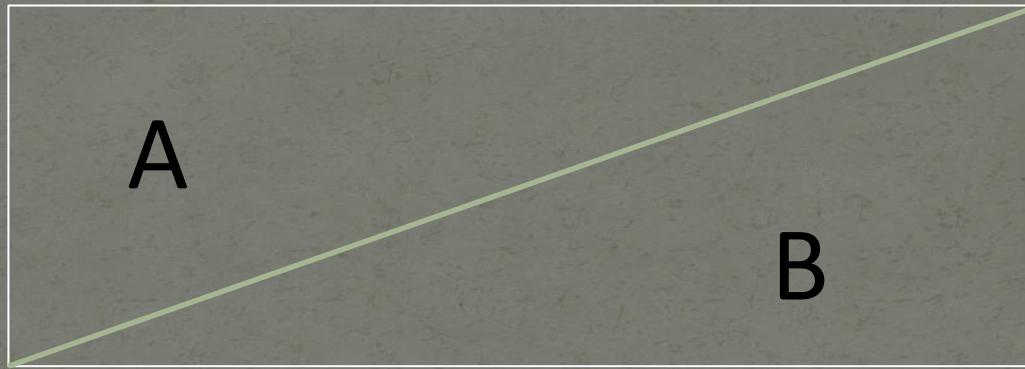
Pair-Share

How can you tell the difference between the hanging wall and the footwall?

- The hanging wall is _____, but the footwall is _____.*

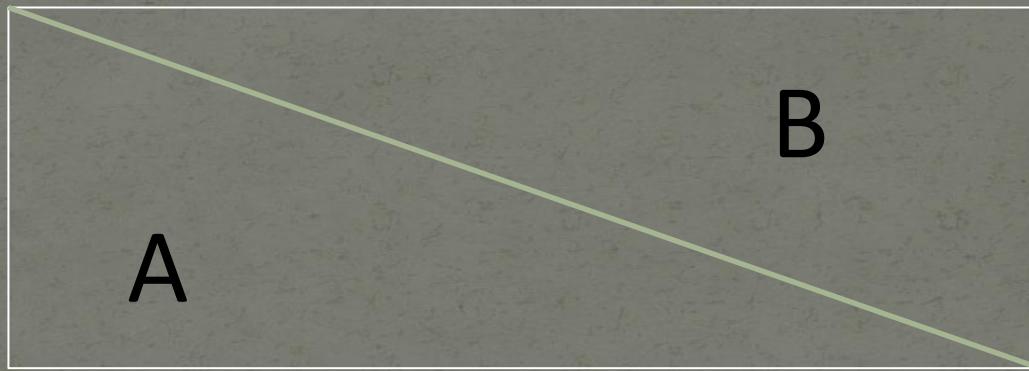
- The hanging wall is _____, whereas the footwall _____.*

Whiteboards



Which side is the hanging wall? How do you know?

Whiteboards



Which side is the footwall? How do you know?

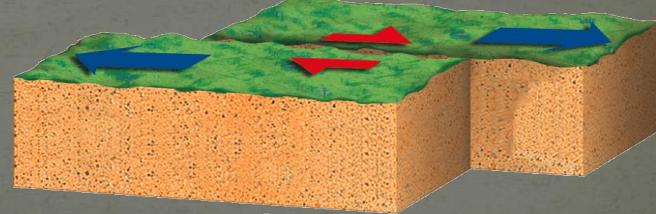
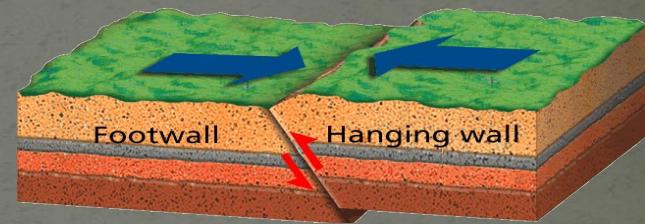
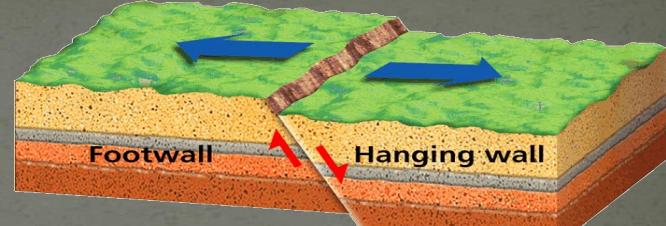
Whiteboards



Which side is the footwall? How do you know?

Types of Faults:

1. Normal fault - hanging wall slips down.
2. Reverse (thrust) fault - hanging wall is thrust up.
3. Strike-slip fault- both rocks slip sideways past each other.



Strike-slip fault
Rocks on either side of a strike-slip fault slip past each other.

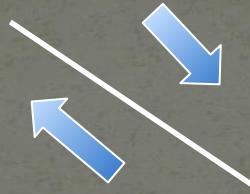
#1: Look at the graphic organizer for the necessary information.

#2: Read the text and fill in the graphic organizer.

Type of fault	Plate Boundary	Stress	Description	Sketch	Example
Normal					
Reverse					
Strike-slip					

Directions for Note-Taking

1. Open to p. 176-177 in the textbook.
2. Take turns reading each paragraph out loud.
3. Fill in the graphic organizer using the information from the text and the figures at the bottom of the page.

Type of fault	Plate Boundary	Stress	Description	Sketch	Example
Normal	divergent	tension	<ul style="list-style-type: none"> Fault is at angle Hanging wall slips down 		Owen's Valley
Reverse					
Strike-slip					

