

Your Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

## Chapter 21 Earth Science Word Study *Movements of the Ocean*

**Directions:** Study the following words by reading and rereading them each evening so you will be prepared for the word study test each week. You may use one index card to write as many words and definitions on as possible to use for the test. The card must be written in ink, be in your handwriting, and have your name, period, and chapter recorded in the top, right corner with no obvious erasures or mark outs. If all the criteria are met, you may use your index card during the test. It will then be stapled to your test.

- 1.) **current** – in geology, a horizontal movement or flow of water in one direction or in a well-defined pattern
- 2.) **surface current** – a horizontal movement of ocean water that is caused by wind and that occurs at or near the ocean's surface
- 3.) **global wind belt** – winds such as *trade winds* and *westerlies* that blow in specific directions
- 4.) **Coriolis effect** – the apparent curving of the path of a moving object from an otherwise straight path due to the Earth's rotation
- 5.) **gyre** – a huge circle of moving ocean water found above and below the equator
- 6.) **equatorial currents** – two currents located in the Atlantic, Pacific, and Indian Oceans that move west with a weaker *Equatorial Countercurrent* that flows east between them
- 7.) **Southern hemisphere currents** – counterclockwise gyre currents such as the world's largest current, the *Antarctic Circumpolar Current* also known as the *West Wind Drift Current*
- 8.) **Gulf Stream** – the swift, deep, and warm Atlantic current that flows along the eastern coast of the United States toward the north
- 9.) **deep current** – a stream-like movement of ocean water far below the surface
- 10.) **Antarctic bottom water** – water in Antarctica is cold and salty so this cold, salty dense water sinks to the bottom and forms a deep ocean current called the *Antarctic Bottom Water* which moves slowly up to a latitude of 40° and back – it takes hundreds of years for the current to make the trip
- 11.) **North Atlantic deep water** – cold, salty water that forms a deep current under the northward flowing Gulf Stream
- 12.) **turbidity current** – a strong, current caused by an underwater landslide
- 13.) **wave** – a periodic disturbance in a solid, liquid, or gas as energy is transmitted through a medium
- 14.) **wave period** – the time required for two consecutive wave crests to pass a given point

- 15.) **fetch** – the distance the wind blows across an area of the sea to generate waves or the length of water over which a given wind has blown
- 16.) **whitecaps** - waves with foaming, white crests
- 17.) **breakers** - a wave or foamy mass of water that washes onto the coastline
- 18.) **refraction** - the process by which ocean waves bend directly toward the coastline as they approach shallow water, the part of the wave that is traveling in shallow water travels more slowly than the part of the wave that is still advancing in deeper water
- 19.) **undertow** - any strong current below the surface of a body of water, moving in a direction different from that of the surface current
- 20.) **rip currents** - a strong, narrow surface current that flows rapidly away from the shore. Rip currents form when excess water that has accumulated along a shore due to wind and waves rushes back suddenly to deeper waters. Also called *rip tide*.
- 21.) **longshore current** - the formation of a current of waves that rush toward the shore at an angle, and generates a current from left to right in the ocean
- 22.) **tsunamis** - an unusually large sea wave produced by a seaquake or undersea volcanic eruption
- 23.) **tide** - the periodic rise and fall of the water level in the oceans and other large bodies of water which is produced by the attraction of the moon and sun and occurs about every 12 hours
- 24.) **tidal range** - the difference in levels of ocean water at high tide and low tide
- 25.) **spring tides** - the large rise and fall of the tide at or soon after the new or the full moon
- 26.) **neap tides** - a weak tide that results when the moon's quarter phases the sun at right angles which causes the bulges to cancel each other with the result of a smaller difference between high and low tides
- 27.) **tidal oscillation** - the slow, rocking motion of ocean water that occurs as the tidal bulges move around the ocean basins
- 28.) **tidal current** - the movement of water toward and away from the coast as a result of the rise and fall of the tides