

Pangea Evolution

Name: _____

Lesson 13

Date: _____

Vocabulary

Plate Tectonics - a massive, irregularly shaped slab of solid rock that is made up of oceanic and continental upper layers of the Earth

Continental Drift - the theory that continents move relative to each other over time

Pangea - a massive supercontinent that existed 200 to 300 million years ago, which comprised all of Earth's continents

Activity 1

Puzzling Pangea Evolutionary Phases

1

Using the Ari Compass Application, you'll puzzle together the evolution of the continents as they've evolved through tectonic plate drifts. With the Compass Application set to **Advanced**, you'll determine which quadrant of the grid to place each piece of the map.

There are five evolutionary periods that will be pieced together. With each puzzle, use the Compass Application to determine the direction and thereby, the appropriate quadrant to place each piece.

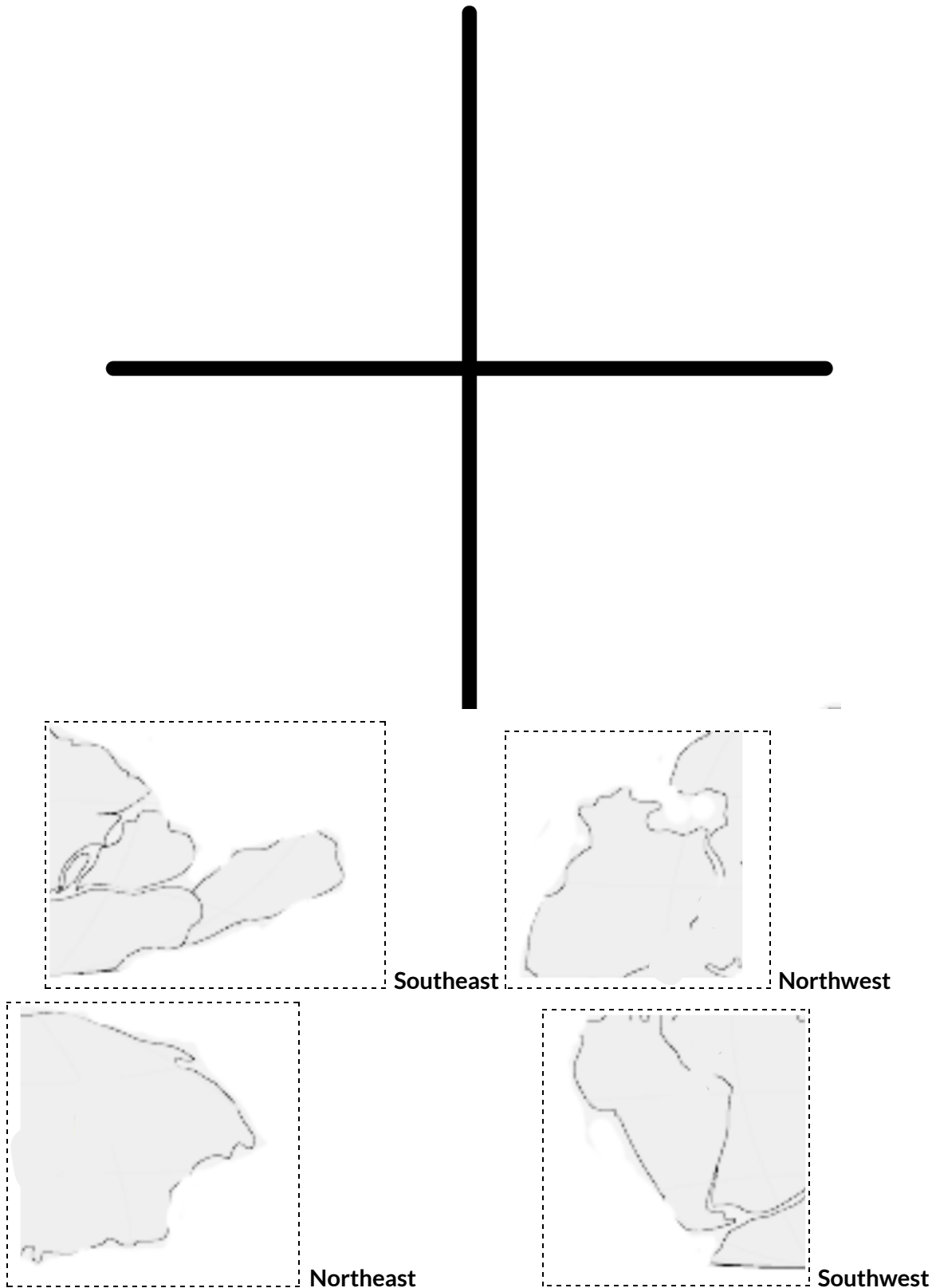
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Phase #1: Cut each piece out on the dotted lines and glue it into the noted quadrant.



