

## Earth Science

### Pangaea

Millions of years ago the Earth looked much different than it looks today. All seven **continents**<sup>1</sup> (North America, South America, Asia, Africa, Europe, Australia, and Antarctica) were one gigantic continent which scientists call *Pangaea* (pan-gee-uh). The name Pangaea is derived from the Ancient Greek words “pan” meaning “entire,” and “Gaia” meaning “Earth.”

Continental drift, the process by which the continents broke apart and spread out across the Earth, is caused by **plates**<sup>2</sup> in the Earth’s **crust**<sup>3</sup> that move around. Plate movement is what causes earthquakes and volcanic **eruptions**<sup>4</sup> today.

Continental drift didn’t happen all at once. It took millions of years. The first separation of Pangaea occurred when North America separated from Africa. The Atlantic Ocean was formed at this time. Next, South America, India, Antarctica, and Australia broke apart. Because of continental drift, these continents are still moving a little bit each year. Some scientists even speculate that a new “super-continent” like Pangaea may form again!

Try to imagine what the Earth will look like millions of years from now. Will it look the same as today, or will it look different?

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<sup>1</sup> **continent** – one of the main land masses of the Earth

<sup>2</sup> **plates** – the large flat pieces of land that the Earth’s crust is broken into

<sup>3</sup> **crust** – the hard outer layer of the Earth

<sup>4</sup> **eruptions** – explosions

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. Pangaea was made up of
  - a. four continents.
  - b. all the world's oceans.
  - c. continental plates.
  - d. all seven continents.
  
2. How does the author organize the information in this passage?
  - a. The author provides a list of theories about what could happen to the Earth in the future.
  - b. The author explains the history of each continent.
  - c. The author describes Pangaea and then explains the process that made it drift apart.
  - d. The author details how each continent was named.
  
3. Which of the following answers supports the statement, "Earth's continents may be in different positions in the distant future."
  - a. Volcanoes and earthquakes have occurred for a very long time.
  - b. Continental drift continues to move continents a little each year.
  - c. Scientists do not agree about how Pangaea was broken up.
  - d. Continental drift stopped after Pangaea was broken up.

4. Read this sentence:

"The name Pangaea is **derived** from the Ancient Greek words 'pan' meaning 'entire,' and 'Gaia' meaning 'Earth.'"

As used in this sentence, the word **derived** means

- a. simplified
- b. formed from
- c. pulled apart
- d. made unusable

5. What is this passage mostly about?

- a. how natural disasters like volcanoes and earthquakes have shaped the continents
- b. how the continents were named by the Greeks
- c. Pangaea and how continental drift has changed the earth over time
- d. how people used to live in one country called Pangaea

6. What are some of the effects of continental plate movement?

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7. Describe evidence from the passage that can help explain why the Earth's continents could look different in millions of years.

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8. The question below includes an incomplete sentence. Choose the answer that best completes the sentence.

Continental plates move under the surface of the continents. \_\_\_\_\_, continental drift occurs.

- a. As a result
- b. In spite of this
- c. On the other hand
- d. For example

9. Read the following sentence.

**Scientists believe a new “super-continent,” like Pangaea, may form again in millions of years due to continental drift.**

Answer the following questions based on the information provided in the sentence you just read. One of the questions has already been answered for you.

1. Who is the main subject of the sentence? **scientists**

2. What do scientists do? \_\_\_\_\_

3. Why \_\_\_\_\_

10. **Vocabulary Word:** speculate (*verb*): to make a guess about something without basing it on a lot of evidence.

Use the vocabulary word in a sentence: \_\_\_\_\_

\_\_\_\_\_

**Teacher Guide and Answers**

**Passage Reading Level:** Lexile 900

**Featured Text Structure:** Descriptive – the writer explains, defines, or illustrates a concept or topic

**Passage Summary:** The passage describes the continent of Pangaea that existed millions of years ago and the process of continental drift that led to the separation of the seven continents.

1. Pangaea was made up of
  - a. four continents.
  - b. all the world's oceans.
  - c. continental plates.
  - d. **all seven continents.**
2. How does the author organize the information in this passage?
  - a. The author provides a list of theories about what could happen to the Earth in the future.
  - b. The author explains the history of each continent.
  - c. **The author describes Pangaea and then explains the process that made it drift apart.**
  - d. The author details how each continent was named.
3. Which of the following answers supports the statement, "Earth's continents may be in different positions in the distant future."
  - a. Volcanoes and earthquakes have occurred for a very long time.
  - b. **Continental drift continues to move continents a little each year.**
  - c. Scientists do not agree about how Pangaea was broken up.
  - d. Continental drift stopped after Pangaea was broken up.
4. Read this sentence:

"The name Pangaea is **derived** from the Ancient Greek words 'pan' meaning 'entire,' and 'Gaia' meaning 'Earth.'"

As used in this sentence, the word **derived** means

- a. simplified
- b. **formed from**

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5. What is this passage mostly about?

- a. how natural disasters like volcanoes and earthquakes have shaped the continents
- b. how the continents were named by the Greeks
- c. **Pangaea and how continental drift has changed the earth over time**
- d. how people used to live in one country called Pangaea

6. What are some of the effects of continental plate movement?

**Suggested answer:** Effects of continental plate movement include continental drift, the movement of the continents over time, as well as volcanoes and earthquakes.

7. Describe evidence from the passage that can help explain why the Earth's continents could look different in millions of years.

**Suggested answer:** Continental drift is a process which is still occurring and which is causing the continents to move a little bit each year. Thus, in millions of years, the continents may move to new locations as a result of this continental plate movement which may create different land mass formations.

8. The question below includes an incomplete sentence. Choose the answer that best completes the sentence.

Continental plates move under the surface of the continents.  
\_\_\_\_\_, continental drift occurs.

- a. **As a result**
- b. In spite of this
- c. On the other hand
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9. Read the following sentence.

**Scientists believe a new “super-continent,” like Pangaea, may form again in millions of years due to continental drift.**

Answer the following questions based on the information provided in the sentence you just read. One of the questions has already been answered for you.

1. Who is the main subject of the sentence? **scientists**
  2. What do scientists do? **believe a new “super-continent” like Pangaea may form again in millions of years**
  3. Why? **due to continental drift**
10. **Vocabulary Word:** speculate (*verb*): to make a guess about something without basing it on a lot of evidence.

Use the vocabulary word in a sentence: answers may vary.