3rd 9 weeks Benchmark Exam

1. Matter is anything that has mass and \_Volume\_\_\_\_\_.
2. Describe the movement of air in coastal areas.

\_\_\_\_\_During the day the land is warm and the water is colder so the air flows from cold to hot which means a sea breeze happens. At night it is the opposite so a Land breeze happens.\_\_\_\_\_\_\_\_\_\_

1. The trade winds are tropical winds that blow toward the equator. Why do trade winds blow towards the equator?

\_\_\_\_\_Because the Equator is hot and wind always goes from where it is cold (high pressure) to where it is hot (low Pressure)\_

1. As the sun heats the sea, the sea absorbs heat \_\_\_\_more slowly\_\_\_\_\_\_\_ than the land. This causes the air pressure above the sea to be \_\_\_higher\_\_\_\_\_\_\_ than the pressure above the land.
2. The movement of energy through empty space is \_\_\_Radiation\_\_\_\_\_\_\_\_\_.
3. What occurs because of unequal heating of the Earth’s surface? Wind
4. If you took a walk in the middle of the afternoon at the beach, what would you expect to be true in regards to heating and wind?

\_\_\_The sand would be hot and the ocean water would be cool so there would be a sea breeze because air moves from areas of cold to areas of hot. (High pressure to low pressure) \_\_\_\_\_\_\_\_

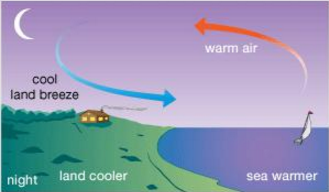
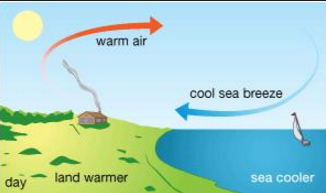
1. Which large global wind pattern directly affects the weather in the state of Georgia? \_\_\_Westerlies\_\_\_\_\_\_\_\_\_\_
2. Where are doldrums found and what do they mean? \_\_\_\_Equators\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. How does the warming of the ocean water throughout the day cause a land breeze at night? \_\_\_\_\_Because water holds heat so at night the water remains warm while the land gets colder causing land breeze (cold to hot; High to low pressure)\_\_\_
4. What two forms of heat transfer most contribute to the creation of land breeze?

\_\_\_\_Conduction and Convection\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Airplanes typically fly in the \_\_stratosphere\_\_\_\_\_\_\_\_\_\_ layer.
2. The \_\_Coriolis \_\_\_\_\_\_\_\_\_ effect causes the wind to travel clockwise around high pressure systems in the northern hemisphere and counter-clockwise in the southern hemisphere?
3. In the United States, air pressure is measured in \_\_inches\_\_\_\_\_\_\_\_
4. The region of the atmosphere closest to Earth is\_\_\_\_\_Troposphere\_\_\_\_\_\_\_\_\_
5. Based on the chart below, when would we expect to have a land breeze? \_\_\_\_\_\_C\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Time** | **Sea Temperature (°F)** | **Land Temperature (°F)** |
| A | 81 | 83 |
| B | 78 | 78 |
| C | 82 | 81 |

1. What causes wind? \_\_\_\_The movement of air from high air pressure to lower air pressure.\_\_\_\_\_\_\_\_\_
2. The region of the atmosphere that reflects radio signals is the \_\_\_ionosphere\_\_\_\_\_\_\_\_\_.
3. Earth’s air is mostly heated by \_\_\_Radiation from the Earth\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Warm air expands and rises, creating an area of \_\_\_low pressure\_\_\_\_; cold air is dense and sinks to create an area of \_\_\_High Pressure\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. A wind that blows from the southwest is a \_\_\_\_\_Southwest Wind\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. A village in Bangladesh deals with a prolonged 4 month rainy season followed by a comparable dry season. This makes difficult to farm due to flooding and drought. The type of local wind that creates this is called a \_\_Monsoon\_\_\_\_\_\_\_\_.
7. Weather is best described as \_\_\_\_\_\_ day to day conditions in the atmosphere \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. The main gas in the atmosphere (78%) is \_\_\_\_\_Nitrogen\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. In what layer of the atmosphere does all weather occur? \_\_\_\_\_\_\_Troposphere\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. A mountain breeze is defined as \_\_\_\_\_\_ Air moving down a mountain toward a valley\_\_\_\_\_\_\_\_\_\_.
11. Draw a picture of a land breeze and a sea breeze. Be sure to include the sun and moon to indicate time of day.



land breeze sea breeze

1. If air is filled to 3/4 of its capacity, the relative humidity is \_\_\_\_75%\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. The Aurora Borealis happens in the layer of the atmosphere called \_\_\_\_\_Mesosphere\_\_\_\_\_\_\_\_
3. Fog forms over rivers and lakes when cool air moves in over? ­­\_\_\_warm water\_\_\_
4. The actual, measured amount of water in the air is the \_\_specific humidity\_\_\_\_\_\_\_\_.
5. Most of the water in the air evaporates from \_\_\_\_the ocean\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. Weather scientists are called \_\_meteorologist\_\_\_\_\_\_\_\_\_\_
7. The weather instrument used to measure wind speed is called an\_\_\_\_\_\_\_anemometer\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. The weather instrument used to measure relative humidity is called a \_\_\_\_\_pychrometer\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. Clouds are formed by the process of \_condensation\_\_\_\_\_\_\_\_.
10. Plants add water vapor to the air through \_\_\_\_\_transpiration\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
11. Air with a relative humidity of 100% is? ­­­­­\_\_\_\_\_\_\_Saturated\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. A cloud that forms near the ground is \_\_\_\_Fog\_\_\_\_\_\_\_\_\_\_\_\_\_.
13. The amount of water vapor in the air is called \_\_\_\_Humidity\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. When does air have more capacity to hold water? \_\_\_\_\_\_\_\_when it’s warmer\_\_\_\_\_\_\_
15. The temperature at which air must be cooled to reach saturation is the \_\_\_Dew Point\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
16. Air pressure is measured with an instrument called \_\_Barometer\_\_\_\_\_\_\_\_\_\_.
17. Water vapor is water in the form of \_\_\_Gas\_\_\_\_\_\_\_\_\_\_\_\_
18. The part of the plant that holds water waste is called its \_\_\_\_\_\_Stomata\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
19. Heat moves through solids by \_\_conduction\_\_\_\_\_\_\_\_.
20. An altimeter measures \_\_altitude\_\_\_\_\_\_\_\_\_\_\_\_.
21. Regions of cold, heavy are called \_\_highs\_\_\_\_\_\_\_.
22. Beyond the atmosphere is a region known as the \_\_exosphere\_\_\_\_\_\_\_.
23. The ozone layer of the stratosphere protects the Earth from \_\_\_\_ultraviolet\_\_\_\_\_ light from the sun.