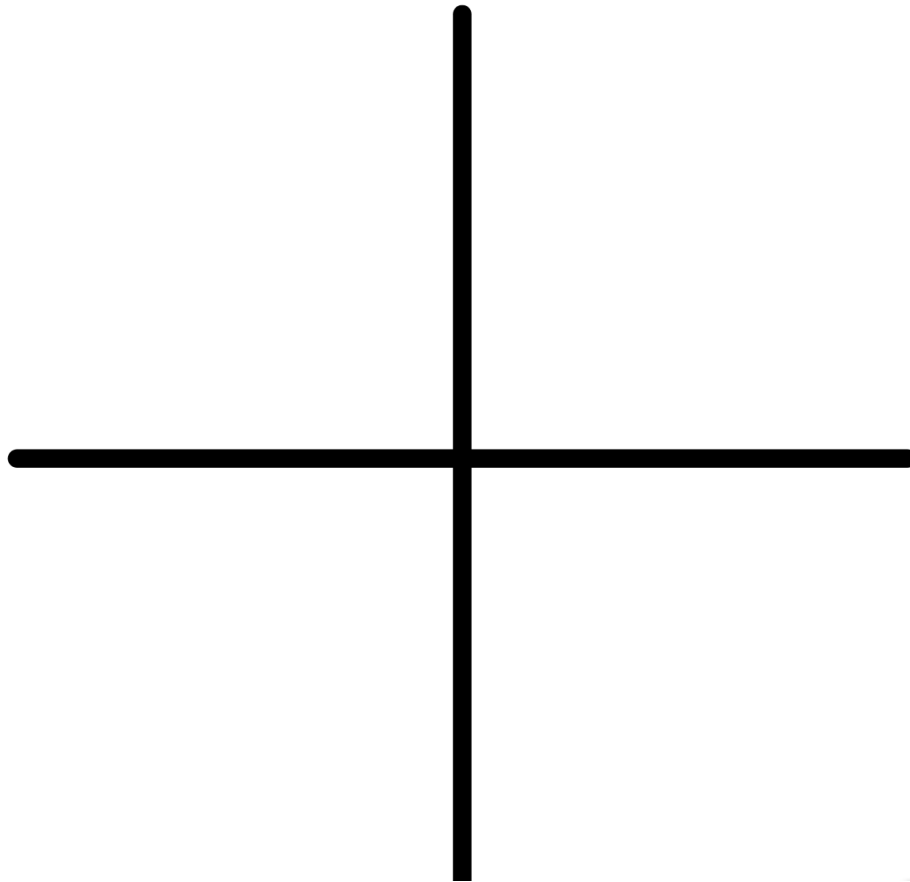
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Phase #2: Cut each piece out on the dotted lines and glue it into the noted quadrant.



