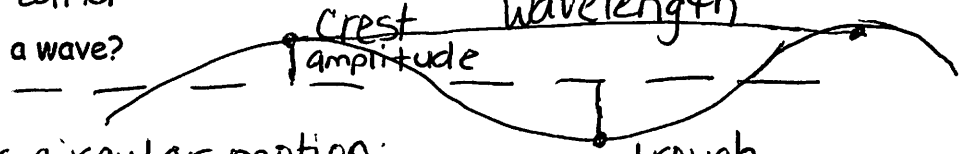
Name Key Date_____ Class___

Oceanography: Waves and Currents

Waves

1. What causes waves? Wind; energy is transferred to the oceans from wind
2. What are the parts of a wave?



3. How do waves move? up and down in a circular motion; Waves move energy, NOT water
4. What are breakers? When the bottom of a wave snags the ocean floor, causing the top of a wave to topple over.

Currents

1. Describe how surface currents form and travel in the ocean. (horizontal) Caused by wind and bouncing off continents. move in circles due to the earth's rotation (Coriolis Effect).
2. How is heat transferred from Earth's oceans to land areas? Oceans are heated by radiation, which then heat the air above by conduction
3. Explain how deep (density) currents form and move in the ocean. (Vertical) Saltier, colder water sinks; less salty, warmer water rises
4. How does the movement of water in a river differ from what you've learned about how ocean water moves? Rivers are pulled downslope by gravity
5. Is the water carried by the Gulf Stream warmer or cooler than the water it flows through? Why? Warmer because it originates from the equator.
6. How do currents affect climates? Warm currents-warm climate cold currents - cool climate
7. What determines whether a current is cold or warm? cold currents originate from the poles. Warm currents originate from the equator.
8. Are deep (density) currents cold-water currents or warm-water currents? Cold water
9. Why do cold-water currents mainly flow along the ocean floor? Cold water is denser
10. Why are upwellings significant? good for fishing. Winds push warm surface waters away, causing cold water to move upward from the bottom, bringing nutrients with it
11. How do swimmers get out of rip currents? Swim parallel (or diagonally) with the shore.