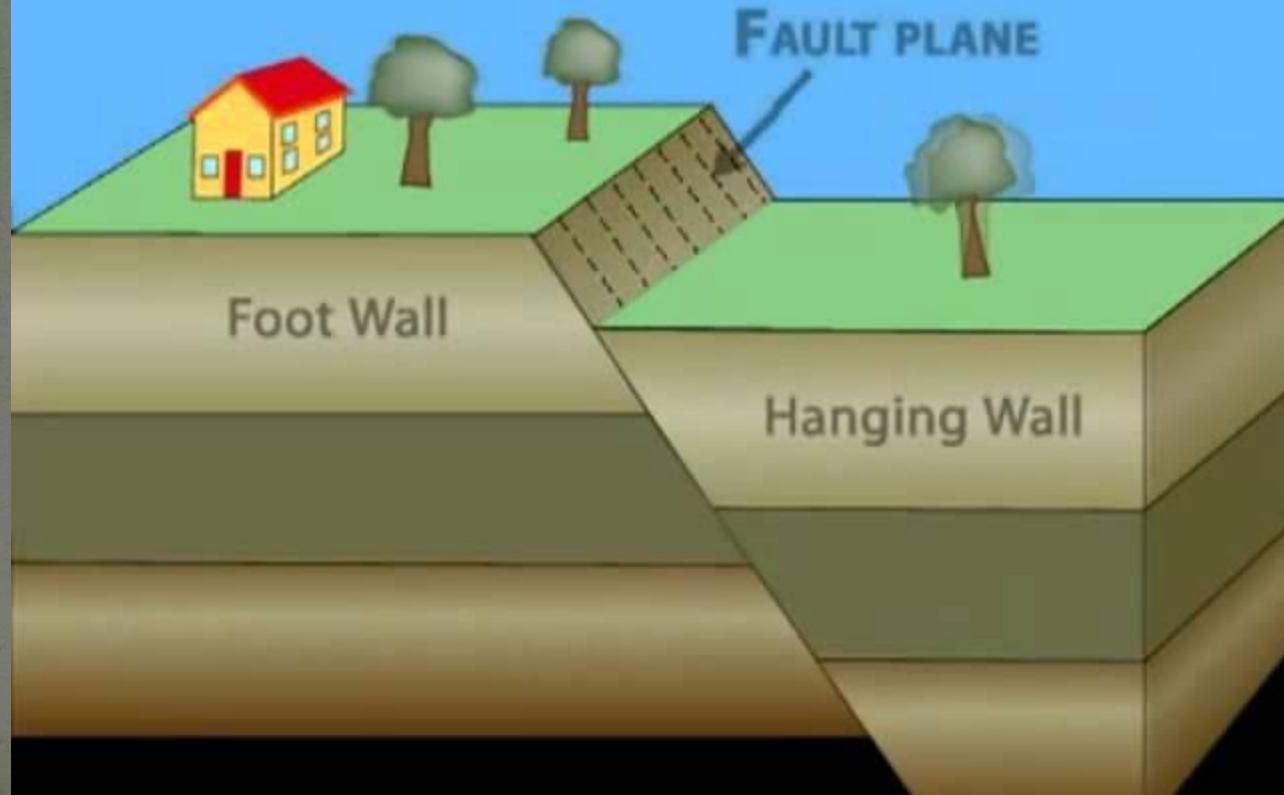
Owens Valley, California

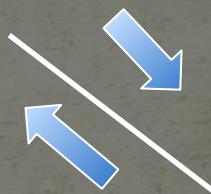
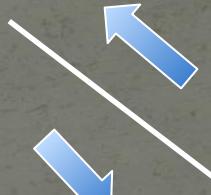




Geology

earth
scope



Type of fault	Plate Boundary	Stress	Description	Sketch	Example
Normal	Divergent	tension	<ul style="list-style-type: none"> Fault is at an angle Movement causes hanging wall to slip down. 		Owen's Valley
Reverse	convergent	compression	<ul style="list-style-type: none"> Fault is at an angle. Hanging wall slides up and over footwall 		Rocky Mountains Klamath Mountains
Strike-slip					



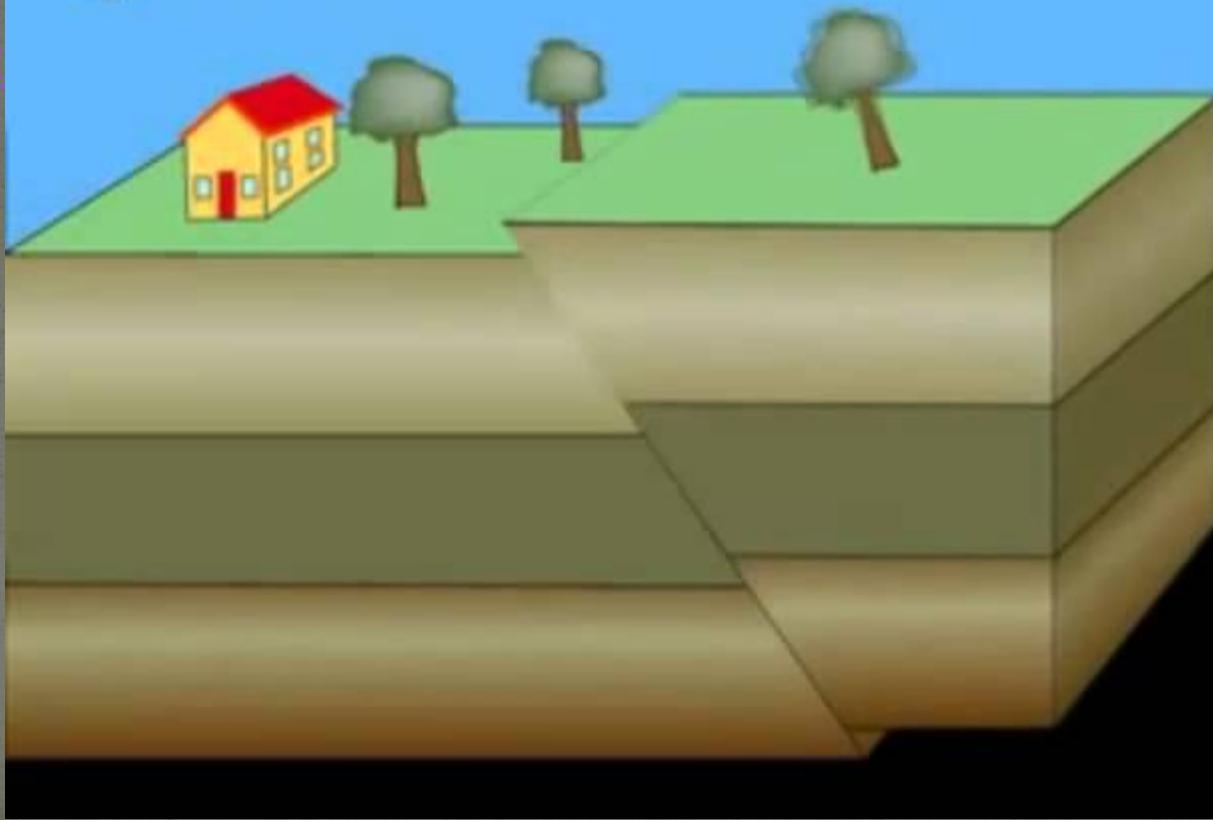


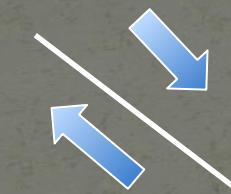
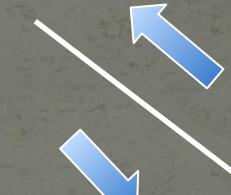
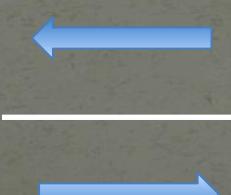
Geology

