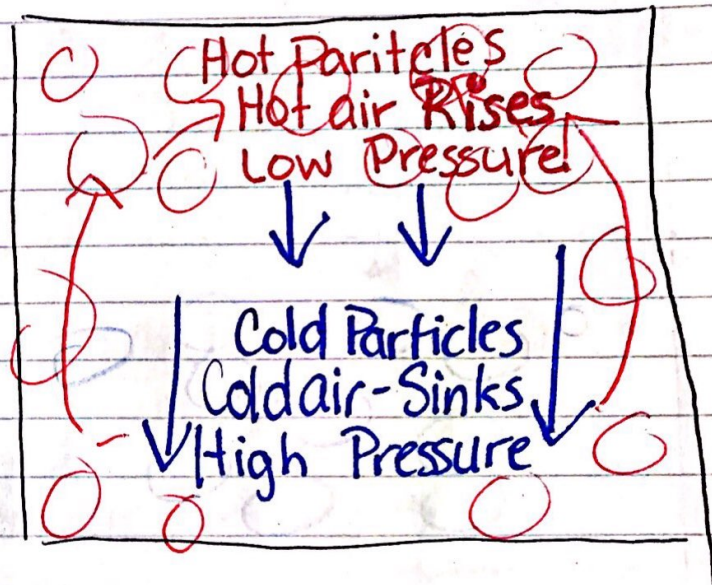
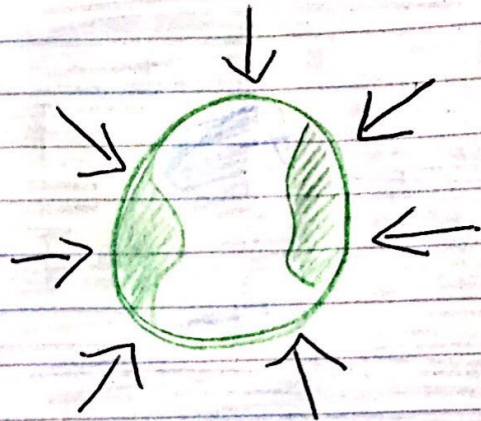


Unit 4 lesson 4 Notes ① Weather Patterns

Wind → moving air
* Air is made of matter
• has volume
• has mass

Air Pressure
- The weight of the atmosphere on Earth's surface

* Uneven heating of Earth's surface causes different air pressures
* different air pressures causes air to move resulting in Wind (moving air)



HIGH PRESSURE →
TO

- Colder temperatures
- High density
- Particles sink
- Cold air sinks**

LOW PRESSURE

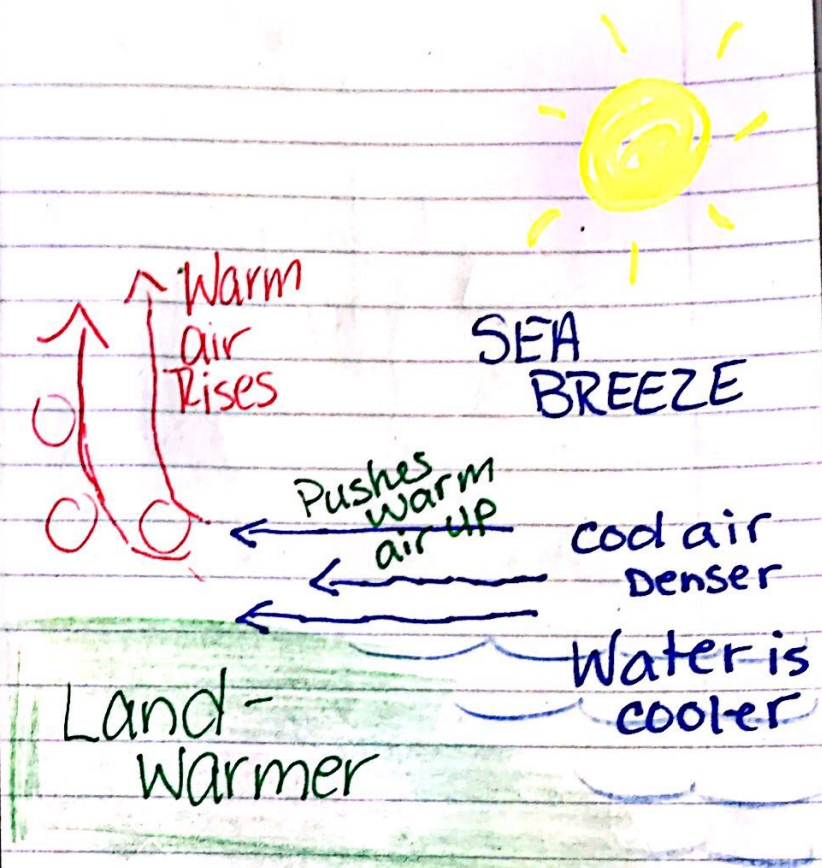
- Air is warmer
- low density
- Hot air rises

