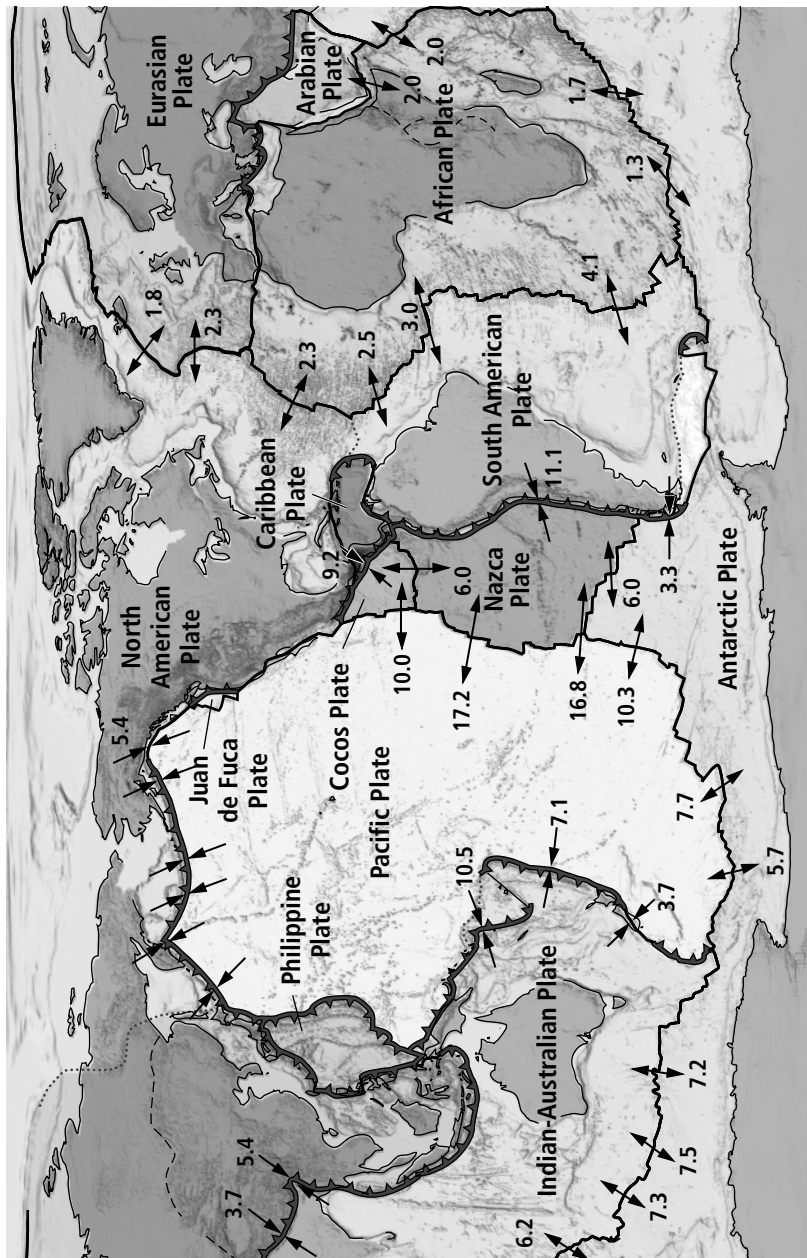


Use with Chapter 17
Section 17.3

Earth's Tectonic Plates

- ↔ Divergent boundary
- Convergent boundary
- ~ Ridge axis
- Transform boundary
- ▬ Subduction zone
- - - Zones of extension within continents
- ⋯ Uncertain plate boundary
- 5.0 Rate of movement (cm/yr)



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Earth's Tectonic Plates

1. In what direction is the Pacific Plate moving?

2. Are the Pacific Plate and the Antarctic Plate moving toward each other, away from each other, or past each other? Explain your answer.