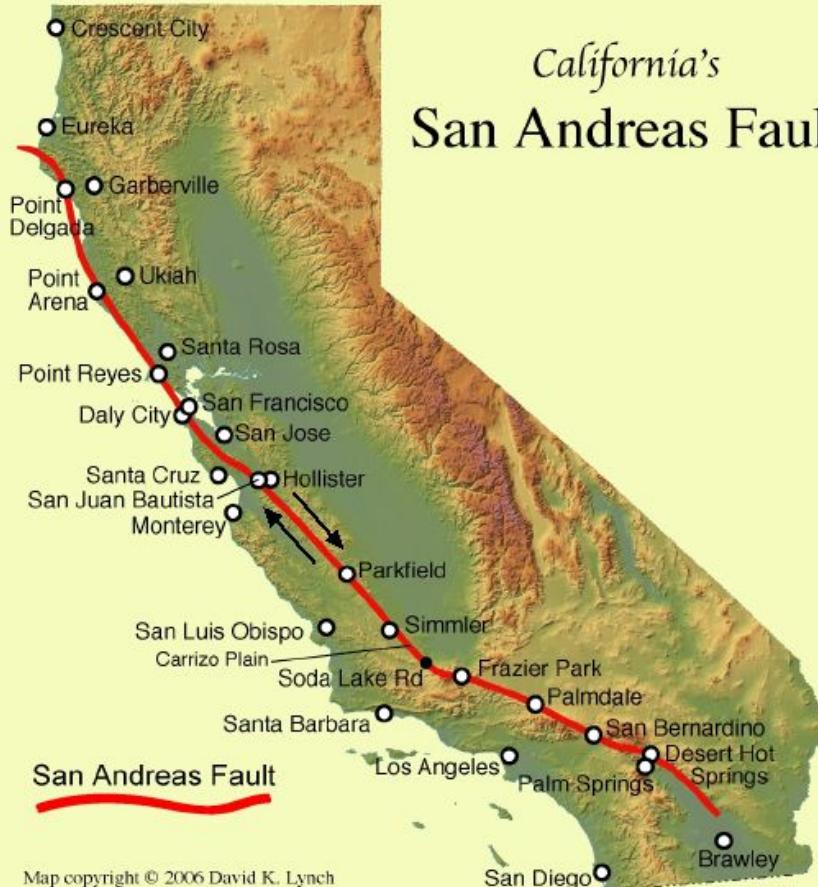
earth
scope

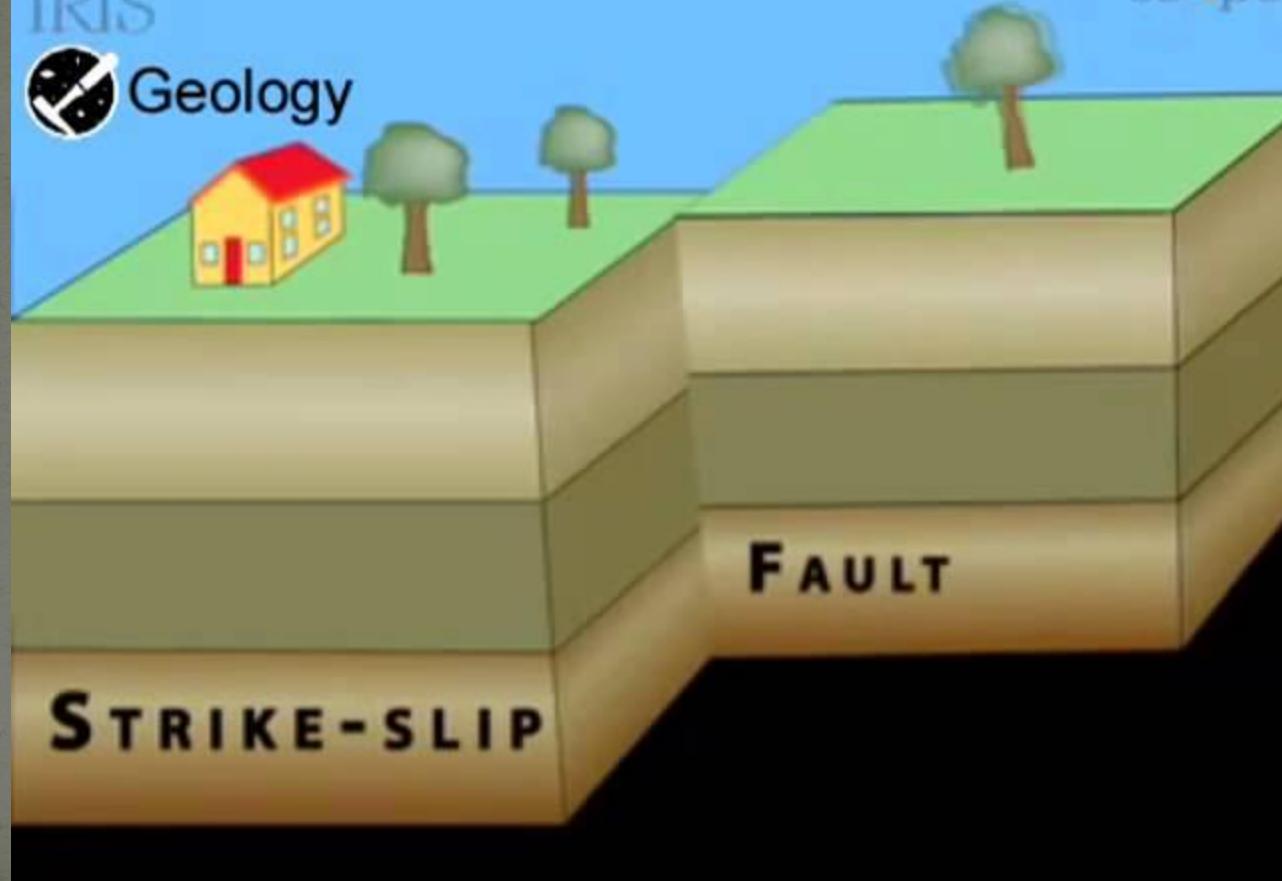
[htt](#)

[fault/](#)



Type of fault	Plate Boundary	Stress	Description	Sketch	Example
Normal	divergent	tension	<ul style="list-style-type: none"> Fault is at angle Hanging wall slips down 		Owen's Valley
Reverse	convergent	compression	<ul style="list-style-type: none"> Fault is at angle Hanging wall slides up and over footwall 		Klamath Mountains Rocky Mountains
Strike-slip	transform	shearing	<ul style="list-style-type: none"> Plates slip past each other. Little up or down motion. 		San Andreas Fault





