

Lesson – Air Masses

THE FOLLOWING VIDEO HAS BEEN APPROVED FOR
ALL AUDIENCES
BY THE EARTH SCIENCE TEACHERS ASSOCIATION OF AMERICA, INC

THE VIDEO HAS BEEN RATED

1	INTELLIGENT LEARNER IS REQUIRES TEACHER ASSISTANCE
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STRONG EARTH SCIENCE LANGUAGE, DETAILED DIAGRAMS, AND SUPER AWESOMENESS

- I can describe high & low pressure systems
- I can describe the four different weather fronts
- I can describe what an air mass is & where it came from
- I can find the Air Masses & Fronts on the ESRT

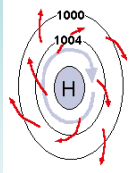
Weather Factors Associated with Different Pressure Areas

• Fill in the blanks below using the terms in the center of this chart.
• Draw an arrow on the line provided at the center, top of the chart to show the direction the wind blows (from _____ pressure to _____ pressure).

High Pressure		Low Pressure
Air moves _____	[in / out]	Air moves _____
Air is _____	[rising / sinking]	Air is _____
Air is _____	[warm / cold]	Air is _____
There are _____	[clouds / no clouds]	There are _____
There is _____	[precipitation / no precipitation]	There is _____
	Use the diagrams to the left and right to determine if the air is moving clockwise or counterclockwise around the center of the pressure system.	
Air moves _____	[clockwise / counterclockwise]	Air moves _____


Higs & Lows

- **Higs** (anticyclones)
 - Winds blow **out**
 - Coriolis effect causes highs to move **clockwise**
 - **Low Temp**
 - **Dry Air**



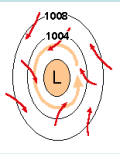
High

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Lows (Cyclones)

- **Lows** (Cyclones) -
 - Winds blow **in** toward the center
 - Coriolis effect causes lows to move **counterclockwise**
 - **High temp**
 - **Wet air**



Low

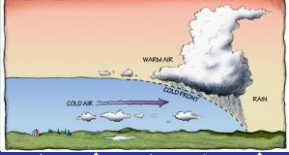
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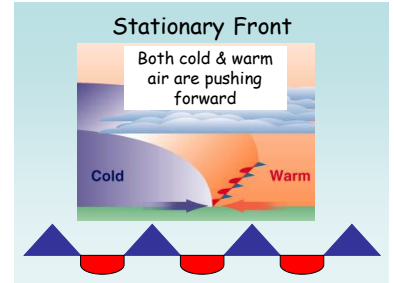
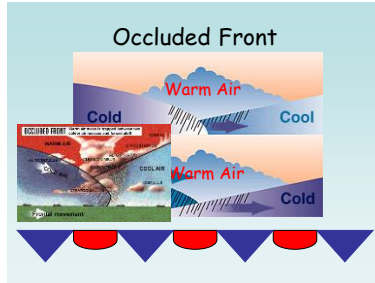
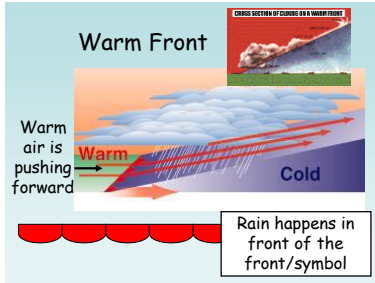


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Cold Front

Rain happens on the front/symbol





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- ESRT
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→
- | Fronts | |
|------------|-------|
| Cold | ▲▲▲▲ |
| Warm | —●●●● |
| Stationary | —●▲▲ |
| Occluded | ▲▲▲▲ |

Air Mass - large body of air with similar characteristics of pressure, moisture, & temp.

Cold Air Mass

- An air mass forms when a large mass of air remains stationary for a period of time acquiring similar characteristics.
 - Source Regions - where air masses form
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Hot

- Temperature:
 - High Latitude → Low Temp
 - Low Latitude → High Temp
- Humidity:
 - Land → Dry Air
 - Water → Wet Air

m = maritime (water, wet) c = continental (land, dry)
T = Tropical → P = Polar →
(low latitudes & hot) (high latitudes & cold)

Air Masses	
cA	continental arctic
cP	continental polar
cT	continental tropical
mT	maritime tropical
mP	maritime polar

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