3. What type of boundary separates the South American Plate from the Nazca Plate? Explain your answer.

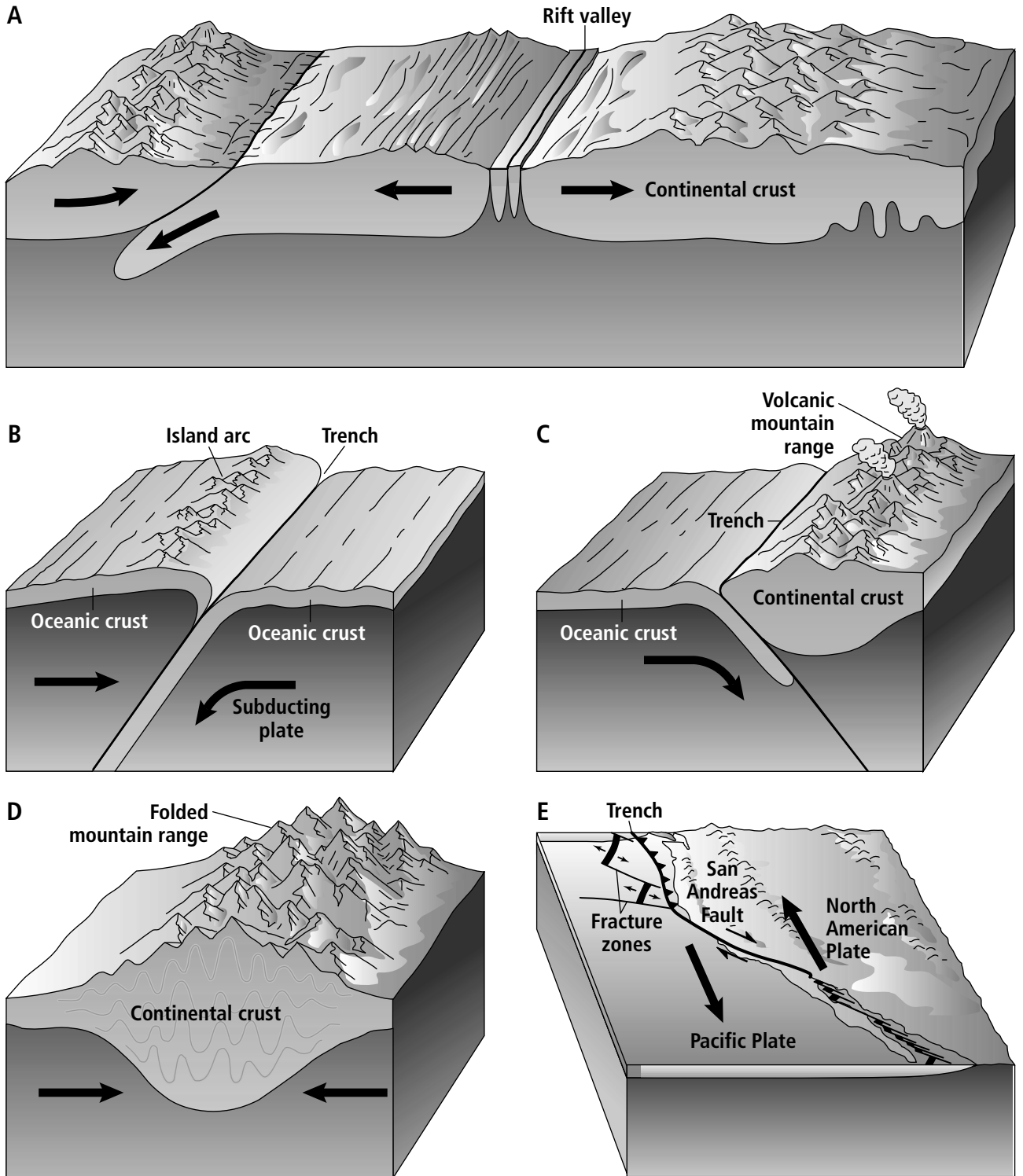
4. Describe the relative motion between the North American Plate and the Pacific Plate.

5. Between which plates is the relative motion the fastest?

6. Would you predict that, over time, the distance between New York and Miami will increase, decrease, or stay the same? Explain your answer.

7. Would you predict that, over time, the distance between New York and Lisbon, a city in southern Europe, will increase, decrease, or stay the same? Explain your answer.

Types of Plate Boundaries



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Types of Plate Boundaries

1. Which diagram shows a divergent boundary? How do the plates move relative to each other at this type of boundary?

2. At a divergent boundary, what feature forms when two oceanic plates are involved? When two continental plates are involved?

3. Which diagram shows oceanic-oceanic convergence? Describe what occurs at this type of plate boundary.

4. The Himalayas are mountains that are forming as a result of the collision of the Indian and Eurasian continental plates. Which diagram shows a plate boundary like the one involved in the formation of these mountains?

5. Which diagram shows oceanic-continental convergence? Describe what occurs at this type of plate boundary.

6. Which diagram shows a transform boundary? Describe what occurs at this type of plate boundary.

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TEACHING TRANSPARENCY

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Section 17.3

Earth's Tectonic Plates

1. In what direction is the Pacific Plate moving?

west or northwest

2. Are the Pacific Plate and the Antarctic Plate moving toward each other, away from each other, or past each other? Explain your answer.

The arrows along the plate boundaries point in opposite directions, indicating that the Pacific Plate and the Antarctic Plate are moving away from each other.

3. What type of boundary separates the South American Plate from the Nazca Plate? Explain your answer.

Arrows along the boundary between the South American Plate and the Nazca Plate point toward each other, indicating that the boundary between these two plates is a convergent boundary.

4. Describe the relative motion between the North American Plate and the Pacific Plate.

These two plates are sliding past each other in some areas and converging in others.

5. Between which plates is the relative motion the fastest?

between the Nazca Plate and the Pacific Plate

6. Would you predict that, over time, the distance between New York and Miami will increase, decrease, or stay the same? Explain your answer.

The distance between New York and Miami will likely stay the same because they are on the same plate.

7. Would you predict that, over time, the distance between New York and Lisbon, a city is southern Europe, will increase, decrease, or stay the same? Explain your answer.

The distance between New York and Lisbon will increase because the cities are on different plates and the plates are moving away from each other.

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Types of Plate Boundaries

1. Which diagram shows a divergent boundary? How do the plates move relative to each other at this type of boundary?

A; The plates move apart from one another.

2. At a divergent boundary, what feature forms when two oceanic plates are involved? When two continental plates are involved?

an ocean ridge; a rift valley

3. Which diagram shows oceanic-oceanic convergence? Describe what occurs at this type of plate boundary.

B; Two oceanic plates converge. One of the plates is subducted under the other. A deep-sea trench forms and magma rises to form an arc of volcanic islands.

4. The Himalayas are mountains that are forming as a result of the collision of the Indian and Eurasian continental plates. Which diagram shows a plate boundary like the one involved in the formation of these mountains?

D

5. Which diagram shows oceanic-continental convergence? Describe what occurs at this type of plate boundary.

C; An oceanic plate collides with a continental plate. The oceanic plate, which is denser than the continental plate, subducts under the continental plate to form a trench and volcanoes.

6. Which diagram shows a transform boundary? Describe what occurs at this type of plate boundary.

E; Two plates slide horizontally past each another, and crust is deformed or fractured. Long faults and earthquakes are characteristics of these boundaries.