Name _____ Date _____ Period _____ 112

WEATHER FRONTS

Activity 1- Weather Fronts Interactive

Go to dixiemiddlescience.weebly.com and click on the "WEATHER FRONT LINK". Before you begin anything, read the introduction at the top of the page to answer the first 2 questions. Click on the front to gather information and observe each of the 4 main types of air fronts.

1. What is an air front?
2. What does an air front cause?
    a.
    b.
3. Click on each of the fronts to learn a more about each of the 4 main weather fronts.

Weather Front	What air mass is moving in? (warm or cold)	Which air mass goes on top (warm or cold)	Type of Weather	Diagram (picture of air masses, cloud type, and precipitation)
Cold Front				
Warm Front				
Stationary Front				
Occluded Front				

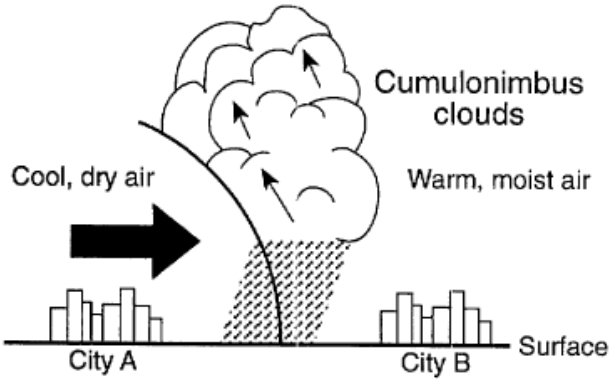
Activity 2 - Weather Fronts Symbols

Complete a google search to identify the **symbol** and **color** used to represent each type of weather front.

Front	Cold	Warm	Stationary	Occluded
Symbol				

Activity 3 – Air Mass and Weather Fronts Review

The cross section below shows a weather front. The large arrow shows the direction of the movement of the cool air mass.

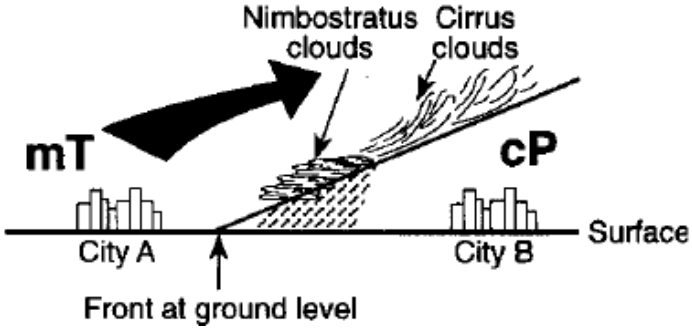


1. Which type of weather front is shown?
   a. warm front
   b. occluded front
   c. cold front
   d. stationary front

2. The winds shift from southwest to northwest as heavy rains and hail begin to fall in Albany, New York. These changes are most likely caused by the arrival of
   a. an mT air mass
   b. a cT air mass
   c. a cold front
   d. a warm front

3. What is the difference in the air temperature and humidity between the cP and mT air masses?
   a. The cP air mass is warmer and less humid.
   b. The cP air mass is colder and more humid.
   c. The mT air mass is warmer and more humid.
   d. The mT air mass is colder and less humid.

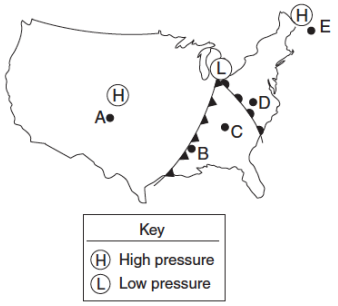
Base your answers to questions 4 and 5 on the diagram below, which shows the frontal boundary between mT and cP air masses.



4. If the front at ground level is moving toward city B, which type of weather front is shown?
   a. cold front
   b. warm front
   c. occluded front
   d. stationary front

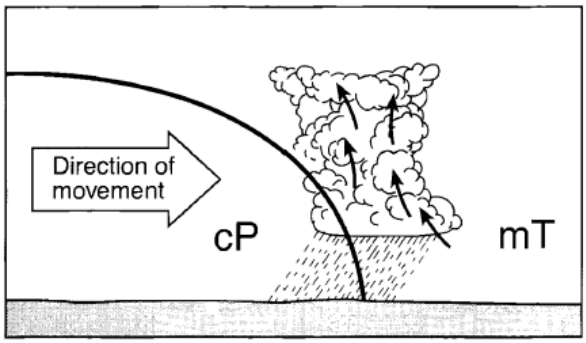
5. Why do clouds and precipitation usually occur along the frontal surface?
   a. The warm air rises, expands, and cools.
   b. The warm air sinks, expands, and warms.
   c. The cool air rises, compresses, and cools.
   d. The cool air sinks, compresses, and warms.

The map below shows high-pressure and low-pressure weather systems in the United States.



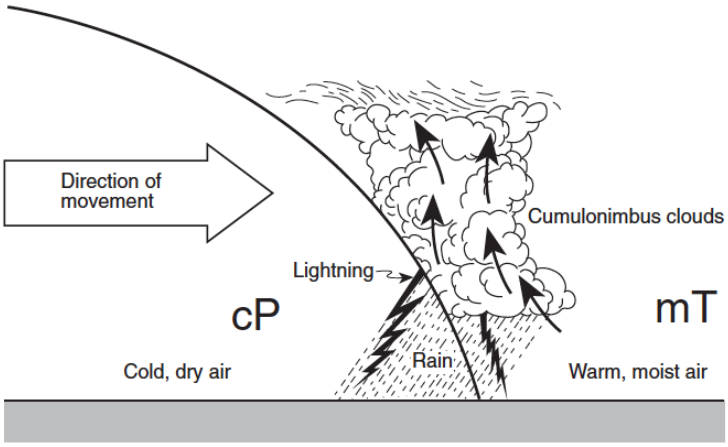
6. Which two lettered positions on the map are most likely receiving precipitation?
   a. A and B
   b. B and D
   c. C and E
   d. A and D

The diagram below which represents a cross section of a weather front is shown below.