Northwest



Northeast



Southwest



Southeast

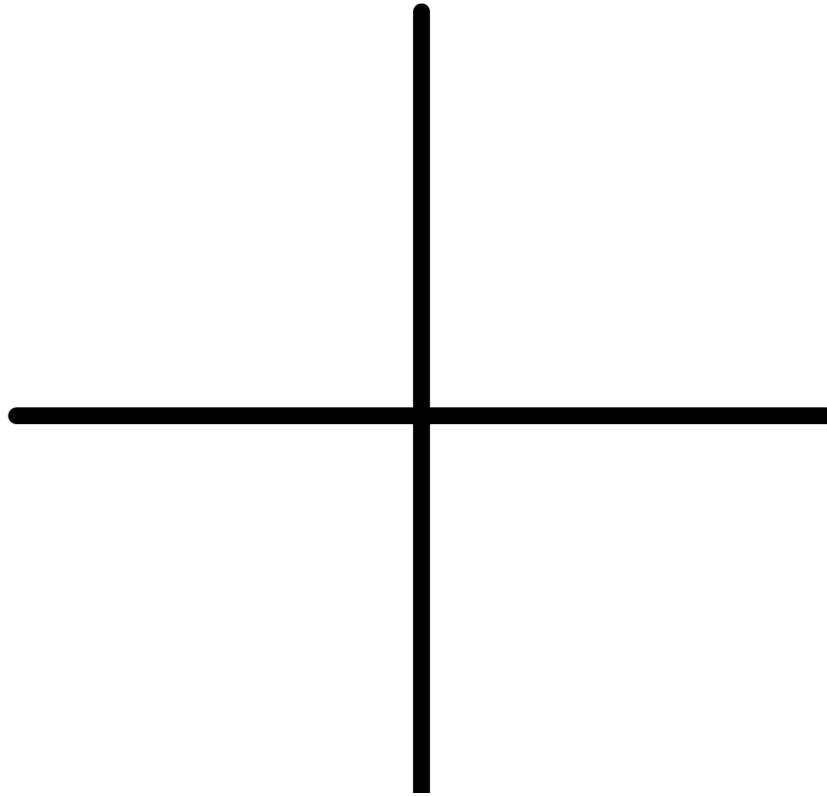
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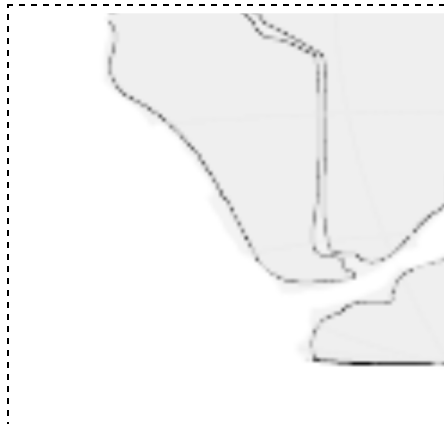
Phase #3: Cut each piece out on the dotted lines and glue it into the noted quadrant.



Northwest



Southeast



Southwest



Northeast

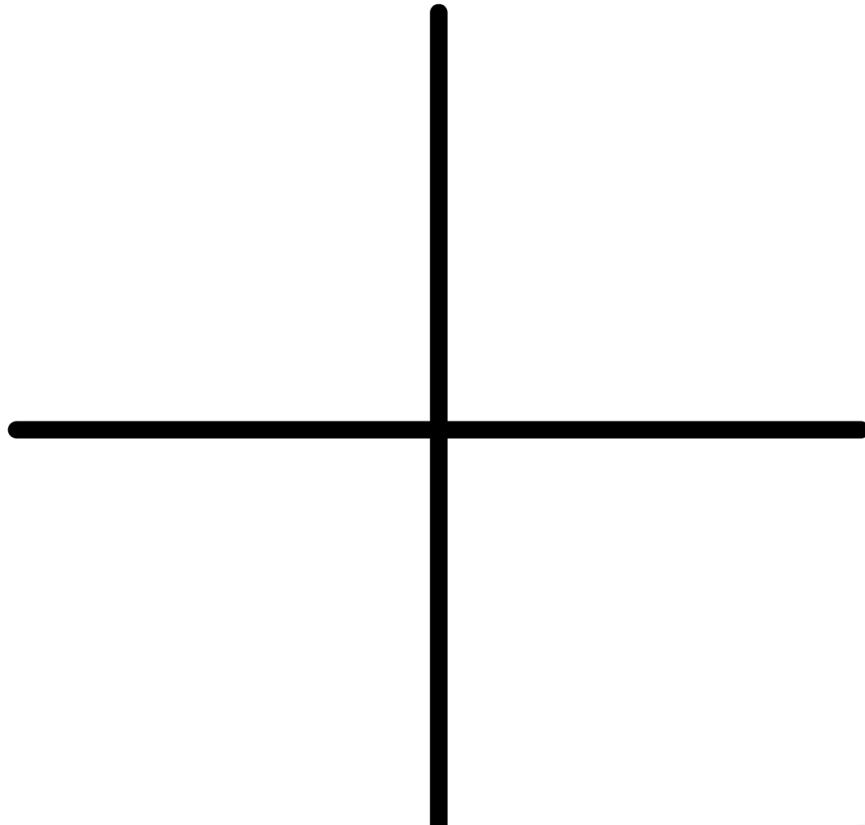
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Phase #4: Cut each piece out on the dotted lines and glue it into the noted quadrant.



