Climate Notes Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Climate is…**

* **An area’s long-term of weather**.
* It includes characteristics such as how \_\_\_\_\_ summers are, how cold \_\_\_\_\_\_\_ are, and how much precipitation falls at \_\_\_\_\_\_\_\_\_ times of year.

1. main characteristics:

**\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Precipitation**

**Climate Controls**

* Climate depends on a set of \_\_\_\_\_\_\_\_\_\_ called **climate controls**. These include:
* **\_\_\_\_\_\_\_\_\_\_\_\_\_**: how much solar radiation a location receives.
* **Proximity to water**
* **Altitude/\_\_\_\_\_\_\_\_\_**
* **Proximity to mountains**
* **\_\_\_\_\_\_\_\_ currents**
* **Prevailing \_\_\_\_\_\_\_**

**1. Latitude**

* A location’s \_\_\_\_\_\_\_ relative to the **equator** **determines how much \_\_\_\_\_\_\_ radiation it receives**, and therefore affects its \_\_\_\_\_\_\_\_\_\_\_\_\_.
* *Remember as Earth \_\_\_\_\_\_\_\_\_\_\_\_ around the Sun, the tilt influences \_\_\_\_\_\_\_\_\_ much solar radiation a \_\_\_\_\_\_\_\_\_\_\_\_\_ receives & seasons \_\_\_\_\_\_\_\_\_\_\_.*

**1. Latitude**

* Also, the latitude relative to **\_\_\_\_\_\_\_\_\_\_\_\_ cells** in our troposphere affects \_\_\_\_\_\_\_\_\_\_\_\_.
* **Dry at \_\_\_\_\_\_ N & S**
* **\_\_\_\_\_\_\_\_\_ at equator**

**Zones of Latitude**

* A region’s latitude (\_\_\_\_\_\_\_\_\_\_\_ from the equator) can impact \_\_\_\_\_\_\_ climate.
* Sketch the diagram below.

**2. Proximity to Water**

* Because **\_\_\_\_\_\_\_\_ heats and cools** **slowly**, it has a low temperature \_\_\_\_\_\_\_. Therefore \_\_\_\_\_\_\_ masses beside large bodies of \_\_\_\_\_\_\_ usually have **mild climates.**
* Large \_\_\_\_\_\_\_\_\_ of water add water vapor to the air, so \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is more likely downwind of water **Ever heard of “lake effect” snow?**

**3. Altitude/Elevation**

* As you go up in the **Troposphere** *(\_\_\_\_\_\_\_\_\_ layer of the atmosphere)* \_\_\_\_\_\_\_\_\_\_\_\_\_ **decreases**.
* Therefore, the \_\_\_\_\_\_\_\_\_ the elevation of the \_\_\_\_\_\_\_\_, the **colder** it is, *generally*.

**4. Proximity to Mountains**

* \_\_\_\_\_\_\_\_\_\_\_ can affect precipitation by making a **\_\_\_\_\_\_\_\_\_ Shadow**.
* On the \_\_\_\_\_\_\_\_\_ side of the mountain, air is \_\_\_\_\_\_\_\_\_ to rise. As it **rises**, it cools. As it \_\_\_\_\_\_\_, it loses its ability to \_\_\_\_\_\_\_\_ **water**, and **precipitation** occurs on the windward \_\_\_\_\_\_\_\_\_\_. As the air travels to the leeward side, it no \_\_\_\_\_\_\_\_\_ contains **moisture**, the air is **dry**. ***This is why there are \_\_\_\_\_\_\_\_ on the east side of our Rocky Mountains.***

**5. Ocean Currents**

* \_\_\_\_\_\_\_\_ circulation of **heat** in the **oceans** \_\_\_\_\_\_\_\_\_ heat energy around the world.

**6. Prevailing Winds**

* Global \_\_\_\_\_\_\_\_ Patterns cause there to be a predominant **wind \_\_\_\_\_\_\_\_\_\_** in some areas. **This influences the \_\_\_\_\_\_\_\_ of weather that approaches you.**
* **Prevailing Westerlies** cause \_\_\_\_\_\_\_\_\_ patterns to move from \_\_\_\_\_\_\_\_ to east across the United States.