LESSON 28 | What are some other kinds of fronts?

Warm fronts are not the only kind of fronts. There are also **cold fronts** and **stationary** [STAY-shuh-ner-ee] **fronts**.

COLD FRONT

A warm front changes weather slowly. Another kind of front, called a **cold front**, changes weather quickly.

A COLD FRONT FORMS WHEN A MOVING COLD AIR MASS PUSHES AGAINST A WARM AIR MASS.

A moving cold front "scoops up" warm air that it meets. It lifts the warm air high into the atmosphere. The warm air cools and condenses. Tall storm clouds form. Strong winds blow. Heavy rain or snow falls. But it lasts only a few hours. A short time after the cold front passes, the weather becomes clearer and drier. The temperature drops suddenly. In the wintertime, a cold front may bring very cold air.

STATIONARY FRONT

Sometimes a cold air mass and a warm air mass meet, but then stop moving. The boundary between air masses that have stopped moving is called a stationary front.

A stationary front may remain only for a short time. Then there is little weather change.

If a stationary front remains for a long time, the weather changes. Warm front-like weather takes over. There is a steady rain. It may last a few days. Then the sky clears and it becomes warmer.

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WHAT A COLD FRONT LOOKS LIKE

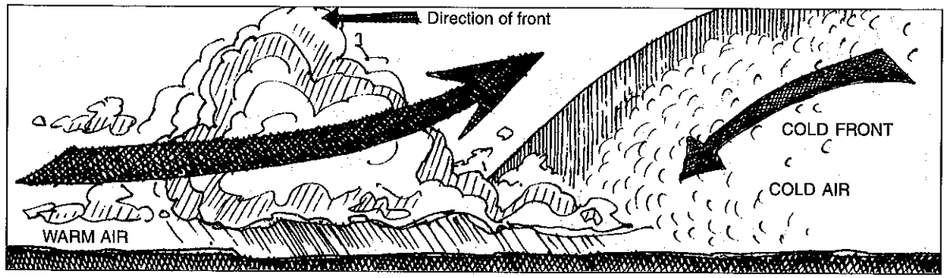


Figure A

Figure A shows a cold front. Find the two air masses. The moving cold air pushes the warm air high up. Many storm clouds form.

A cold front brings rapid weather changes.

What To Do

1. Get a thin piece of paper. Tracing paper would be best.
2. Put your paper over Figure B and trace it.
3. Now put the traced drawing over Figure C, lining up the x's.
4. Slowly, move the tracing to the right over Figure C until the y's match up.

Now imagine yourself to be at spot y. What would you see? What would you feel?