Southeast



Northeast



Southwest



Northwest

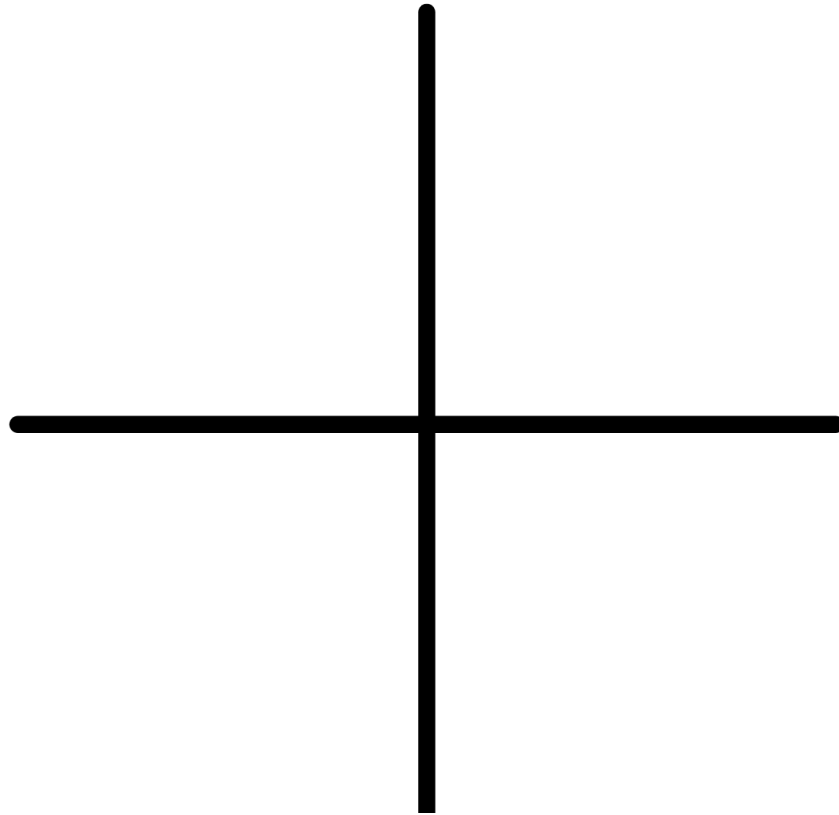
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Phase #5: Cut each piece out on the dotted lines and glue it into the noted quadrant.



