**Name \_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_ Changes in Climate Notes**

* **Weather vs. Climate**
	+ Weather is defined as: the \_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at any given time
		- Weather is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ measurement of what’s happening in the atmosphere
	+ Climate is defined as: the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of all the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ that describes a place or region
		- Climate is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of all the weather information over a \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of time (i.e. many years, decades, centuries or even longer)
* **Measuring Climate**
	+ Recent climate data is available through records of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Past climate data is collected through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ data including:
		- Sea floor studies: studying \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the sea floor can tell us about earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of years
		- Glaciers: Glaciers contain detailed records of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the atmosphere, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (i.e. ash, dust, pollen, pollution etc.)
		- Tree rings: Trees usually \_\_\_\_\_\_\_ a ring to their trunk each year. By studying the \_\_\_\_\_\_\_\_\_\_\_\_ of the rings, we can learn about the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when the ring was created.
* **Causes of Climate Change**
	+ Causes of climate change can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Natural causes include: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ movement, volcanic \_\_\_\_\_\_\_\_\_\_\_\_\_\_, changes in earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and changes in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ activity
	+ Human influence includes: changing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and ground cover, increasing \_\_\_\_\_\_\_\_\_\_ levels, increasing aerosols
* **Plate Tectonics**
	+ Different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Plate tectonics causes plates to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ across different \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, causing a change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Volcanic Activity**
	+ Volcanoes release \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ into the atmosphere
	+ This increases the amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ being \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Less sunlight reaches earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the temperatures are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Changes in Earth’s Orbit**
	+ **Eccentricity**

* + - The shape of the earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ changes from nearly \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ every 90,000-100,000 years
		- This change in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the sun creates changes in earth’s climate.
		- This would create greater \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ temperatures.
	+ **Axial Tilt**

* + - The \_\_\_\_\_\_\_\_\_\_ of the earth’s axis is currently \_\_\_\_\_\_\_\_\_\_\_\_\_
		- This angle \_\_\_\_\_\_\_\_\_\_\_\_ from 22.1-24.5° every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ years
		- Lower angles would cause warmer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and cooler \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- This would promote more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in winter and less snow \_\_\_\_\_\_\_\_\_\_\_ in summer, causing \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to form on the earth
	+ **Precession**

* + - As the earth rotates it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on its axis, just like a spinning \_\_\_\_\_\_\_\_ as it begins to slow down.
		- This cycle changes the \_\_\_\_\_\_\_\_\_\_ of the earth and coincides with \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ cycles every 26,000 years.
		- This would also make the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to what they are now
	+ **Solar Activity**
		- The sun typically generates a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that makes its way to earth
		- Over time, slight variations in the amount of solar radiation may affect the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		- Scientists think that approximately \_\_\_\_\_\_\_\_\_\_ of the current warming of earth’s atmosphere is due to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ solar activity
* **Human Activity**
	+ We’ve already talked a lot about this, so let’s just say that we’re adding greenhouse gases to the atmosphere which are leading to an increase in global temperatures by trapping added heat