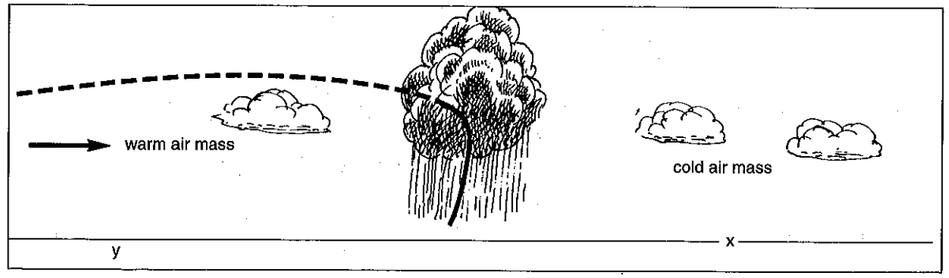


Figure B

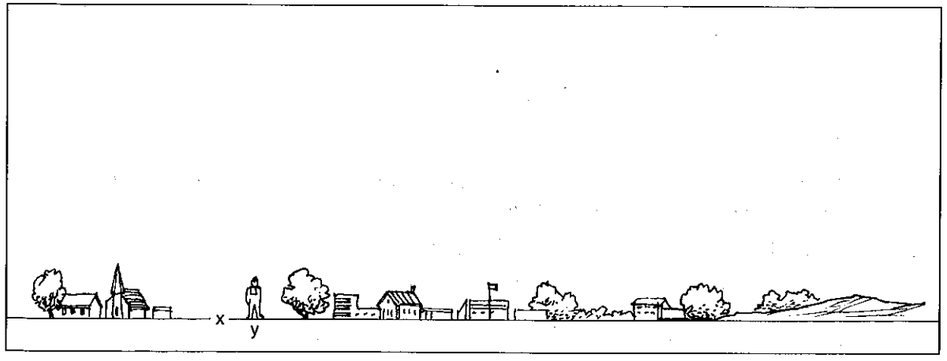


Figure C

WHAT A STATIONARY FRONT LOOKS LIKE

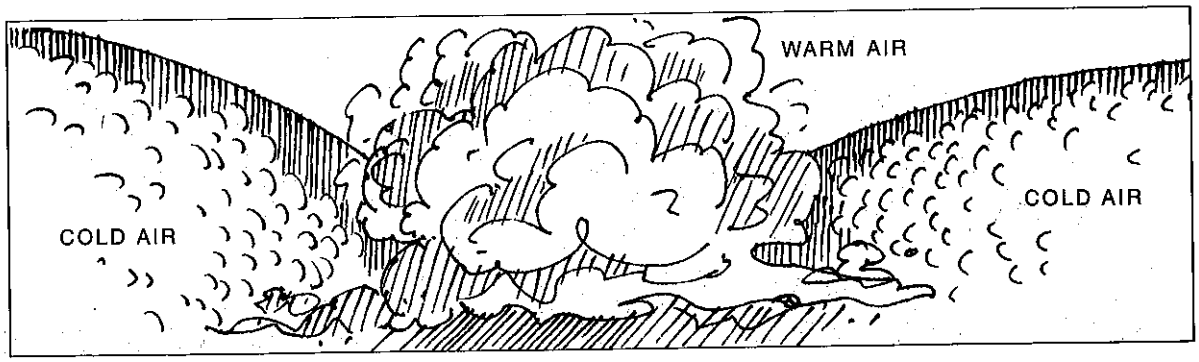


Figure D

Figure D shows a stationary front. A stationary front brings very little change in the weather.

MORE WEATHER MAP SYMBOLS

The symbol for a cold front is ▲▲▲▲▲.

The symbol for a stationary front is ◥◓◥◓◥◓.

Figure E shows what these symbols look like on a weather map.

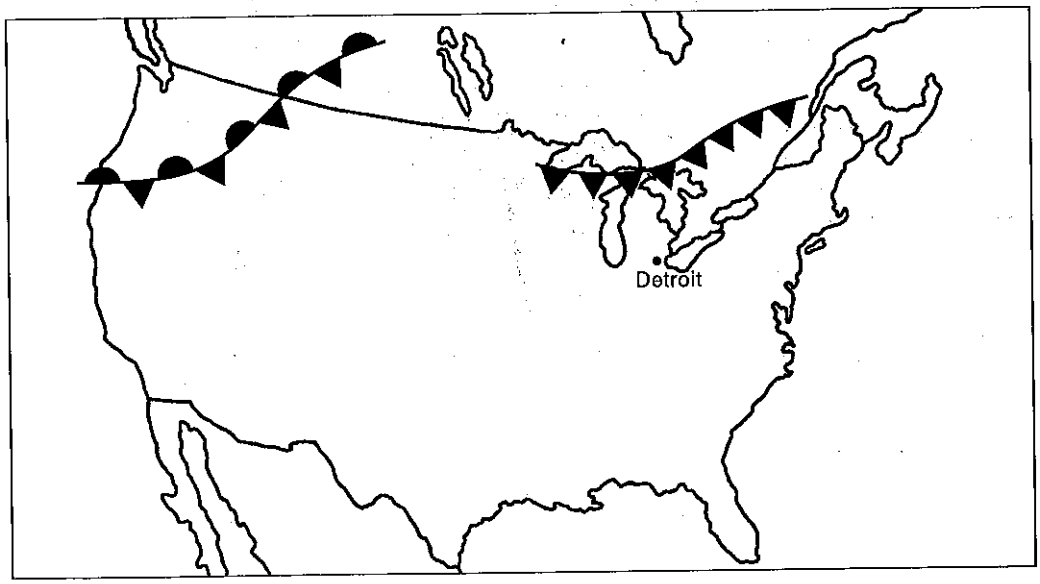
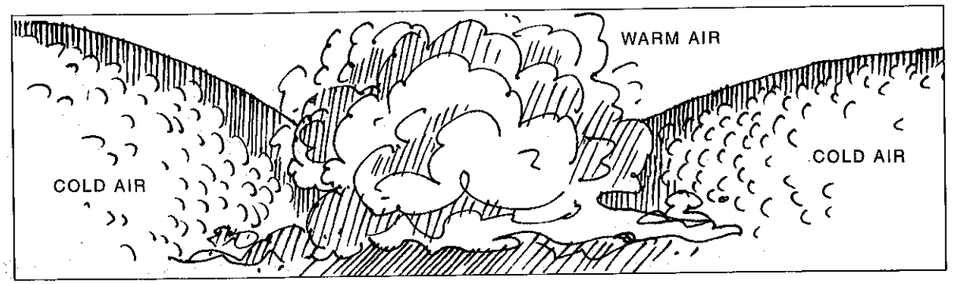


Figure E

The cold front on this map is moving towards Detroit. Its speed is about 40 kilometers (25 miles) per hour. Detroit is 440 kilometers away.