Unit 4 Lesson 4 Notes (2)

Local Winds

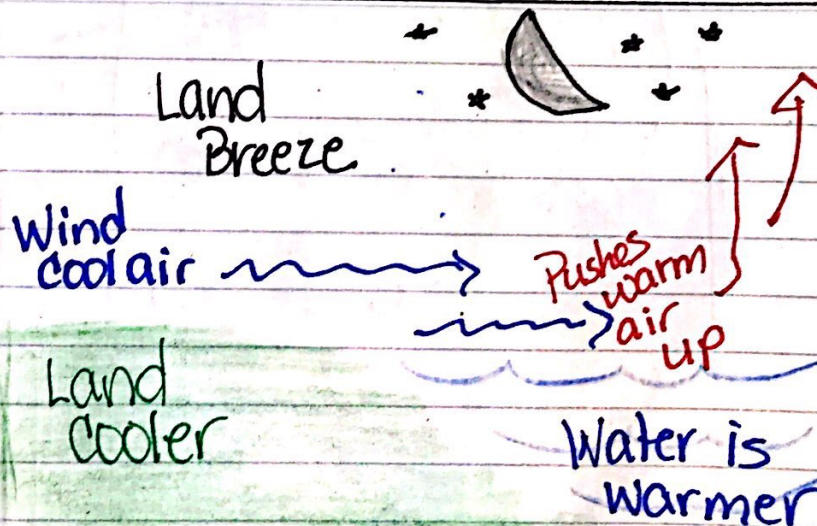
Day - Sea Breeze

- * Land heats up faster than water
- land is warmer
- lower density
- warm air rises
- cool air moves in from the water
- Sea Breeze



Night - Land Breeze

- land loses heat faster
- water is warmer
- Air over the water rises → air from land moves in -
- Land Breeze



Unit 4 Lesson 4 Notes (3)

Bodies of Air

Air mass:

- large body of air that has the same temperature and moisture properties throughout
- * Depends where they form

If it forms:

- Over warm land:
Air mass → warm & dry
- Over warm waters:
warm & wet air mass (tropical)
- Over cold water:
cold & wet air mass (Polar waters)

Wind Blows →
West to East

Fronts:

- When (2) different air masses meet

Cold front

Warm front



Hot & Dry

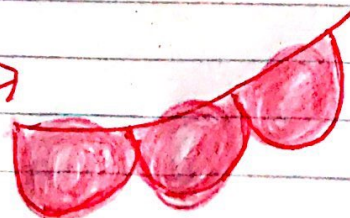
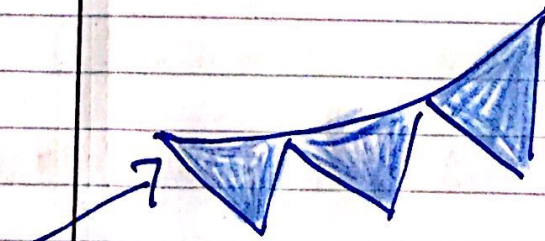
Warm/Dry land

Warm & Wet

Tropical Waters

Cold & Wet

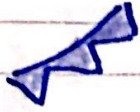
Polar Waters



ON TEST

Unit 4 lesson 4 Notes (4)
Battling Fronts

Cold Front



- Cold air mass moves under a warm air mass
- Warm air is lifted steeply
- Condenses quickly into cumulonimbus clouds
- Severe Weather
Thunderstorms/hail

cold air mass →

← warm air mass



After it passes: Fair weather, sunny skies, cooler air

Warm Front

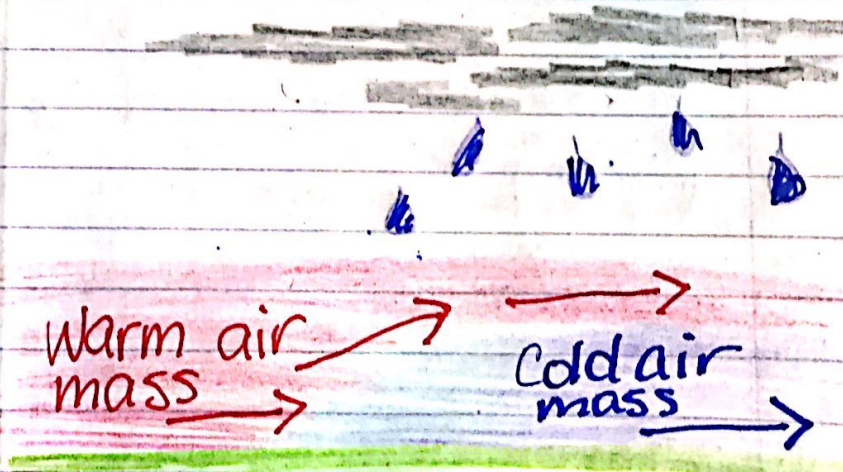


- Warm air mass moves over a cold air mass
- cools slowly
- cloudy skies
 - steady rain or snow (stratus clouds)