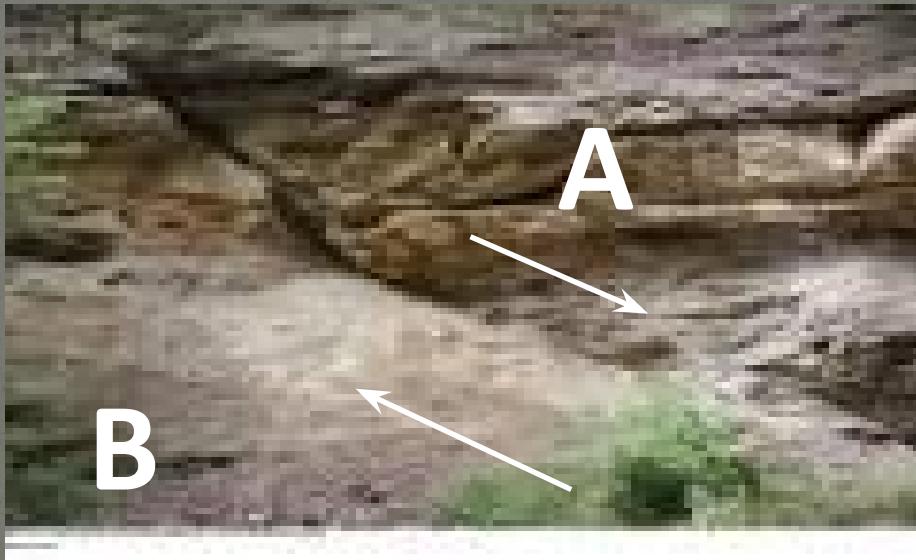
Pair-Share

Which side is the hanging wall? Which side is the footwall? How do you know?



Pair-Share

What type of fault is this? How do you know?



Pair-Share

What type of fault is this? How do you know?



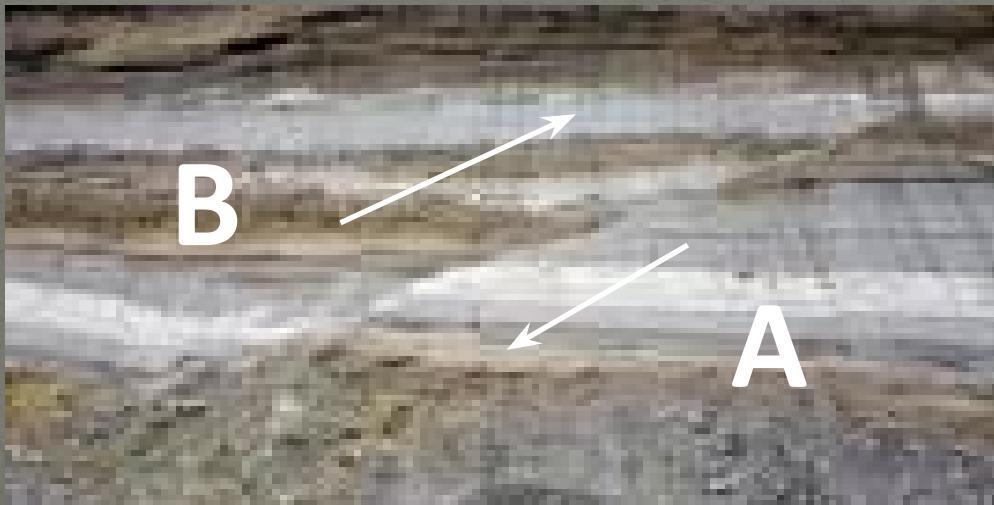
Pair-Share

Which side is the hanging wall? Which side is the footwall?



Pair-Share

What type of fault is this? How do you know?



Take Out:

- Pencil
- Notebook
- HW: Faults WS

Steps to Ready:

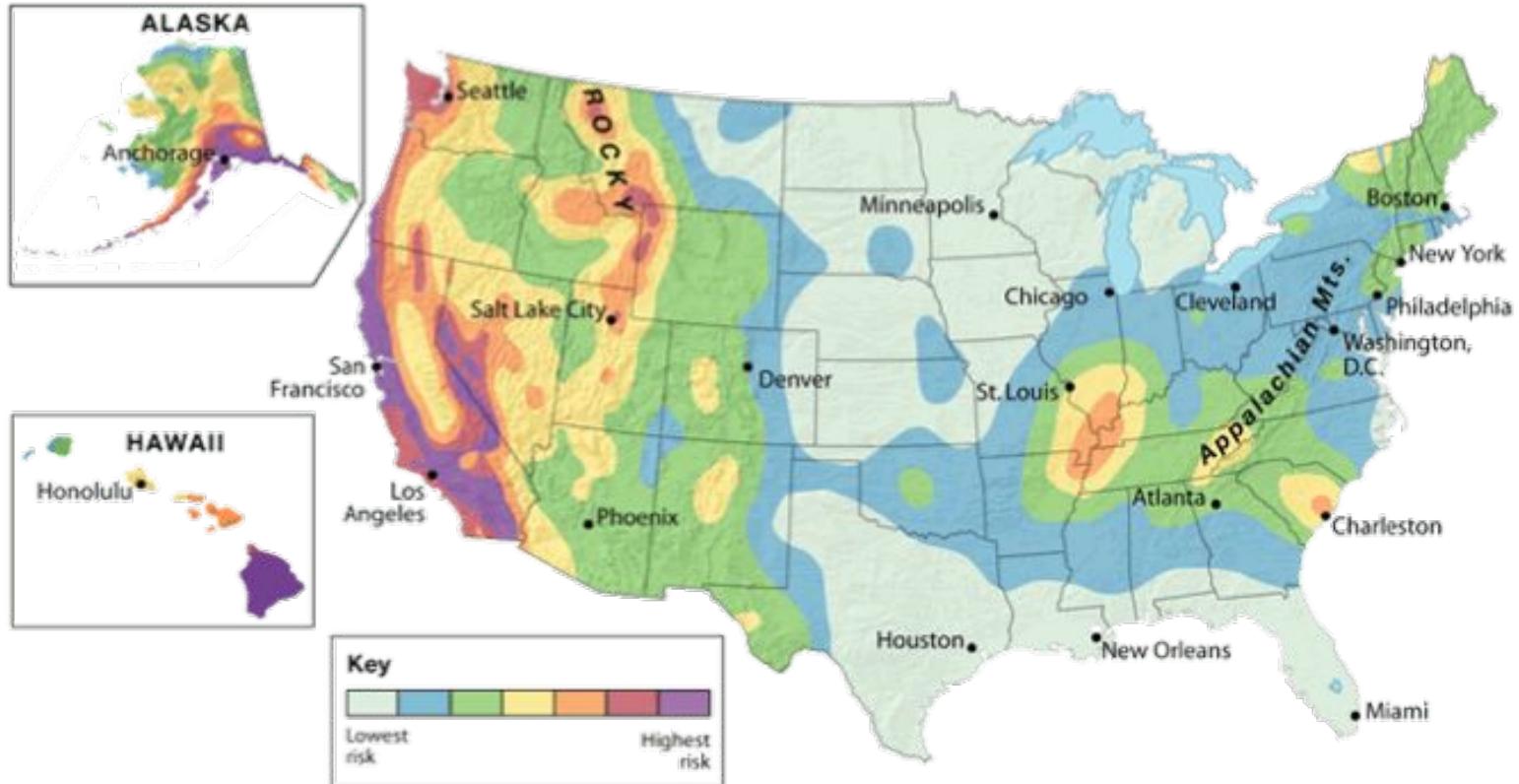
1. Turn in HW
2. Open your notebook to your Faults Notes

