**Chapter 6**

**Essential Question:  How does Earth’s water affect weather?**

**Vocabulary:**

*evaporation*:  the process of changing liquid water to water vapor

*condensation:* the process of water vapor becoming liquid water. Clouds are formed by condensation of water vapor in the atmosphere.

*precipitation*: any form of water that falls to the Earth from the cloud. This could be in the form of rain, sleet, snow, or hail.

*humidity*: the amount of water vapor in the air

*front:* the area where two air masses meet. There are only two types of fronts: cold and warm.

*meteorologist*: scientists that study weather

*barometer*:  a tool used to measure air pressure

*anemometer*: a tool used to measure wind speed

*wind vane:* a tool used to show which direction the wind is blowing from.

**Key concepts for study:**

* Most water on Earth is found in the oceans (97%), followed by water frozen in glaciers and polar ice caps (2%), and finally in lakes and rivers (1%)
* Most of the salt in ocean water originated from rocks and soils on the land
* Water moves endlessly from Earth’s surface into the atmosphere and back again during the water cycle.
* Earth’s atmosphere is made up of a combination of gasses, the majority of which is nitrogen
* Air pressure increases as you go lower in the atmosphere and decreases as you go higher.
* There are three main categories of clouds:

 cirrus: feathery ice clouds that form high in the atmosphere

cumulus: puffy, white clouds common in good weather

stratus: flat layers of cloud that form close to the Earth’s surface

* Over time Earth’s climate has had cycles of warm (now) and cold periods (ice ages).
* Extra greenhouse gasses in the air can cause an increase in Earth’s temperature.
* Meteorologists mainly use weather radar to track precipitation.
* Meteorologists use symbols to represent different parts of weather on a map:

 cold front: triangles

 warm front: half-circles

 high pressure: H

 low pressure: L

* A rain gauge and a hygrometer are both used to measure precipitation (water).
* Scientists study ice cores from glaciers to determine the amount of carbon dioxide and other gasses that were present in the atmosphere long ago.