Southwest



Northwest



Northeast



Southeast

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Activity 2

Line Following the Continental Drift

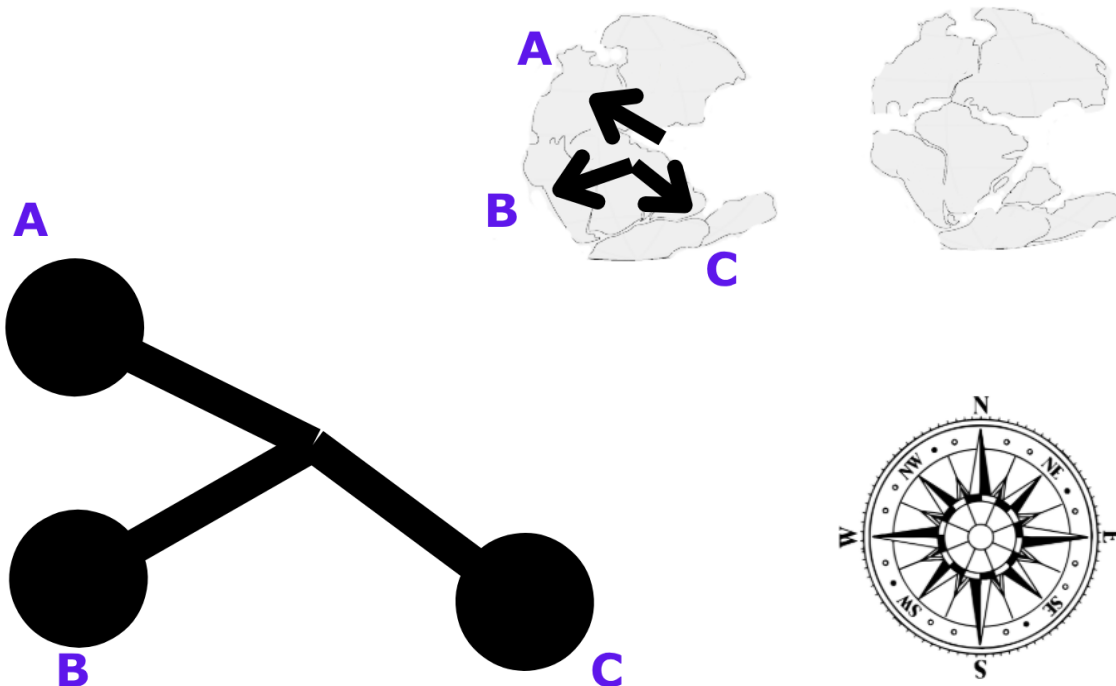
Below, you'll be shown two phases of the evolution of Pangea into the continental placements we know today. The arrows on each map show the directions of the continental drift.

With the Compass Application set to **Line Following**, you'll determine the direction of movement of each of the regions. As Ari is moving and following each line, note the direction readout on the screen and record it next to the letter corresponding to the line.

1

Evolutionary Phase #1 to #2 Movement

- A.
- B.
- C.



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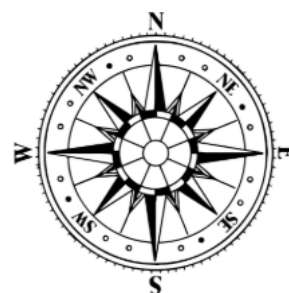
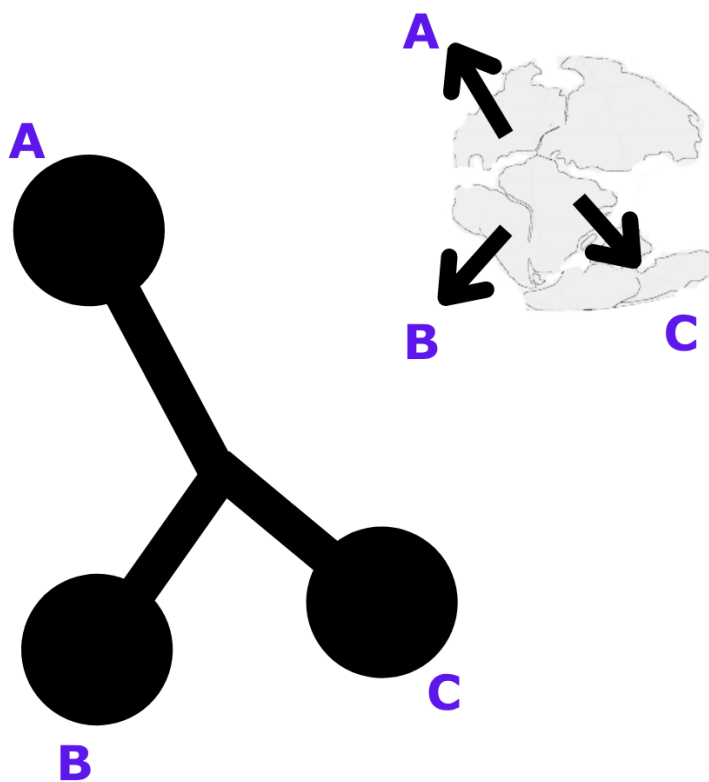
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2

