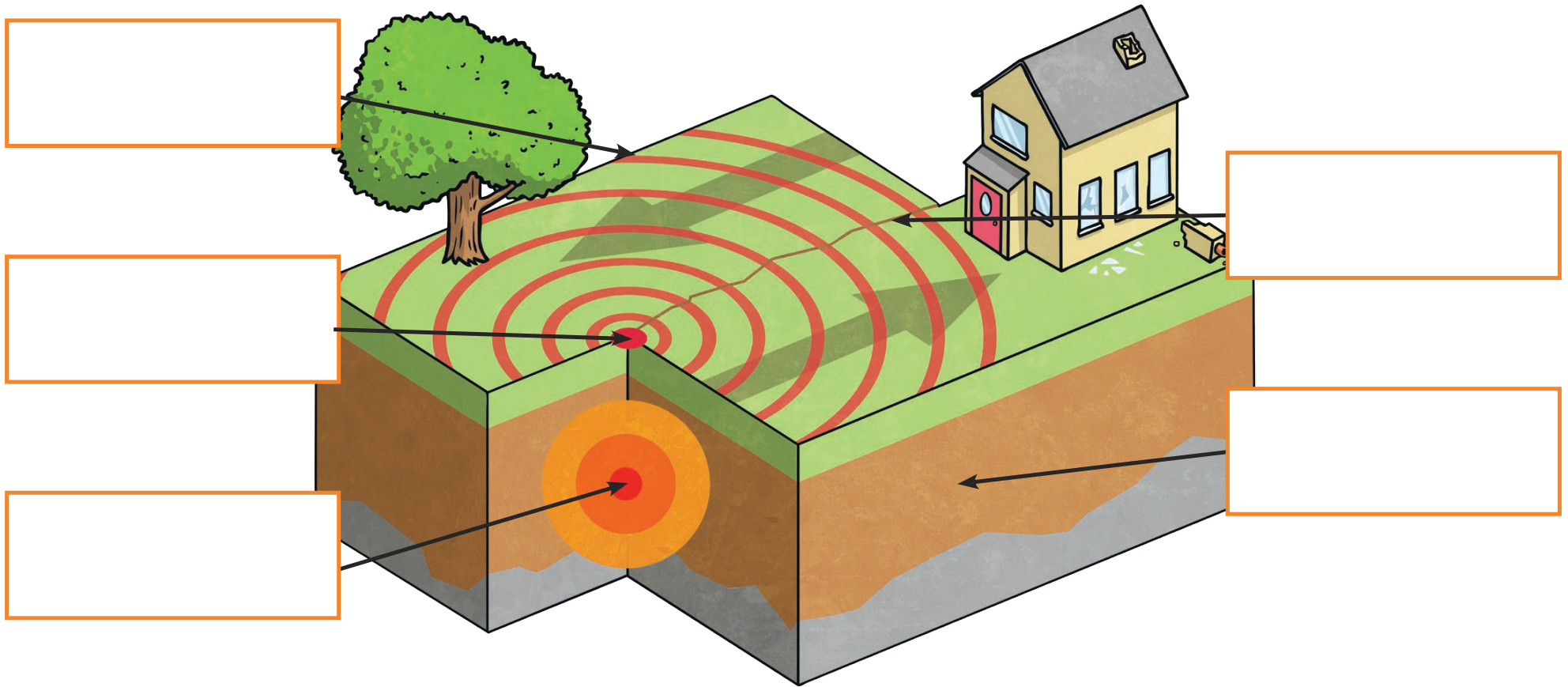


# Earthquake Cross-Section

Cut out the labels and glue them onto the correct parts of the earthquake.



earth's crust

epicentre

hypocentre

fault line

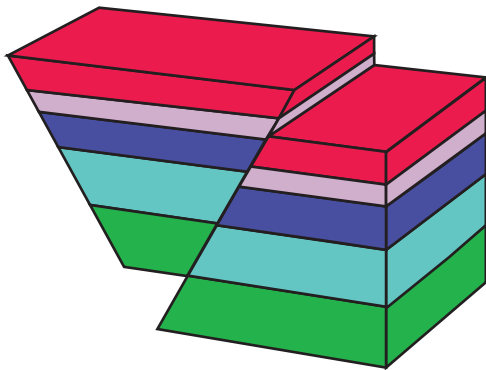
tectonic plate

## Teacher Reference Page

### Fault

A fracture in the Earth's crust where one side moves relative to the other. Sudden movements in faults cause earthquakes.

