**Severe Weather**

2000 thunderstomrs are occurring around the world

Some are capable of producing hail the size of baseballs. Swirling tornadoes, and surface winds of more than 160 mph

**Conditions that thunderstorms need to form**

1 must have moisture

2 must have warm air pushing up

3 must be a cloud in a unstable atmospheric condition

The air in a thunderstorm will keep rising until

1 it meets a layer of stable air that it cannot overcome

2 the of condensation which diminishes with height is insufficient to generate enough latent heat to keep the cloud warmer than the surrounding air

**Cumulous stage**

In the cumulus stage air starts to rise vertically upward building a large cumulus cloud

Transported moisture condenses into a visible cloud and releases latent heat

**Mature stage**

As the precipitation falls it cools the air around it which becomes denser than the surrounding air, it sinks creating down drafts and up drafts

The updrafts and downdrafts form a convection cell

**Dissipation stage**

The supply of warm, moist air runs out because the cool downdrafts cool the area from which the storm draws energy

Cold fronts are usually accompanied by upper level low pressure systems that are marked by pools of cold air which cause the air to become more unstable

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

About 10% of the roughly 100,000 thunderstorms is a supercell

**Lighting**

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

**Tornadoes**

Violent whirling coloumn of air in contact with the ground

Pressure drops in the middle of a tornado

**Fujta tornado intensity scale**

The scale ranges from f0 to f5

Most tornadoes don’t exceed f1

**Tropical Cyclones**

Thrive on the tremendous amout of energy in warm oceans

**Saffir Simpson scale**

Category 1-5