7. The cloud formation and precipitation shown in the cross section are caused by
   a. cold air rising and warming
   b. cold air sinking and warming
   c. warm air rising and cooling
   d. warm air sinking and cooling

Base your answers to questions 8 through 10 on the cross section below, which shows a typical cold front moving over Utah in early summer.

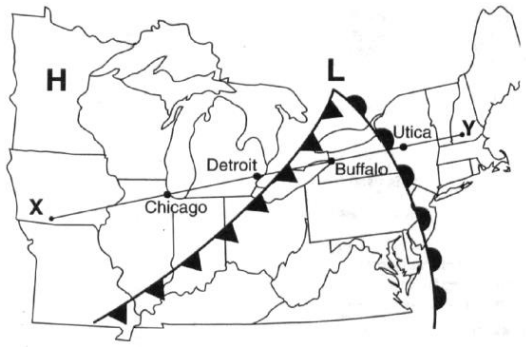


8. Explain why the warm, moist air is rising at the frontal boundary.

9. State one process that causes clouds to form in this rising air.

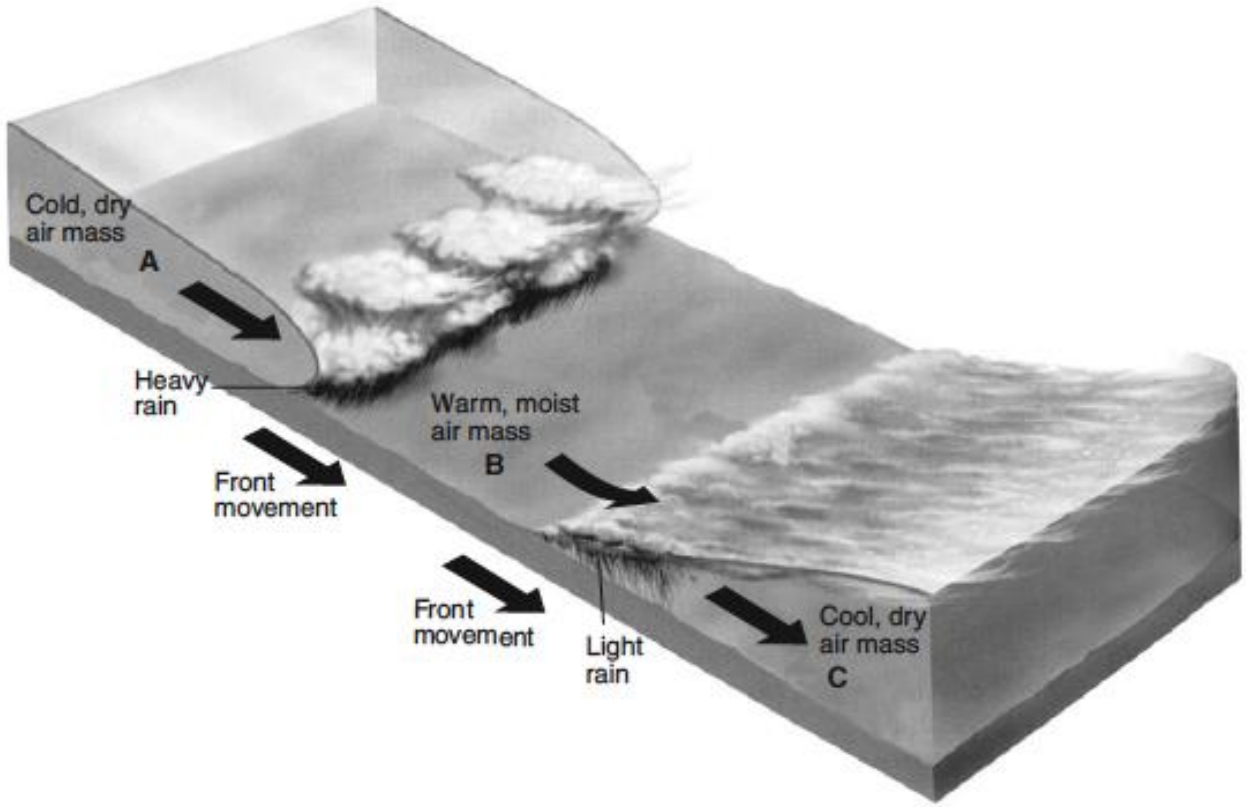
10. Central Canada was the geographic source region for the cP air mass shown in the cross section. Identify the most likely geographic source region for the mT air mass shown in the cross section.

The weather map below, which shows a high-pressure center (**H**) and a low-pressure center (**L**), with two fronts extending from the low-pressure center. Points X and Y are locations on the map connected by a reference line.



11. Which type of front is located between Buffalo and Detroit?
   a. stationary
   b. warm
   c. occluded
   d. cold

Base your answers to questions 12 through 16 on the diagram below, which shows air masses, clouds and rain associated with two fronts that are influencing weather conditions in Utah. Letters A, B, and C represent three air masses. The arrows show the direction of air and front movements.



12. Identify the most likely geographic source region for air mass A.

13. Identify the most likely geographic source region for air mass B.

14. Identify the type of front shown between air mass A and air mass B.

15. Identify the type of front shown between air mass B and air mass C.

16. Identify one process that causes clouds to form in the air rising along the frontal surface between air mass A and air mass B.