

Skills Worksheet

Directed Reading

Section: The Changing Continents

1. What is the result of slow movements of tectonic plates?

RESHAPING EARTH'S CRUST

In the space provided, write the letter of the definition that best matches the term or phrase.

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|------------------|--|
| _____ 2. cratons | a. rocks that have been exposed at Earth's surface |
| _____ 3. rifting | b. large areas of stable rock older than 540 million years |
| _____ 4. shield | c. the process by which a continent breaks apart |

5. Describe continental crust.

6. What probably causes continental lithosphere to become thinner and weaken?

7. What happens when the lithosphere weakens?

8. What are two ways in which continents can change?

In the space provided, write the letter of the definition that best matches the term or phrase.

- | | |
|---------------------|---|
| _____ 9. terrane | a. a small volcanic island or underwater volcano |
| _____ 10. accretion | b. the process by which a terrane becomes part of a continent |
| _____ 11. sea-mount | c. a piece of lithosphere that has a unique geologic history |
| _____ 12. atoll | d. a small coral island |

Directed Reading *continued*

13. Describe the rocks and fossils of a terrane.

14. What is found at the boundaries of a terrane?

15. Describe the magnetic properties of a terrane.

16. What happens when a tectonic plate carrying a terrane subducts under a plate made of continental crust?

17. What two forms might terranes take when they become part of a continent?

18. Name three kinds of materials that can form terranes.

19. What often happens when large terranes and continents collide?

20. What is an example of a mountain chain that formed when a large terrane and a continent collided?

EFFECTS OF CONTINENTAL CHANGE

21. Name three factors that affect a continent's climate.

22. How have movements of tectonic plates affected climates?

23. Most of Earth's continental surfaces were once covered by _____

Directed Reading *continued*

24. Ice covered most of Earth when all the continents were located near _____
25. What caused Earth's temperatures to change and its ice sheet to melt? _____
26. What happens to populations of organisms as continents rift or as mountains form? _____
27. What is an example of a unique species that evolved on Madagascar? _____
28. Why did unique species of plants and animals evolve on Madagascar? _____

THE SUPERCONTINENT CYCLE

- _____ 29. A picture of continental change throughout time has been constructed by
- a. paleontologists.
 - b. geologists.
 - c. geographers.
 - d. scientists from many fields.
- _____ 30. Supercontinents are
- a. large landmasses formed in the past from smaller continents.
 - b. the large continents that exist today.
 - c. pieces of large landmasses that broke apart.
 - d. large oceans that covered Earth in the past.
- _____ 31. According to the process called the supercontinent cycle, what will probably occur in the future?
- a. No new supercontinents will form.
 - b. Old supercontinents will reappear.
 - c. Continents will stay as they are.
 - d. A new supercontinent will form.
- _____ 32. Supercontinents form when
- a. rifts form in the lithosphere.
 - b. plates move toward convergent boundaries.
 - c. heat builds up in Earth's interior.
 - d. continental lithosphere subducts.

Directed Reading *continued*

- _____ 33. What causes a supercontinent to break apart?
- a. Heat inside Earth causes rifts to form in the supercontinent.
 - b. The convergent boundary between two continents becomes inactive.
 - c. A new convergent boundary forms.
 - d. The supercontinent cycle stops.
- _____ 34. The supercontinent that formed about 300 million years ago is called
- a. Laurasia.
 - b. Gondwanaland.
 - c. Africa.
 - d. Pangaea.
- _____ 35. The body of water that was on the eastern edge of Pangaea is called
- a. the Ural Sea.
 - b. the Tethys Sea.
 - c. Panthalassa.
 - d. the Russian Sea.
- _____ 36. Pangaea was surrounded by
- a. mountains.
 - b. seas.
 - c. an ocean.
 - d. other supercontinents.
- _____ 37. One mountain range that formed when Pangaea was created was
- a. the Rocky Mountains.
 - b. the Alps.
 - c. the Himalaya Mountains.
 - d. the Appalachian Mountains.
- _____ 38. How were Laurasia and Gondwanaland created?
- a. Pangaea collided with another supercontinent.
 - b. North America collided with Eurasia.
 - c. Pangaea split from north to south.
 - d. A rift split Pangaea from east to west.
- _____ 39. The Tethys Sea eventually became
- a. the North Atlantic Ocean.
 - b. Gondwanaland.
 - c. the Mediterranean Sea.
 - d. Laurasia.

40. How were South America and Africa formed?

41. How was the South Atlantic Ocean formed?

Directed Reading *continued*

42. How were India, Australia, and Antarctica formed?

43. How were the Himalaya Mountains formed?

44. When did the Himalaya Mountains begin to form?

45. How did the Rocky Mountains, the Andes, and the Alps form?

46. How did tectonic plate motion affect the oceans?

47. What will happen to Africa and the Mediterranean Sea in 150 million years if plate movements continue at current rates?

48. What will happen to the Atlantic Ocean as North and South America collide with Africa?

49. What will happen to the region west of the San Andreas Fault in 150 million years?

50. According to scientists' predictions, what will happen to the continents in 250 million years?