Agenda

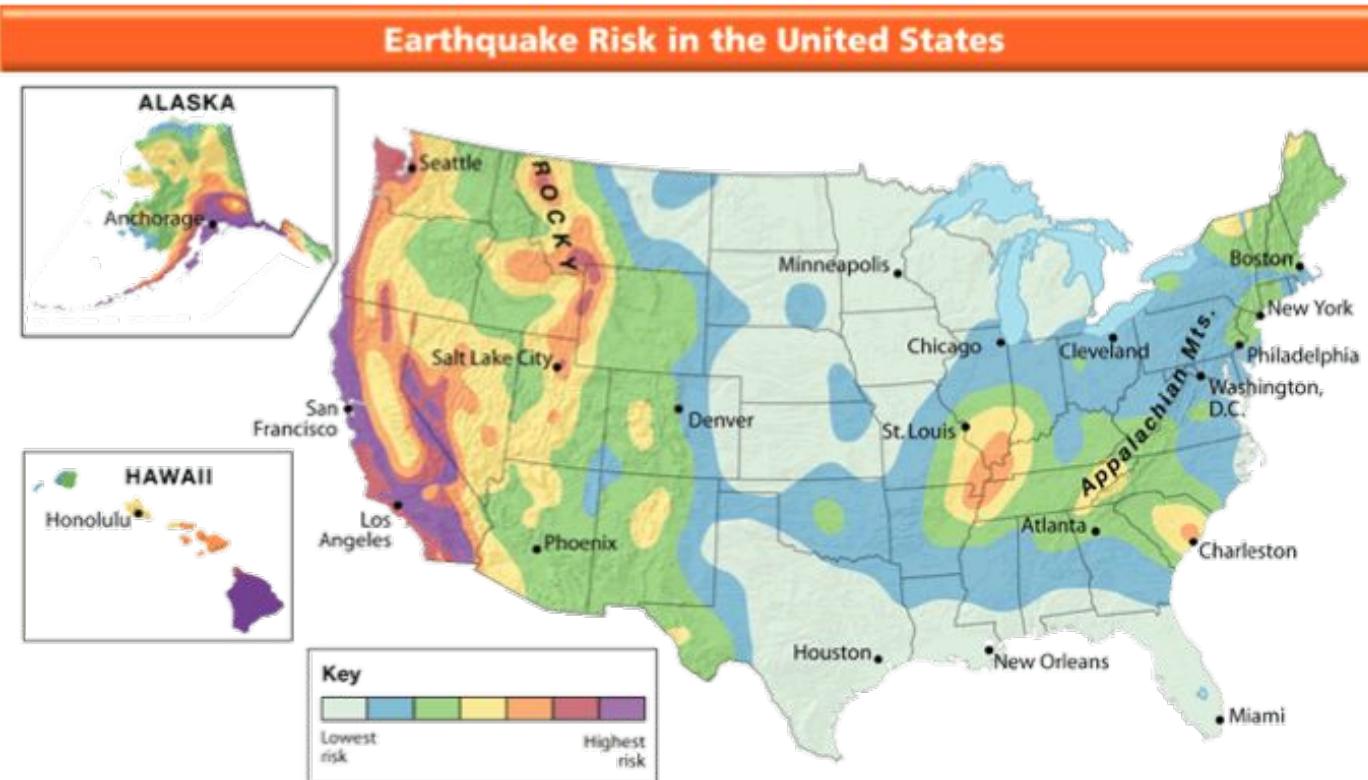
1. WARM-UP
2. Earthquake Hazards Map
3. Three Faults Model Lab

Go to page 197

Earthquake Risk in the United States

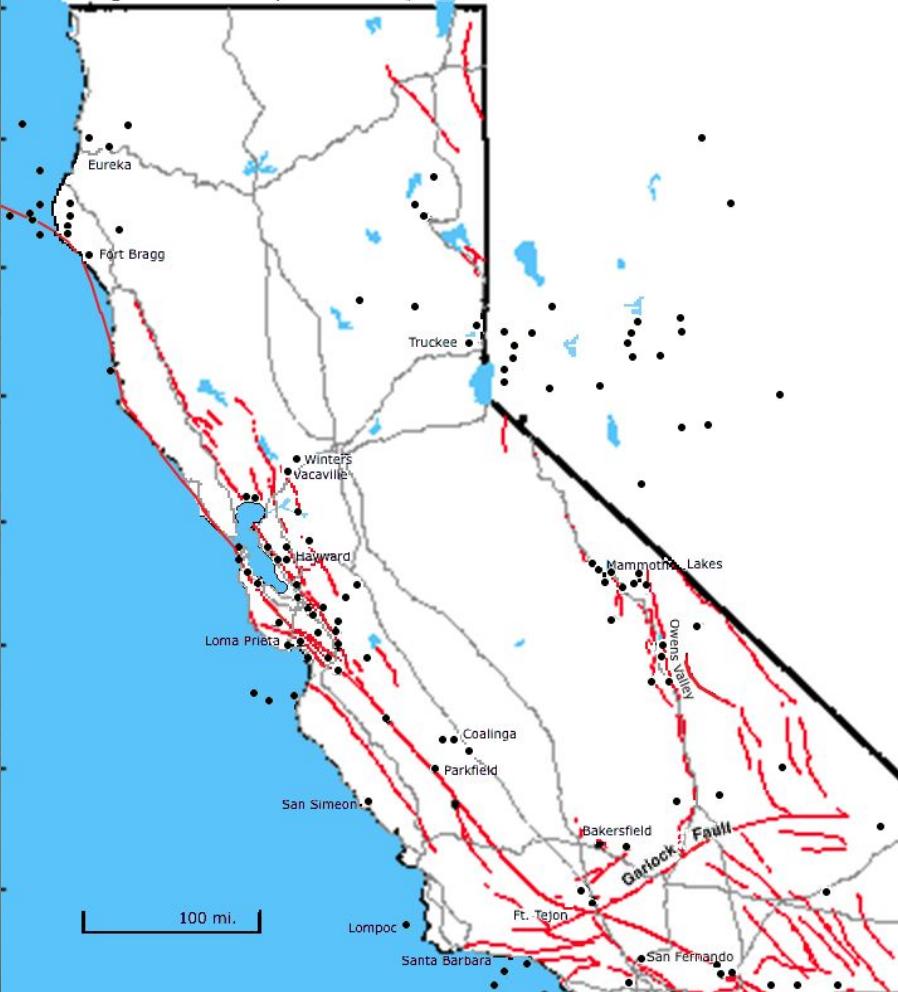


Which cities have the highest earthquake risk? Why?

