Name

Class

Skills Worksheet)

# **Directed Reading B**

## Section: Earth's Changing Continents (pp. 270–275) PLATE TECTONICS

plate tectonics

**1.** The theory that explains how Earth's tectonic plates move and change shape is called

- a. continental drift.b. tectonic drift.
- **c.** plate theory.
- **d.** plate tectonics.

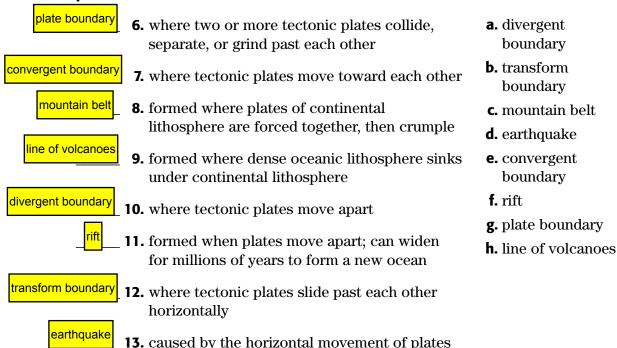
**2.** The thin, cool "skin" of Earth is called the \_\_\_\_\_

3. Tectonic plates rest on a thick layer of slowly moving, solid rock called

the \_\_\_\_\_\_mantle\_\_\_\_\_\_.
4. How fast do tectonic plates move?
\_\_\_\_\_\_one to two inches per year
5. Why can tectonic plates move thousands of miles?

They move for millions of years

# Match the correct description with the correct term. Write the letter in the space provided



in areas like the San Andreas fault

### **CONTINENTAL DRIFT**

Name \_

continental drift 14. The continents once formed a single landmass, broke up, and drifted to their present locations because of

- **a.** tectonic drift.
- **b.** plate tectonics.
- **c.** continental drift.
- **d.** continental tectonics.

it carries rocks and fossils with it

- 15. As a continent moves across Earth's surface,
  - **a.** it carries oceans with it.
  - **b.** it carries rocks and fossils with it.
  - **c.** rocks and fossils fall off it.
  - **d.** it carries lithosphere with it.
- 16. What evidence from rocks shows that India, South America, and Africa were part of a single landmass located near the South Pole about 280 million years ago?

 The same layers of rocks are found in the same sequence (order)	
on all three of those continents. Also glacier tracks match up in	
 these continents.	

17. How does finding *Mesosaurus* fossils in South America and southwestern Africa show that the continents of South America and Africa were joined?

There was one large population of Mesosaurus walking and dying on Pangaea	
then when South America and Africa broke away and moved from Pangaea,	
these two continents carried the fossils of Mesosaurus to their current locations.	
	(

#### **HISTORY OF CONTINENTAL DRIFT**

Pangaea

18. About 245 million years ago, all of Earth's continents made up a supercontinent called

- a. Pandora.
- **b.** Godwanaland.
- **c.** Eurasia.
- d. Pangaea.

split into several new plates

- **19.** Beginning about 200 million years ago, the supercontinent Pangea **a.** split into several new plates.
  - **b.** joined with another supercontinent.
  - **c.** was destroyed and reformed.
  - **d.** began to be surrounded by a superocean.

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between them, the Atlantic Ocean <b>a.</b> a sup <b>b.</b> tector <b>c.</b> new of	angaea's new plates d ed, erocean formed betw nic plates stopped mo continents formed betw v ocean formed betwe	een them. oving between t tween them.		ents
<b>21.</b> What happened drifted apart?	to rocks and fossils a	as the tectonic j	plates separated a	nd
_	l fossils were carried along	with the plates to ne	ew locations.	
<b>22.</b> If continents ma happened to the	oved toward the equa eir climates?	tor because of	continental drift, v	vhat
Their climates we	ould get warmer and wetter			
around the plar _ <mark>Some continents</mark>	ental drift affect temp net? moved to colder latitudes a and got more rain.			IS
	ctica become the icy l o <mark>f Antarctica drifted to the s</mark> o		ay?	
on different cor		_		sms live
The geographic isolati	Pangaea living organisms b ion prevented them from br s of evolution to work indep	eeding between two	o new populations.	
<b>26.</b> How does the the the oceans formed?	heory of continental o ?	lrift explain cha	anges to sea life w	hen new
	between continents and so outside species. This crea			

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sea life to evolve into new species.

#### Directed Reading B continued

**27.** How does the theory of continental drift explain why fossils of the same organisms are found on different continents?

The theory of continental drifts begins with the supercontinent Pangaea.
Inhabitants of Pangaea died and left their fossils in the ground which then
separated into new continents. The new continents took their fossil record
with them.

### CASE STUDY: THE PANAMA LAND BRIDGE

The Panama land bridge

- **28.** About 3 million years ago, what narrow strip of land joined North and South America for the first time?
  - **a.** the Panama Canal**b.** the Island of Panama
- **c.** the Pangaea Land Bridge
- **d.** the Panama Land Bridge
- **29.** What are two types of animals that crossed the Panama Land Bridge from South America to North America?

Opossums, armadillos.

**30.** What are two types of animals that crossed the Panama Land Bridge from North America to South America?

<mark>camels, cats</mark>

**31.** What happened to some populations of clams, snails, corals, and sea urchins that became separated by the Panama Land Bridge?

They evolved into separate species

32. How was the Gulf Stream formed?

Ocean currents became deflected upwards by the Panama land bridge to form the gulf stream.

**33.** How was the climate of Western Europe affected by the Gulf Stream?

Warm water was transported along the Gulf stream across the	
Atlantic ocean and helped to make Western Europe warmer.	

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