Evolutionary Phase #2 to #3 Movement

- A.
- B.
- C.



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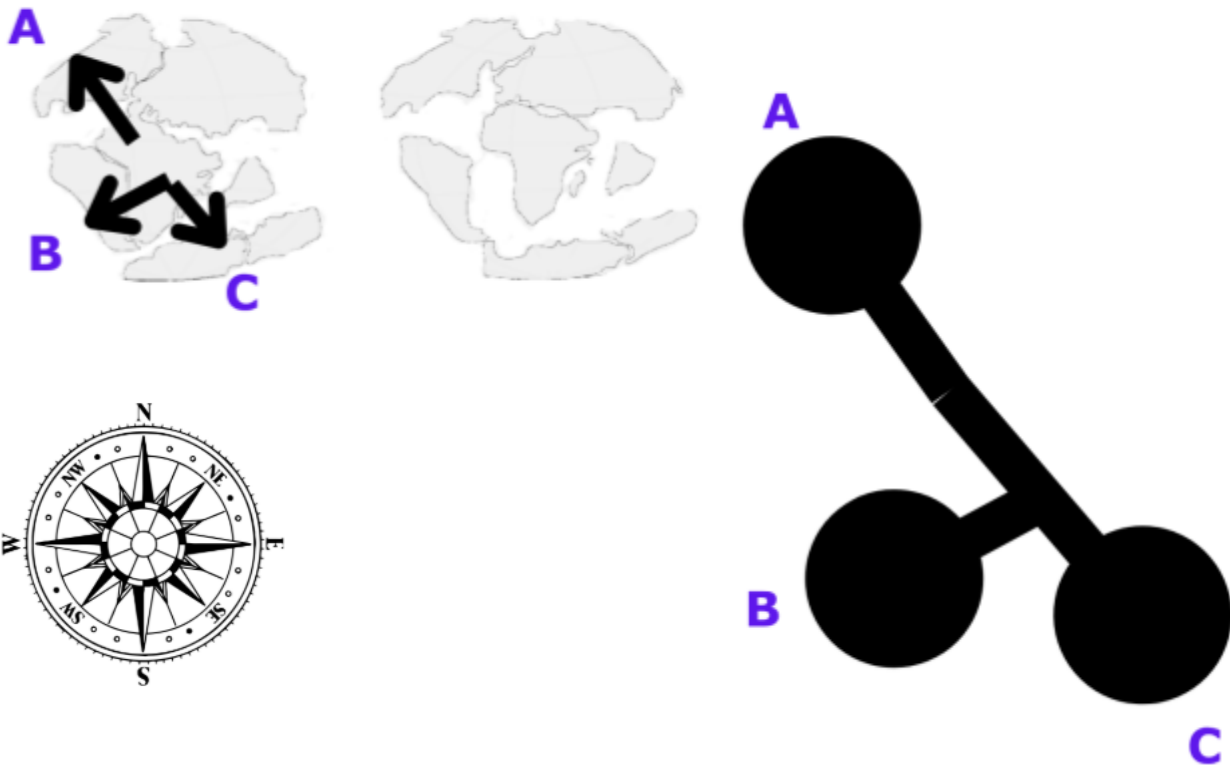
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Evolutionary Phase #3 to #4 Movement

- A.
- B.
- C.



