Plate Detectives: Evidence Continents Moved

Grade 8 Science | Fossils, rocks & seafloor clues



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Today we will...

WE ARE LEARNING TO

- Analyze fossil and rock matches across oceans
- Interpret continental shapes and seafloor structures as motion evidence

SUCCESS LOOKS LIKE

- I can match fossil and rock data to past plate positions
- I can explain how seafloor spreading shows plates move







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How Detectives Prove Motion

1. Fit continental shapes like puzzle pieces
2. Match same fossils on far-apart continents
3. Match same rock types and ages
4. Check seafloor for new crust clues







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Do these coasts fit?

- South America and Africa look like torn puzzle pieces. If joined, fossils and rocks line up too.







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Strongest Clue?

Which clue most convinces you continents were once joined?

A Coastlines fit like puzzle pieces

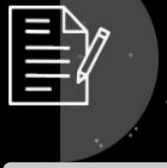
B Same fossils found on far-apart continents

C Same rocks found on far-apart continents

D New seafloor forming at ocean ridge







Vote with your hands, then explain why.

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Fossils, Rocks, and Shapes



▶ 0:00 – 4:36

- Watch for fossil matches across oceans
- Watch for rock matches across oceans
- Listen for why shape alone is not enough

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DID YOU KNOW?

Plates creep only 1 to 6 inches per year

At 2 to 15 centimeters a year, plates can still shift continents thousands of miles over millions of years.

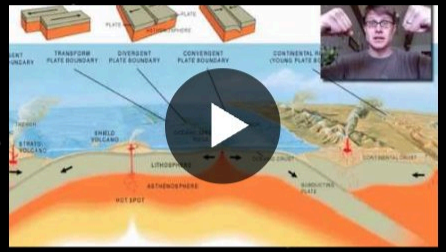






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Seafloor spreading in action



▶ 1:00 – 5:40

- Spot the ridge where new crust forms
- Notice oldest crust farthest from ridge
- Connect conveyor motion to continents moving

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Your task

In pairs, build a claim that continents moved using all four clues.

1. Sketch Africa and South America fitted together
2. Add labels for matching fossils and matching rocks
3. Draw arrows and new crust at the ridge to show motion







10 min

In pairs

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BIG IDEA

Continents ride like passengers on moving plates.







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What could this be?

This 40,390-mile underwater mountain wraps around Earth. New rock forms here. What is it?

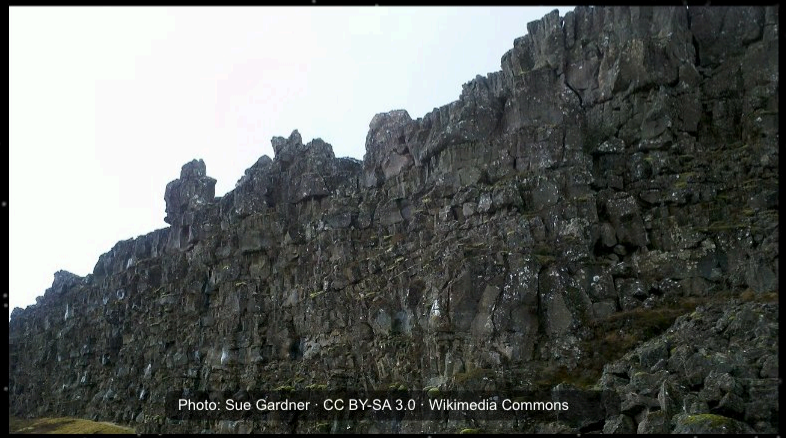


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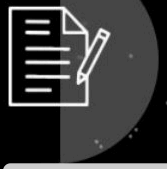
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QUICK QUIZ

1. Why do matching fossils in Brazil and West Africa support past motion?
2. What does matching rock type and age on two continents show?
3. What seafloor evidence shows plates are moving now?
4. Where do most earthquakes and volcanoes happen, and why?







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