

Name _____ Class _____ Date 4/10/13

Skills Worksheet

Directed Reading

Section: Ocean Currents

1. A horizontal movement of water in a well-defined pattern is called

a(n) _____

2. What are two ways that oceanographers identify ocean currents?

3. What are the two major categories of ocean currents?

FACTORS THAT AFFECT SURFACE CURRENTS

4. Currents that are driven by winds and move horizontally on or near the ocean's surface are called

- a. air currents.
- b. high-pressure areas.
- c. surface currents.
- d. low-pressure areas.

5. Which of the following factors do NOT control surface currents?

- a. floating debris
- b. air currents
- c. location of the continents
- d. Earth's rotation

6. All surface currents are affected by

- a. glaciers.
- b. ocean pollution.
- c. winds.
- d. the equator.

7. Explain what causes winds to form.

8. How does wind make water on the ocean's surface move?

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Directed Reading *continued*

9. Two types of global wind belts that affect the flow of ocean surface water are called _____ and _____

10. Wind belts located just north and south of the equator are called _____

11. In the Northern Hemisphere, trade winds blow from the _____

12. In the Southern Hemisphere, trade winds blow from the _____

13. In both hemispheres, trade winds push currents _____ across the tropical latitudes of all three major oceans.

14. In the Northern Hemisphere, westerlies blow from the _____

15. In the Southern Hemisphere, westerlies blow from the _____

16. In the higher latitudes of both hemispheres, westerlies push ocean currents in which direction?

17. Why does a surface current get deflected and divided when it flows against a continent?

18. The curving of the path of oceans and winds due to Earth's rotation is called the _____

19. Huge circles of moving water caused by wind belts and the Coriolis effect are called _____

20. In which direction does the water flow in gyres of the Northern Hemisphere?

21. In which direction does the water flow in gyres of the Southern Hemisphere?

Directed Reading *continued*

MAJOR SURFACE CURRENTS

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

- _____ 22. North Atlantic Current a. the world's largest current
- _____ 23. Canary Current b. the Pacific equivalent of the Gulf Stream
- _____ 24. Antarctic Circumpolar Current c. a current that keeps the coast of Norway ice-free
- _____ 25. California Current d. a cool, southward current that flows along the California coast
- _____ 26. Gulf Stream e. a cool, southward current split off from the North Atlantic Current
- _____ 27. North Pacific Drift f. an eastward-flowing current lying between equatorial currents
- _____ 28. Equatorial Countercurrent g. a swift, warm current in the North Atlantic
- _____ 29. Kuroshio Current h. a vast, slow-moving warm current
- _____ 30. Norway Current i. a cold current that flows south in the North Atlantic and joins the Gulf Stream
- _____ 31. equatorial currents j. warm currents in the Atlantic, Pacific, and Indian Oceans that move westward
- _____ 32. Labrador Current k. a current also known as the Antarctic Circumpolar Current

33. A current that is uninterrupted by any continents and crosses all three major oceans is the _____

34. Currents in the northern Indian Ocean are governed by _____, which are winds whose directions change seasonally.

35. The Gulf Stream, the North Atlantic Current, the Canary Current, and the North Equatorial Current form the _____

36. A vast area of calm, warm water at the center of the North Atlantic Gyre is called the _____

Directed Reading *continued*

37. Name two things you would find floating on the surface of the Sargasso Sea.

38. The pattern of currents in the North Pacific is similar to that in the _____

39. The Kuroshio Current flows toward North America as the _____, and then southward as the _____

DEEP CURRENTS

40. A streamlike movement of ocean water far below the surface is called a(n) _____

41. Deep currents move much more _____ than ocean currents.

42. What causes deep currents to form?

43. What causes the movement of polar waters?

44. Two factors that determine the density of water are temperature and _____

45. Explain why water in polar regions has high salinity.

46. Where is the world's densest and coldest ocean water?

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47. A deep current of dense, cold water that moves northward to a latitude of about 40°N is called the _____
48. Where does the deep current that moves southward under the northward-flowing Gulf Stream form?

49. What causes the salinity of water in the Mediterranean Sea to increase?

50. To where does the denser, highly saline water of the Mediterranean Sea flow?

51. A strong current caused by an underwater landslide is called a(n) _____
52. Explain how a turbidity current forms.

53. How does the water in a turbidity current appear compared with the surrounding water?

54. Why does a turbidity current move beneath the clear water that surrounds it?

