Handout 1 (blue) Plate Tectonics Name _____ Period ___
Standard 2.3

Chapter 10: Section 1 Directed Reading: Pages 239-246

Section: Continental Drift (page 239)

1. What did people notice when they studied new world maps 400 years ago?

WEGENER'S HYPOTHESIS (page 239)

2. The German scientist Alfred Wegener proposed a hypothesis now called _____.
a. paleomagnetism. **b.** continental drift. **c.** floating continents. **d.** sea-floor spreading.

3. Wegener hypothesized that the continents formed part of a single land mass, or _____.
a. mid-ocean ridge. **b.** monocontinent. **c.** supercontinent. **d.** world land.

4. When did Wegener think that small continents began forming? _____.
a. 25 million years ago. **b.** 2.5 billion years ago. **c.** 250 million years ago. **d.** 2.5 million years ago.

5. Wegener speculated that over millions of years these small continents _____.
a. moved closer together. **b.** did not move. **c.** drifted to their present locations.

6. Why was Wegener interested in finding fossils of the same plants and animals on two different continents?

7. Where were the fossils from the extinct land reptile called *Mesosaurus* found?

8. Give an example of a mountain chain that seems to continue from one continent to other continents across the ocean.

9. What do layers of debris from ancient glaciers in South Africa and South America indicate to geologists?

10. How did Wegener account for differences in climate between the past and today?

11. According to Wegener, how did the continents move?

12. Why did scientists disagree with Wegener's theory of how the continents moved?

13. Why was Wegener's theory not proven in his lifetime?

MID-OCEAN RIDGES (Page 242)

14. Undersea mountain ranges with steep, narrow valleys in the center are called _____.
a. black smokers. **b.** the Mid-Atlantic Ridge. **c.** mid-ocean ridges. **d.** sea floor ridges

15. Compared to sediment found farther from a ridge, sea-floor sediment closer to a ridge is _____.
a. thicker. **b.** thinner. **c.** older. **d.** larger.

16. Compared to rocks farther from a ridge, rocks closer to a ridge are
a. larger**.** **b.** smaller. **c.** older. **d.** younger

17. The oldest ocean rocks are _____.
a. 3.8 billion years old. **b.** 175 million years old. **c.** older than rocks on land

SEA-FLOOR SPREADING (page 243)

18. Describe the process of sea-floor spreading.

PALEOMAGNETISM (page 244)

19. In what way is Earth like a giant magnet?

20. Explain how solidified magma comes to be magnetic.

21. Rocks with magnetic fields that point north have _____.

22. Rocks with magnetic fields that point south have _____.

23. The pattern of normal and reverse polarity in rocks enabled scientists to create the _____.

24. What did scientists think happened to cause the magnetic patterns they found?

25. Where were the youngest rocks on the sea floor? _____

26. Where were the older rocks on the sea floor? _____

27. Where does new rock form on the sea floor? _____

28. What supports Hess's theory of sea-floor spreading?

WEGENER REDEEMED (page 246)

29. Continents move over Earth's surface _____.
a. by plowing through the sea floor. **b.** by rolling on Earth's molten core. **c.** by the widening sea floor, which acts as a conveyor belt.

30. The mechanism that verifies Wegener's hypothesis of continental drift is _____.
a. geomagnetic reversal. **b.** magnetic symmetry. **c.** sea-floor contracting. **d.** sea-floor spreading.