Warm air mass →

← Cold air mass →

After it passes: Warmer temperatures, cloudy skies

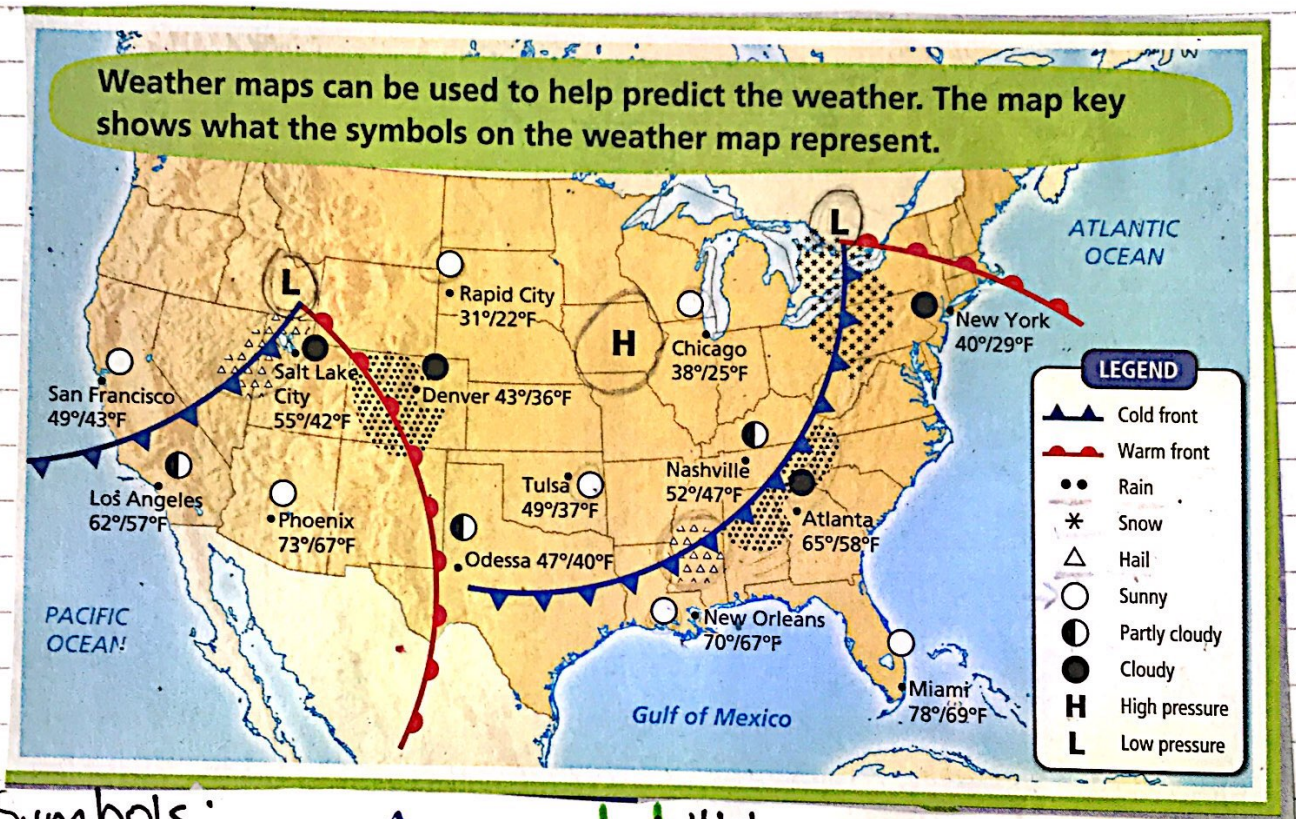


Unit 4 Lesson 4 Notes (5)

Weather Map: A map that uses symbols to show weather data.

Weather tools: help collect this data

* Weather stations, * satellite, * Doppler Radar



Symbols:

Warm Front

Cold Front

High Pressure
Fair Weather

Low Pressure
stormy weather

Severe Weather Kit:

- Water
- First aid kit
- Flashlight
- Batteries
- Non-perishable food
- Portable radio
- Cash