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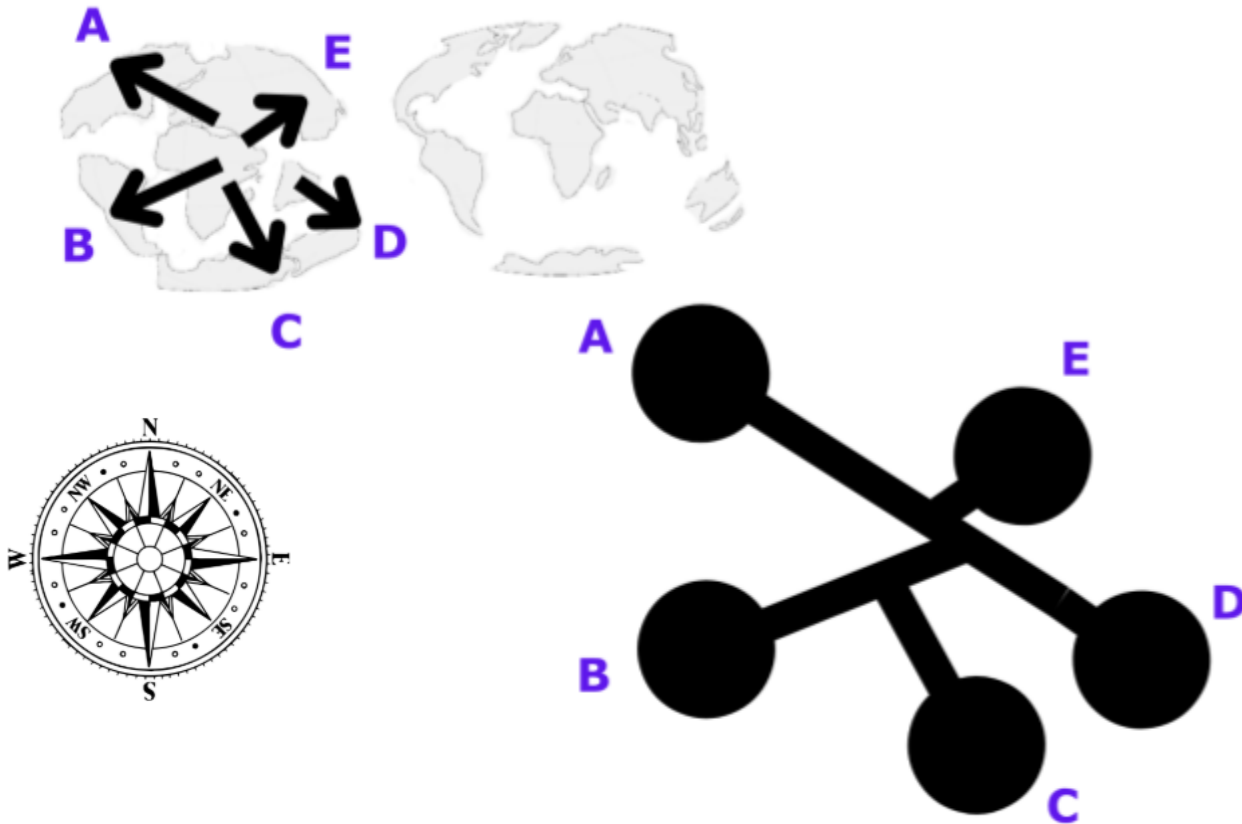
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Evolutionary Phase #4 to #5 Movement

- A.
- B.
- C.
- D.
- E.



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Exit Ticket

Please respond to the following prompts.

Criteria for Success:

- Accurate use of compass directions (north, south, east, west)
- Use information from the lesson to extrapolate future landmass motions using compass directions and names of the continents and/or oceans

1. Describe how North America's position changed across the five phases. Use compass directions to explain its movement

2. Predict how Earth's landmasses might continue to move over time if continental drift continues
