Severe Weather

**Thunderstorms**

* At any given moment, nearly 2000 thunderstorms are occurring around the world.
* Some are capable of producing hail the size of baseballs, swirling tornadoes, and surface winds of more than 160 km/h.
* All thunderstorms, regardless of intensity, have certain characteristics in common.

**Air-Mass Thunderstorms**

Thunderstorms are often classified according to the mechanism that caused the air to rise

* An **air-mass thunderstorm** is a thunderstorm that results from the air rising because of unequal heating of Earth’s surface within one air mass.

**Frontal Thunderstorms**

* **Frontal thunderstorms** are thunderstorms that are produced by advancing cold fronts and, more rarely, warm fronts.

Cumulus stage, mature stage, dissipation stage

* **Supercells** are self-sustaining, extremely powerful severe thunderstorms, which are characterized by intense, rotating updrafts.

**Lightning**

Lightning is an electrical discharge caused by the friction of falling and rising ice crystals within strong drafts of a cumulonimbus cloud

* **Downbursts** are violent downdrafts that are concentrated in a local area and can contain wind speeds of more than 160 km/h.

**Hail**

* Hail is precipitation in the form of balls or lumps of ice that can do tremendous damage.

**Floods**

* When there are weak wind currents in the upper atmosphere, weather systems and resulting storms move slowly.

**Tornadoes**

A **tornado** is a violent, whirling column of air in contact with the ground

**Tropical cyclones** are large, rotating, low-pressure storms that form over water during summer and fall in the tropics

The **Saffir-Simpson hurricane scale** classifies hurricanes according to wind speed, air pressure in the center, and potential for property damage