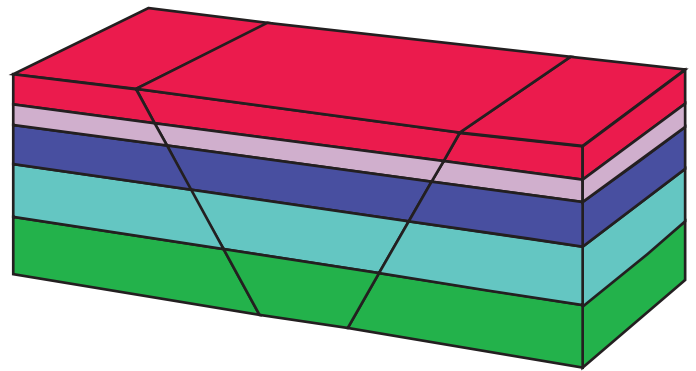
The fault plane in this diagram is the area of contact between the two fault blocks. Fault planes may contain striations or slickensides that can indicate the direction of fault motion.



### Fault Blocks

Fault blocks represent blocks of the Earth's crust. Each color represents a layer of the Earth, while the diagonal black lines represent faults in the Earth's crust.

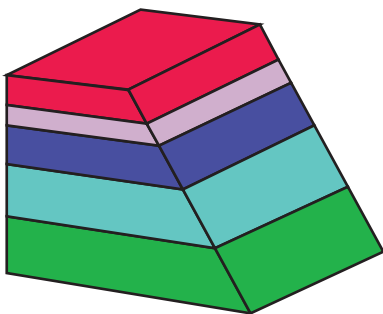
In this position, the fault blocks represent unfaulted, or unmoved, crust.



### Foot Wall

A foot wall is a block of crust that lies underneath a fault plane.

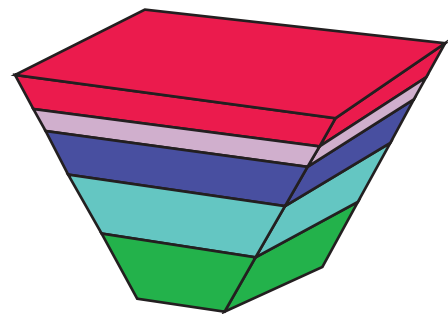
*Hint for Identification:* If a person were able to stand on the fault plane, their feet would be on the foot wall.



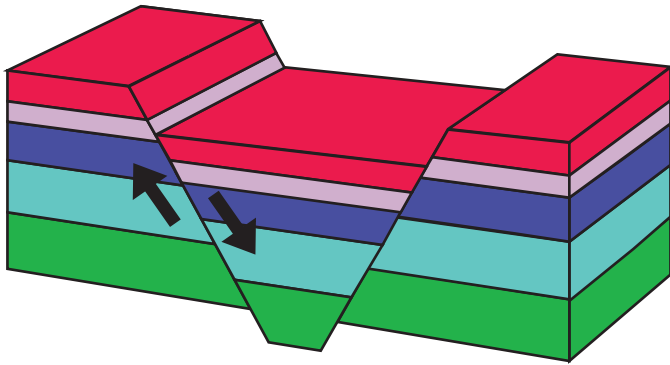
### Hanging Wall

A hanging wall is a block of crust that is located above a fault plane. Its shape rests or hangs on the foot wall.

*Hint for Identification:* If a person were able to stand on the fault plane, they could hang onto the hanging wall.



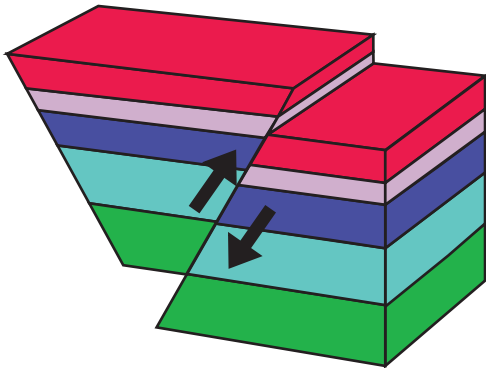
## Teacher Reference Page – Types of Faults



### Normal Fault

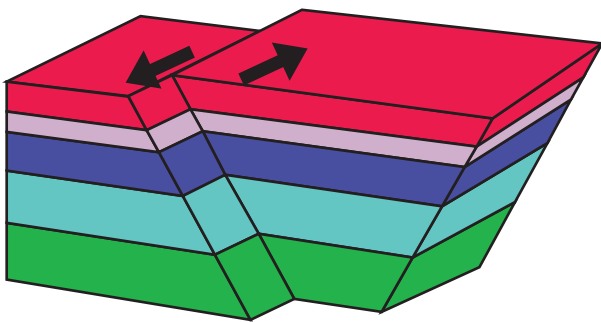
In this position, the hanging wall moved down relative to the foot wall, indicating normal fault activity. This picture shows that the central hanging wall moved down relative to the other foot walls. When a hanging wall moves down, a cliff face is formed, called a “fault scarp.”

All of the known faults in Indiana are normal faults.