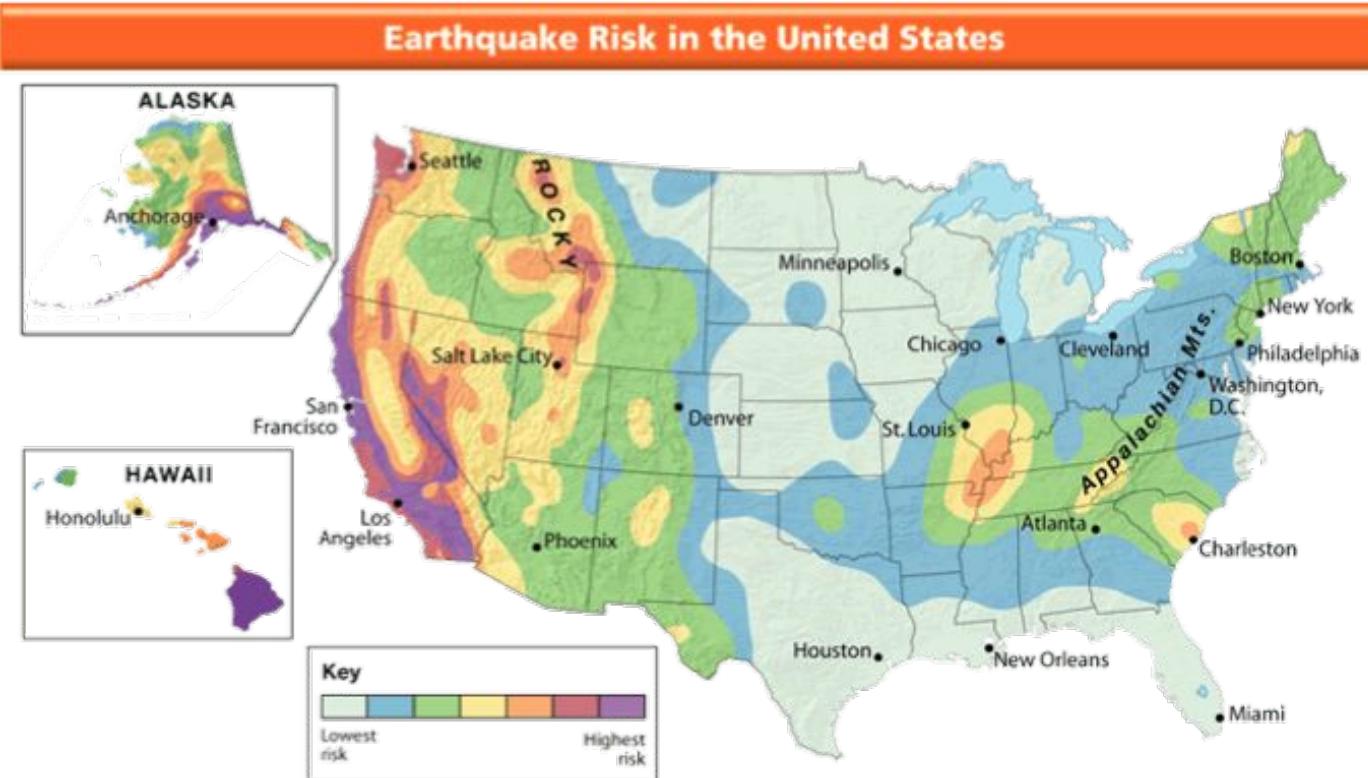


San Francisco and Los Angeles

Significant California/Nevada Earthquakes 1769-1999

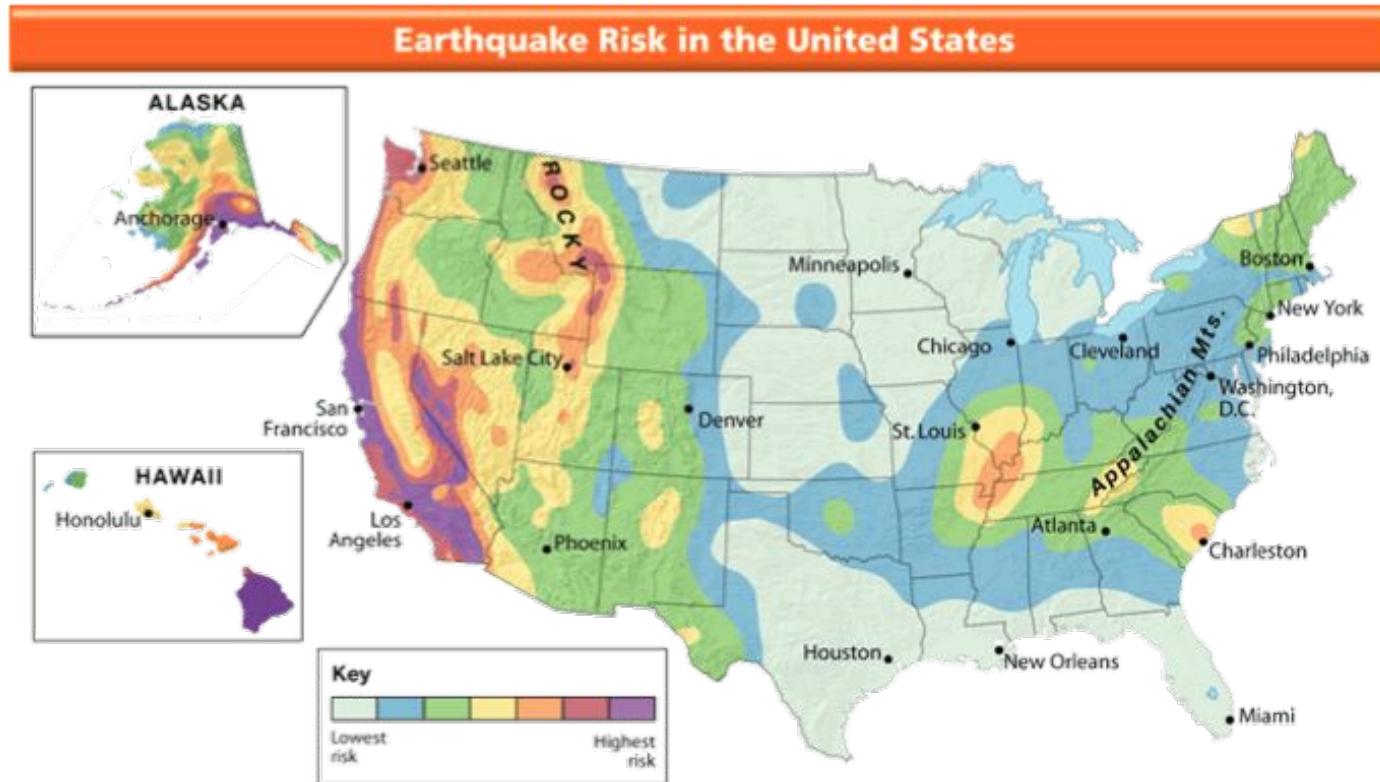


Which cities have the lowest earthquake risk? Why?

