Your Name _____Period _____ Date _____

Chapter 20 Earth Science Word Study *Ocean Water*

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 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. **ocean water gases – the two principal gases are nitrogen, N_2, and oxygen, O_2 although there are large amounts of carbon dioxide, CO_2, as well/gases may enter ocean water through streams or rivers, volcanic eruptions, plants and animals that live in oceans or through the surface that is exposed to the atmosphere**
2. **dissolved solids – these make up 3.5% of ocean water and give the ocean its salty taste/these solids, called sea salts, are composed of about 75 chemical elements**
3. **most abundant elements in oceans – the six most abundant elements that are found in ocean water are chlorine, sodium, magnesium, sulfur, calcium, and potassium**
4. **salinity – a measure of the amount of dissolved salts in a given amount of liquid/since only water molecules of H_20 evaporate, when the rate of evaporation is greater than the rate of precipitation, the salt content is higher and when the rate of precipitation is greater, then the salt content is less/salinity ranges from 33% to 36%/it is usually saltier on the ocean's surface because the temperature is higher**
5. **pack ice – a floating layer of sea ice that completely covers an area of the ocean surface/pack ice is usually no more than 5m thick because the ice insulates the water below and prevents it from freezing**
6. **thermocline – a layer in a body of water in which water temperature drops with increased depth faster than it does in other layers**
7. **density – a measurement that compares the amount or ratio of matter an object has to its volume/an object with a lot of matter in a certain amount of volume has high density/an object with a little matter in the same amount of volume has a low density/commonly expressed as grams per cubic centimeter for solids and liquids and as grams per liter for gases**
8. **carbon – a nonmetallic element that is found in all living organisms/it exists in nonliving materials in two main forms: diamond and graphite, and is found in fossil fuels such as coal and petroleum/it also cycles through all four of Earth's spheres: atmosphere, hydrosphere, geosphere, biosphere/there is 60 times more carbon in the oceans than in the atmosphere**

9.) carbon sink – an environmental reservoir that absorbs and stores more carbon than it releases, thereby offsetting greenhouse gas emissions. Forests and oceans are examples of carbon sinks.
10.) ocean color – ocean color is affected by the way the water absorbs or reflects sunlight and by the type and number of organisms that are in a specific area, such as phytoplankton which absorb red and blue light but reflect green/although water absorbs most visible light, only blue wavelengths tend to be reflected
11.) upwelling – the movement of deep, cold, and nutrient-rich water to the surface when winds blow surface water parallel to the coast causing surface water to move further away and deep water to move up and replace the surface water
12.) plankton – the mass of mostly microscopic organisms that float or drift freely in the waters of aquatic (freshwater and marine) environments
13.) nekton – all organisms that swim actively in open water, independent of currents/Examples: fish; reptiles such as sea turtles, crocodiles, water snakes, marine iguanas; mammals such as seals, dolphins, whales; mollusks such as squid
14.) benthos – organisms that live at the bottom of oceans or bodies of fresh water/Examples: starfish, oysters, clams, sea cucumbers, brittlestars and anemone are all benthos with most benthos feeding on food as it floats by or scavenging for food on the ocean floor.
15.) benthic zone – the bottom region of oceans and bodies of fresh water
16.) pelagic zone – the region of an ocean or body of fresh water above the benthic zone
17.) desalination – a process of removing salt from ocean water
18.) aquaculture – the raising of aquatic plants and animals for human use or consumption
19.) ocean-water pollution – garbage, sewage, nuclear waste, chemicals from factories, and fertilizers and pesticides from agriculture are some of the main causes