### Reverse Fault

In this position, the hanging wall moved up relative to the foot wall, indicating reverse fault activity. This picture shows that the central hanging wall was pushed up relative to the foot wall.



### Strike-Slip Fault

In this position, the blocks of crust have laterally moved relative to each other, indicating strike-slip fault activity. Lateral, or side-to-side, motion does not produce a fault scarp but can create weaker areas of rock where fault blocks slide past one another.

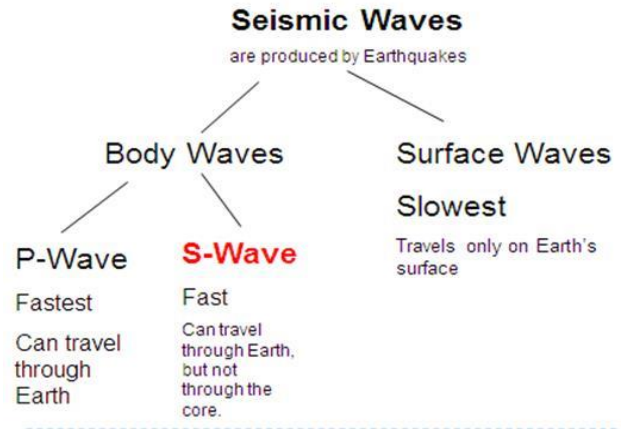
The Earth is complex! In real life, faults can combine several of these movements. For example, the famous San Andreas Fault in California has a strike-slip motion 95 percent of the time and a reverse fault motion 5 percent of the time.

# Seismic Waves and Earth's Interior PPT

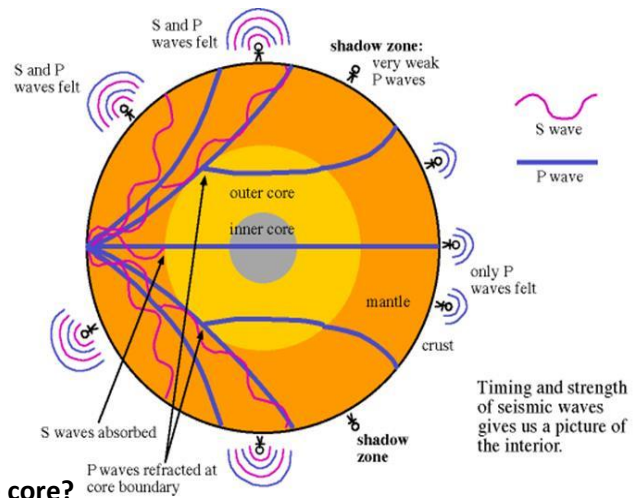
Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

**Essential Question:** How do I describe seismic waves?

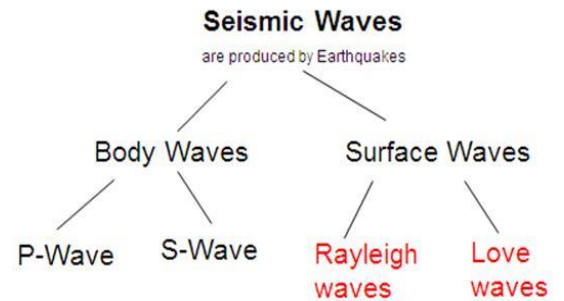
1. What are the two types of seismic waves?  
\_\_\_\_\_
2. What are the two types of body waves?  
\_\_\_\_\_
3. What produces seismic waves?  
\_\_\_\_\_
4. Which seismic wave can travel through earth?  
\_\_\_\_\_



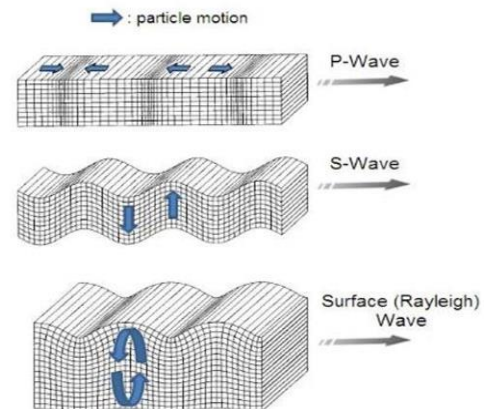
5. Which seismic wave can travel to the mantle, not the outer core ( liquid iron)?  
\_\_\_\_\_
6. Which seismic wave only travel on the earth surface?  
\_\_\_\_\_
7. What are the two types of surface waves?  
\_\_\_\_\_
8. Which seismic waves stay on Earth's Surface?  
\_\_\_\_\_
9. Which seismic wave refracts and cannot penetrate the core?  
\_\_\_\_\_



10. Which seismic wave can penetrate the core but refracts?  
\_\_\_\_\_
11. In what directions do the S, P , and Surface waves move?  
S wave: \_\_\_\_\_  
P wave: \_\_\_\_\_  
Surface wave: \_\_\_\_\_



12. What Are Seismic Waves?  
\_\_\_\_\_  
\_\_\_\_\_
13. Which is faster S or P wave?  
\_\_\_\_\_
14. Where do seismic waves travel slowest and fastest?  
\_\_\_\_\_  
\_\_\_\_\_
15. Which type of wave can penetrate the outer and inner core?  
\_\_\_\_\_



16. What happens to S and P waves as they travel inside earth?

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17. How are we affected by Earthquakes?