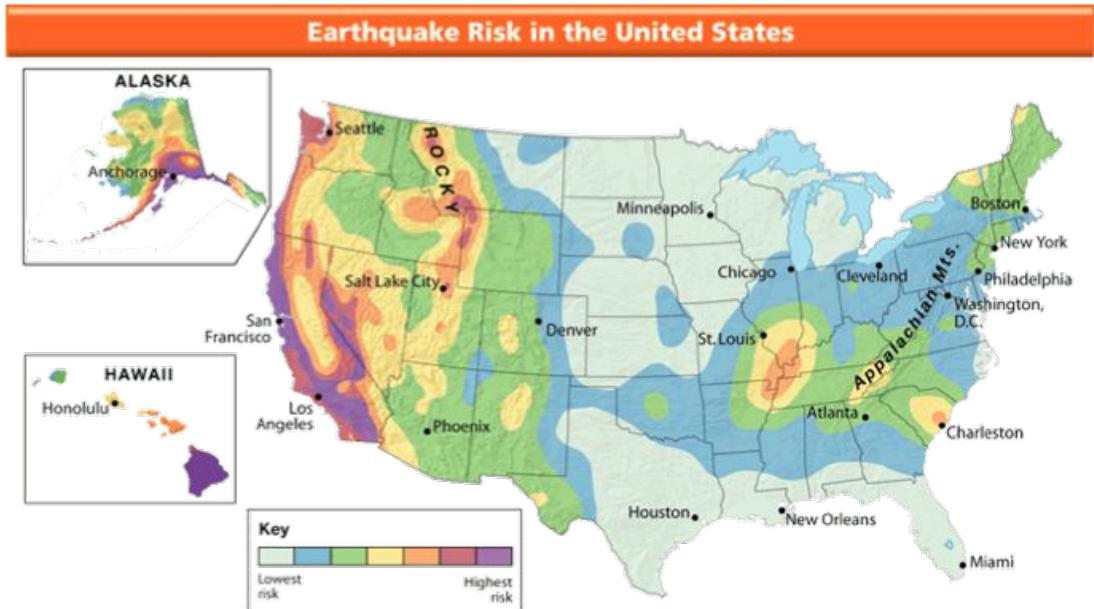
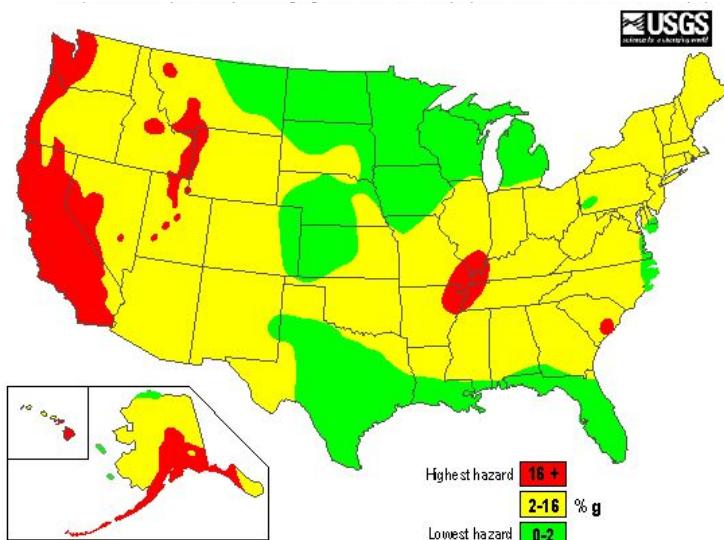


