Weather Study Guide

**AIR MASS** –

Continental air masses are formed over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Maritime air masses are formed over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

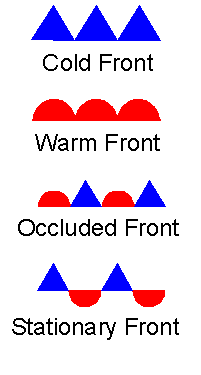
Polar air masses are formed near \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Tropical air masses are formed near \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| Continental tropical | Dry, warm |
| Continental polar |  |
| Maritime tropical |  |
| Maritime polar |  |

A place where two air masses meet is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Scientists use \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to explain information on a weather map.



High pressure system

Low pressure system

Air moves from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- pressure to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ pressure. This causes \_\_\_\_\_\_\_\_\_\_\_\_\_.

* Sea breeze –
* Land breeze -

**WEATHER INSTRUMENTS**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measures wind speed.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measures wind direction

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measures temperature

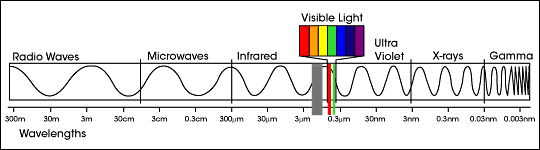
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_measures atmospheric pressure

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an instrument with two identical thermometers, measures humidity

**HEAT TRANSFER IN THE ATMOSPHERE**

RADIATION

* Energy from the sun travels to Earth as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Radiation – Heat transfer in the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ waves.



* Sun’s radiation is either \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the reflection of radiation off a surface.

CONDUCTION

* Conduction is the transfer of heat through a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
* The air can become heated by conduction when it comes in contact with the warm Earth.

CONVECTION

* The movement of matter due to differences in density caused by temperature differences. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ fluids rise, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fluids sink.
* As lower layers of air are warmed, the air \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

GREENHOUSE EFFECT -

***Climate Study Guide***

1. KNOW ALL VOCABULARY WORDS.
2. What are two major factors used to describe climate?
3. What is topography?
4. How does topography affect climate?
5. What is the difference between climate and weather?
6. Why does latitude affect climate?
7. Why do average land and water temperatures at the same latitude vary?
8. What happens when the sun heats water and land?
9. What are the climate zones?
10. Describe polar, tropical, and subarctic climates.
11. What is ice core sampling?
12. Why do meteorologists study the following:
    1. Sea-floor sediment
    2. Fossils
    3. Tree rings
    4. Speleotherms
13. What are potential causes of climate change?
14. What are potential impacts of climate change?
15. According to the Milankovitch theory, which factors could cause climate change?
16. How can you reduce co2 concentrations in the atmosphere?