3.1:Weather changes as air masses move.

Learning: -

* What air masses are
* What happens when air masses meet
* How pressure systems affect the weather

Air mass: A large volume of air in which temperature and

 Humidity are nearly the same in different locations at

 the same altitude.

* An air mass forms when the air over a large region of earth sits in one place for many days.

Characteristics of an Air Mass: -

The first word of an air mass’s category name tells whether the air mass formed over water or dry land. It describes the moisture of the air mass.

* **Continental** air masses form over over land.Air becomes dry as it loses its moisture to the dry land below it.
* **Maritime** air masses form over water. Air becomes moist as it gains water vapor from the water below it.

The second word of a category name tells whether an air mass formed close to the equator. It describes the air mass’s temperature.

* **Tropical** air masses form near the equator. Air becomes warm as it gains energy from the land or water.
* **Polar** air masses form from the equator. Air becomes cool as it loses energy to the cold land or water.

Fronts: a boundary between air masses.

Types of fronts: -

1. **Cold front** form when a cold air mass pushes air mass and forces the warm air to rise.
2. **Warm front** forms when a warm air mass pushes a cold air mass.
3. **Stationary front** occurs when two air mass pushes a cold air mass.

High-pressure system: formed when air moves all the way around a high-pressure center.

Low-pressure system: a large weather system that surrounds a center of low pressure.

3.2: Low-pressure systems can become storms

Tropical storm: a low-pressure system that starts near the equator and has winds that blow at 65 kilometers per hour or more.

Hurricane: a tropical low pressure system with winds blowing at speeds of 120 kilometers per hour.

Structure of a hurricane: -

* Eye: The small center of a hurricane is clear and calm because air is moving downward.
* Eye wall: Just out side the eye the air swirls upward very quickly. It is like a wall of stormy weather.

Storm surge: a huge mass of ocean water pushed by a hurricane.

 **Winter storms**: -

**Blizzards** strong winds can blow so much snow into air at once that it becomes difficult to see and dangerous to travel.

**Lake-Effect Snowstorms** some of the heaviest snows falls in the areas just east and south of the Great Lakes.

**Ice storms** when rain falls onto freezing-cold ground, conditions can become dangerous.