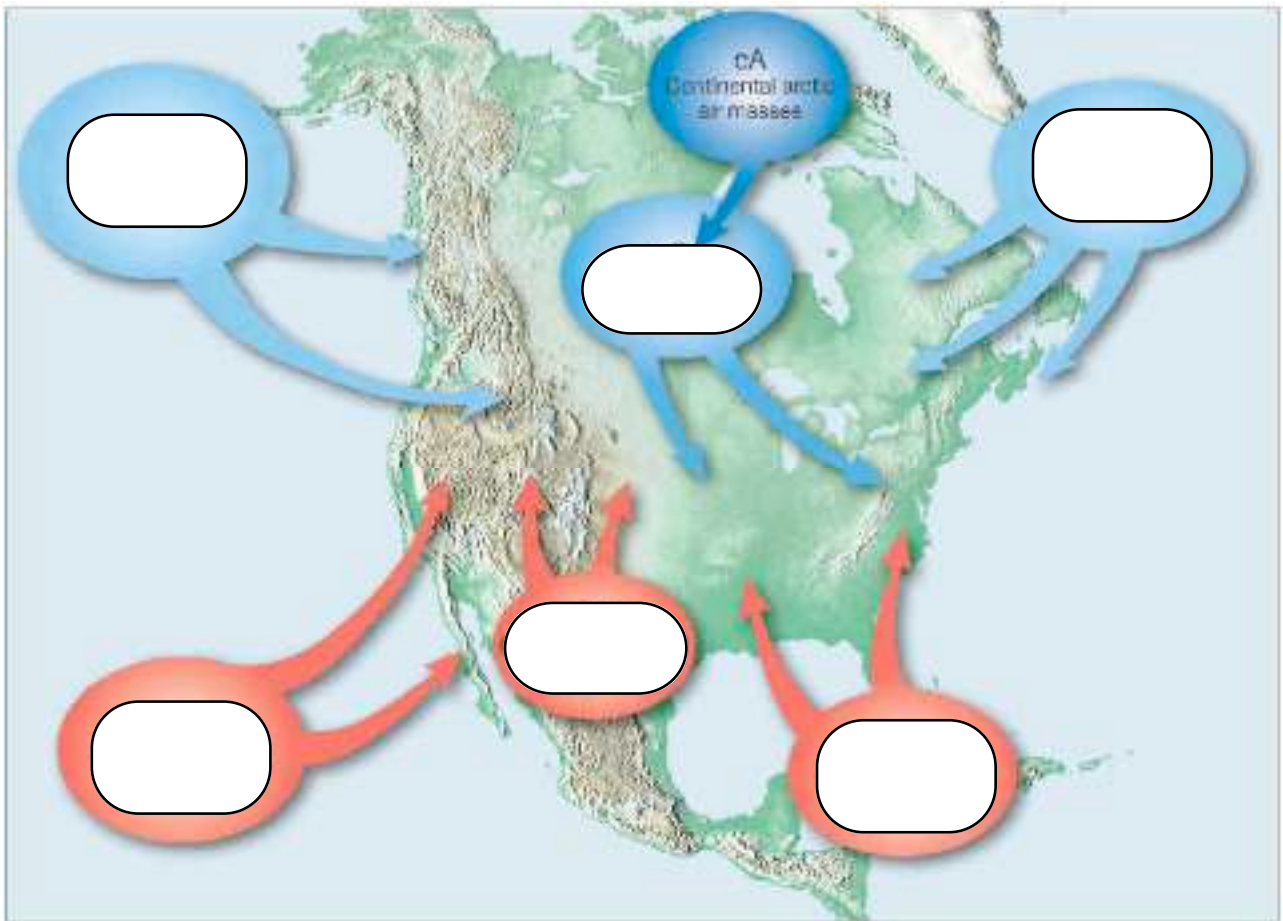


Investigation 9 – Weather and Climate

Notes

1. Air Masses

- a. Large, thick bodies of air that are the same in _____ and _____
- b. Hundreds or thousands of _____ across
- c. 10 – 13 kilometers _____ Earth's surface
- d. Named for _____ region
 - i. _____ – over water (m)
 - ii. _____ – over land (c)
 - iii. _____ – warm latitudes (T)
 - iv. _____ – cold latitudes (P)