In how many hours will the cold front reach Detroit? _____

WHAT A STATIONARY FRONT LOOKS LIKE



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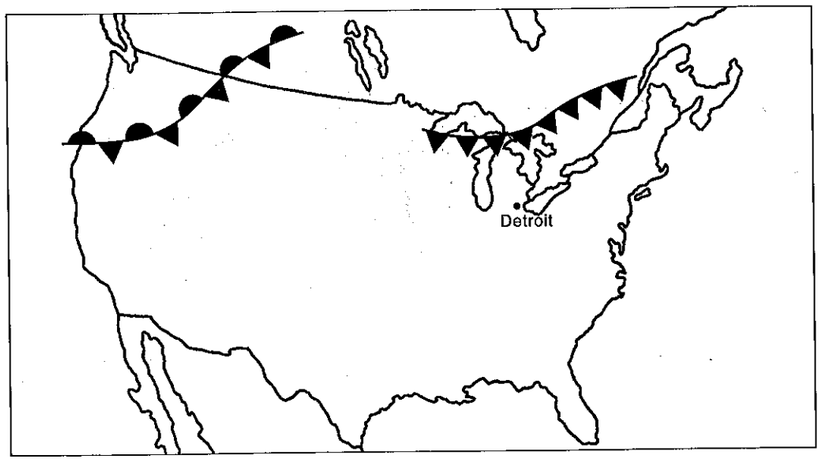

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FILL IN THE BLANK

Complete each statement using a term or terms from the list below. Write your answers in the spaces provided.

storm clouds
for a long time
cold front
does not
stationary front

1. When a cold air mass pushes against a warm air mass, a _____ is formed.
2. A cold front produces big _____.
3. Precipitation from cold front clouds _____ last a long time.
4. The border between "stalled" air masses is called a _____.
5. Warm front weather follows if a stationary front remains _____.

FIND THE PARTS

Figure F shows a cold front. Find the parts listed below. Write the correct letter in the spaces provided. Then fill in the blanks.

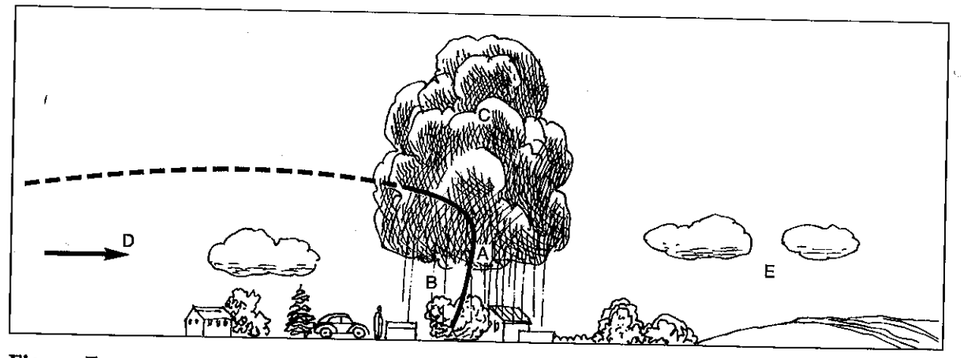

Figure F

1. warm air mass _____
2. cold front _____
3. cold air mass _____
4. storm clouds _____
5. area of precipitation _____
6. The cold front is moving from _____ . (right to left, left to right)
7. A cold front changes weather _____ . (slowly, quickly)
8. Precipitation from a cold front usually lasts _____ . (only a few hours, a long time)
9. Tall storm clouds (thunder clouds) _____ (may, usually do not) form along a cold front.

MATCHING

Match each term in Column A with its description in Column B. Write the correct letter in the space provided.

Column A	Column B
_____ 1.	a) symbol for a stationary front
_____ 2. 	b) caused by a warm front
_____ 3. 	c) symbol for a cold front
_____ 4. slow weather changes	d) caused by a cold front
_____ 5. rapid weather changes	e) symbol for a warm front

TRUE OR FALSE

In the space provided, write "true" if the sentence is true. Write "false" if the sentence is false.

_____ 1. A moving cold front moves cold air over warm air.

_____ 2. A cold front has gentle slope.

_____ 3. A cold front always brings snow.

_____ 4. A cold front builds storm clouds.

_____ 5. A cold front brings slow weather changes.

_____ 6. Precipitation along a cold front lasts a short time.

_____ 7. "Stationary" means moving.

_____ 8. A stationary front is a front that is not moving.

_____ 9. A stationary front never moves.

_____ 10. A stationary front can bring clear and warm weather.

REACHING OUT

A passing cold front changes air pressure. Does a passing cold front increase or decrease air pressure? (Hint: Think how temperature changes the weight of air.)

_____

_____