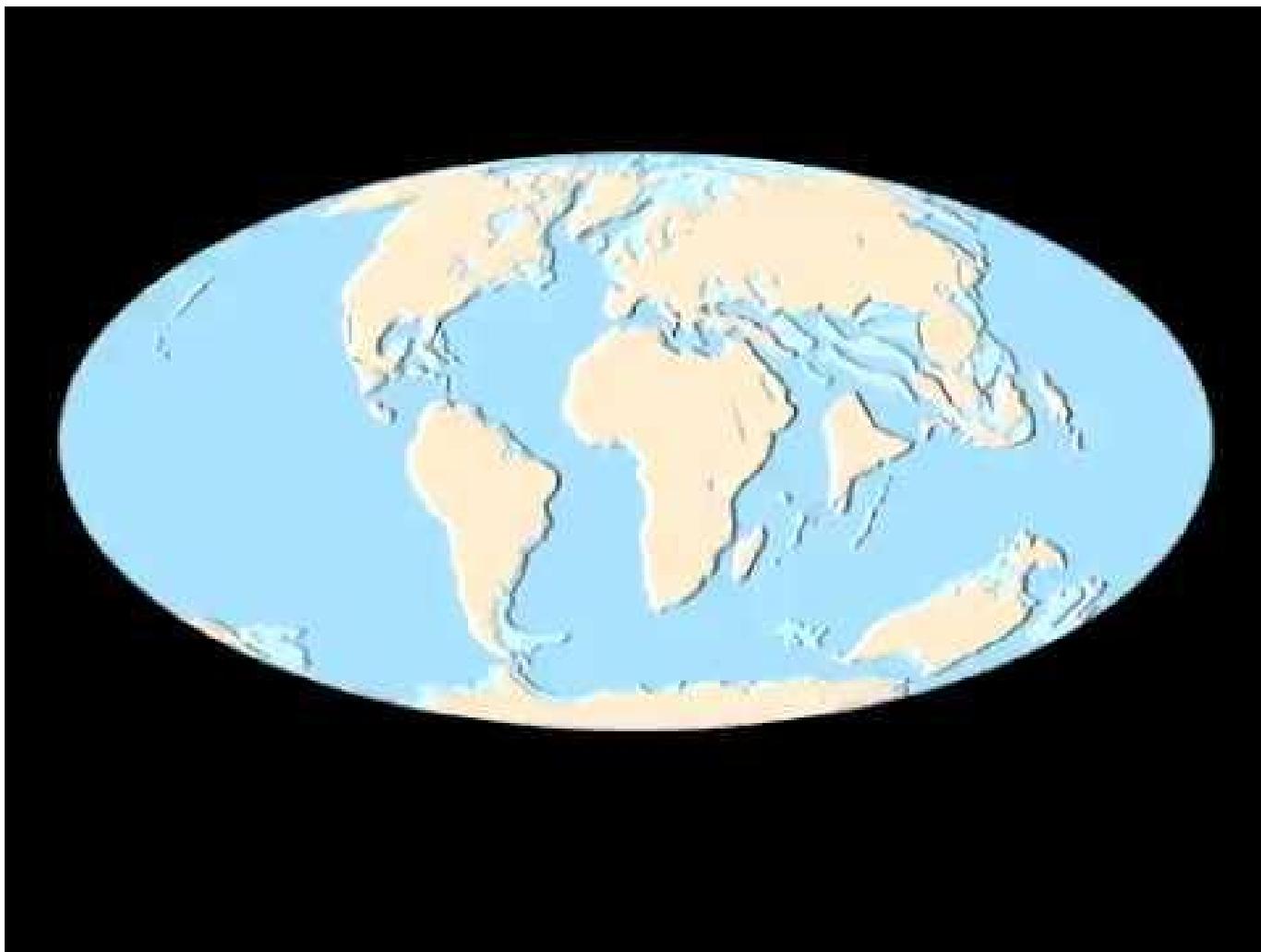
Minneapolis, Houston, Miami

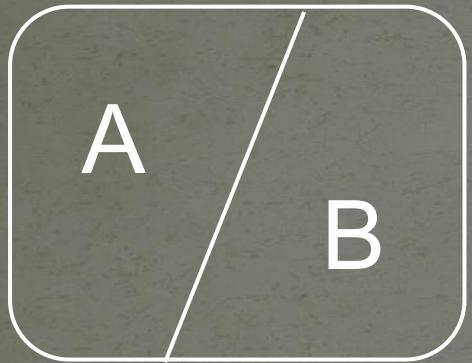
Why do you think there is such a high earthquake risk between St. Louis and Atlanta?



New Madrid Fault





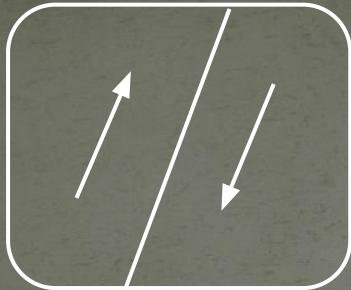


1. Which side is the hanging wall?

A

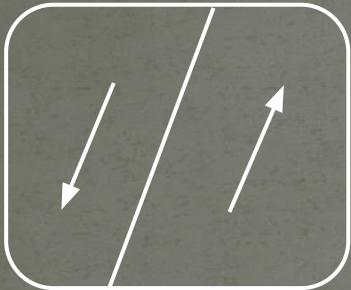
2. Which side is the foot wall?

B



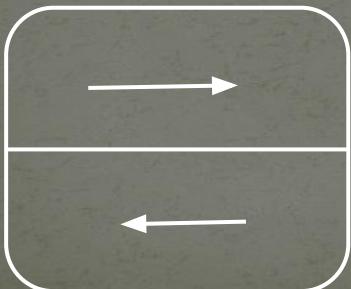
What type of fault is this?

Reverse fault



What type of fault is this?

Normal fault

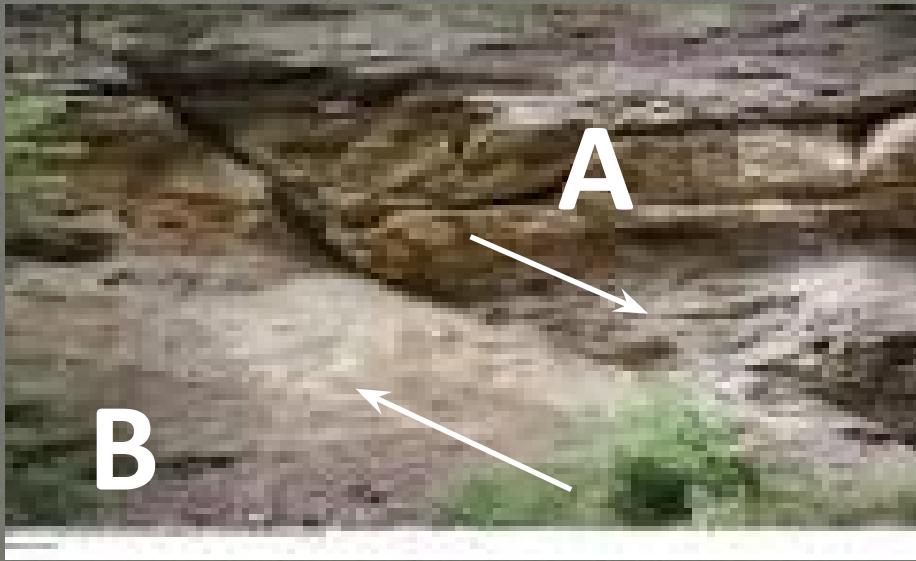


What type of fault is this?

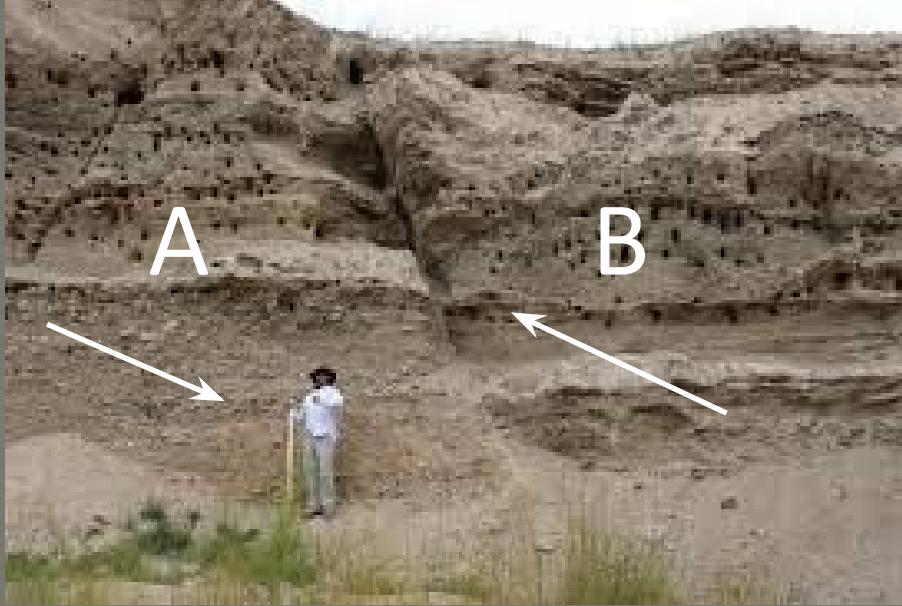
Strike-slip fault

Pair-Share

What type of fault is this? How do you know?



Pair-Share



What type of fault is this? How do you know?