2. Types of Air Masses

a. Cold air masses

- i. Originate in the _____ and move south and east

b. Warm air masses

- i. Originate in the _____ and move north and east

c. Stagnant air masses

- i. A large air mass that stays in one spot for a long time and doesn't _____

- ii. Usually forms over areas with uniform surfaces with few

3. Moving Air Masses

a. Causes the air masses of different temperatures to _____

- i. _____ air masses rise higher because they are less dense

- ii. _____ air masses sink lower because they are more dense

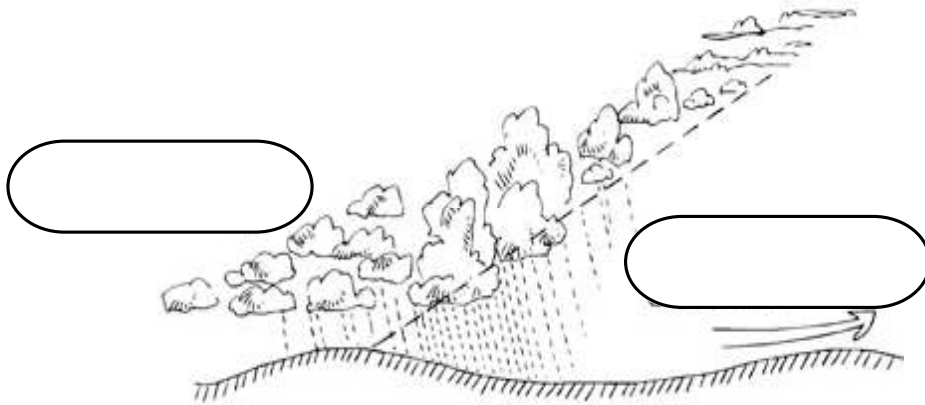
4. Fronts

a. Where two air masses meet, little _____ between the two air masses

- i. Named for the air mass that is moving _____

b. Types of fronts

- i. Warm Front

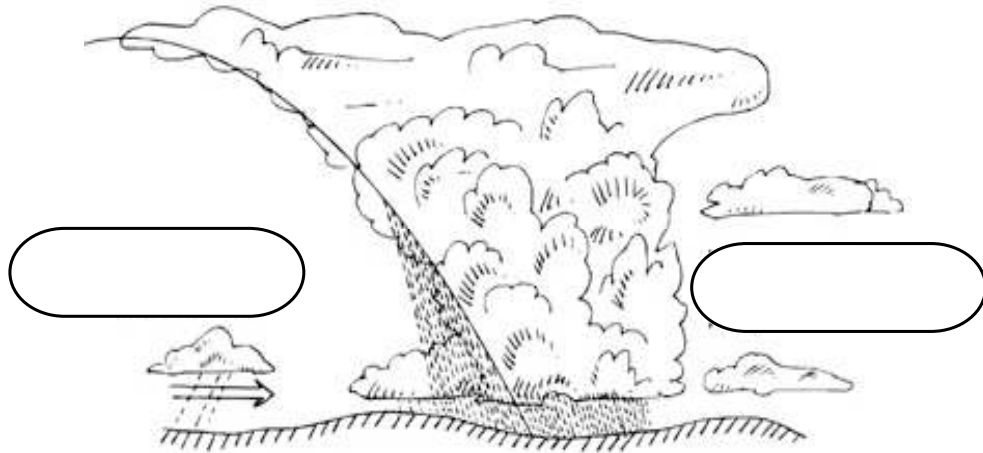


Less dense warm air slides over the cold air at a gentle slope

- Happens over a _____ period of time
 - i. Wispy, _____ clouds form (first signs)
 - ii. Then other clouds form
- Pressure _____

- Temperature _____

ii. Cold Front



Cold dense air pushes the less dense warm air up

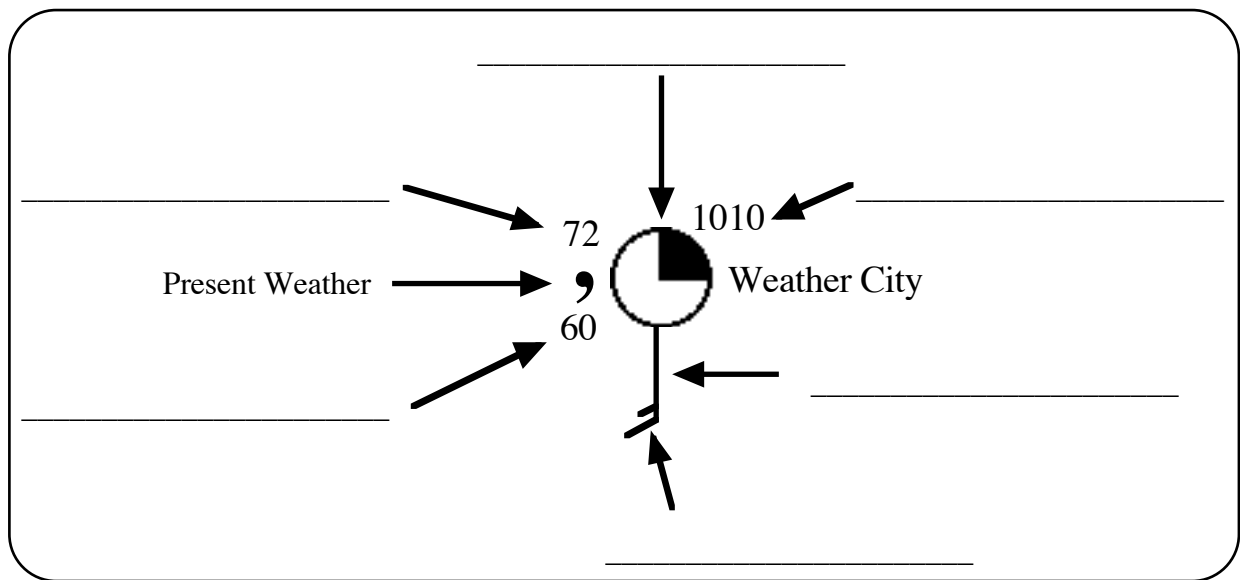
- If warm air is _____, clouds and precipitation form
 - i. Occurs _____
- Temperature _____
- Pressure _____

5. Weather Observations

a. Surface Observations

- i. From weather stations all over the _____ and the world
- ii. _____ plot the information on maps
- iii. Analyzed by _____ to make forecasts

b. Use special _____ to represent weather data on a map



i. The more filled in the circle = the more _____ cover

ii. Wind _____ = shown by the line (staff)

◆ Points to the direction the wind is _____ from

iii. Wind _____ = shown by the short lines (barbs)

◆ Short barb = _____ knots

◆ Long barb = _____ knot

6. How are Weather and Climate different

a. _____ is the condition of the atmosphere over a short period

b. _____ is the condition of the atmosphere over a long time

7. Global Warming

a. Average air temperature has _____ over 0.6°C

b. Scientists don't think it takes much change in the average temperature to cause _____ changes in the environment

c. Possible Effects

i. How Earth's _____ is distributed