**Climate**

**Weather- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Climate- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**What Factors Determine Climate?**

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**\*\*\*Most important of these factors is distance from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Latitude).**

At the equator, sunlight hits the Earth ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** and is concentrated over a smaller surface area.

Away from the equator, sunlight hits the Earth at an ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** and spreads over a larger surface area.

**Air Masses**

**An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is an immense body of air that is characterized by similar temperatures and amounts of moisture at any given altitude.**

**Movement of Air Masses**

**As it moves, the characteristics of an air mass change and so does the weather in the area over which the air mass moves.**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are Warm and Wet**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are Cold and Dry**

**Air Masses are classified according to the surface over which they form**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = formed over land**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = formed over water**

**Factors That Affect Climate**

**A. Latitude**

**1. As latitude increases, the intensity of solar energy decreases.**

**2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is between 23.5o north (the tropic of Cancer) and 23.5 south (the tropic of Capricorn) of the equator. The sun’s rays are most intense and the temperatures are always warm.**

**3. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are between 23.5o and 66.5o north and between 23.5o and 66.5o south of the equator. The sun’s rays strike Earth at a smaller angle than near the equator.**

**4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are between 66.5o north and south latitudes and the poles. The sun’s rays strike Earth at a very small angle in the polar zones.**

**B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**The higher the elevation is, the colder the climate**

**C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Topographic features such as mountains play an important role in the amount**

**of precipitation that falls over an area.**

**The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ uses mean monthly and annual values of temperature and precipitation to classify climates.**

**1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
AKA: Humid Tropical Climate  
Mean temperature above 18C and can exceed 200 cm of rain**

**A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**High temperature and a lot of rain**

**Example: tropical rain forest**

**B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Similar to “Wet Tropical” but periods of low rain fall**

**Example: Savannas (tropical grasslands)**

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
AKA: Humid Mid-Latitude Climate**

**A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**South Eastern United States (hot summer, mild winter)**

**B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with Severe Winters**

**Western Alaska to Newfoundland in North America (mild summer, cold winter)**

**3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**The mean temperature of the warmest month is below 10 C, Little Precipitation**