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18. What are earthquake waves?

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19. How fast are seismic waves?

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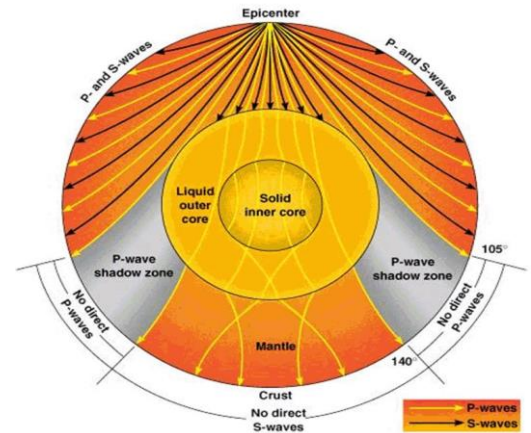
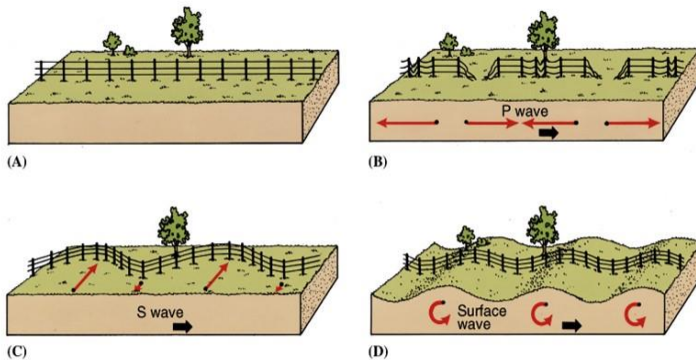
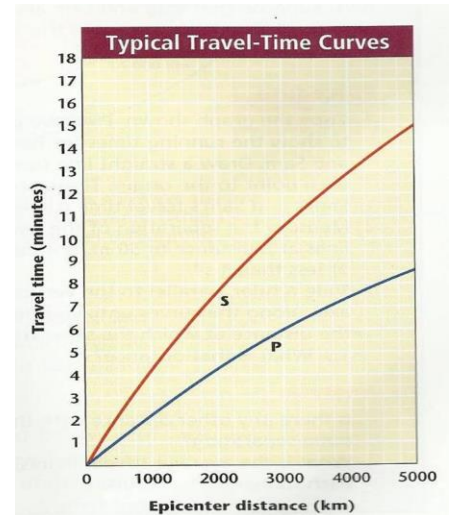
20. Describe the layers of Earth. (solid, liquid, thick, thin, iron, rocks)

Crust: \_\_\_\_\_

Mantle: \_\_\_\_\_

Outer core: \_\_\_\_\_

Inner core: \_\_\_\_\_



**Multiple Choice:** Write the letter of your answer on the space before the number.

\_\_\_\_ 21. The epicenter of the earthquake is directly below the focus.

- A. True      B. false

\_\_\_\_ 22. Waves move out through the ground from the source of an earthquake.

- A. True      B. false

\_\_\_\_ 23. One of the results of an earthquake can be...

- A. Property Damage    B. Landslide    C. Tsunami    D. All of the Above

\_\_\_\_ 24. The machine that measures the strength of an earthquake is called \_\_\_\_.

- A. Radiograph      B. Seismometer      C. Electrocardiograph

\_\_\_\_ 25. Earthquake foci ( focus, singular) are...

- A. More than 200 Miles      C. Deep 50-200 Miles Deep  
 B. C. 0-50 Miles Deep      D. All of the Above

\_\_\_\_ 26. Many earthquakes happen along the borders of...

- A. Countries    B. Tectonic Plates    C. Climate Zones    D. None of the Above

\_\_\_\_ 27. Faults are only found near the edges of tectonic plates.

- A. True      B. False

\_\_\_\_ 28. Energy waves from large earthquakes can move through large portions of the Earth.

- A. True      B. False

\_\_\_\_ 29. Earthquakes can happen when the strain on weak rocks forces them to break and fracture.

- A. True      B. False

\_\_\_\_ 30. Earthquakes can happen when there is a large amount of...

- A. Volcanic Activity    B. High Tides    C. Surface Construction    D. All of the Above

R.Angat