

Name \_\_\_\_\_

# Modeling Air Masses and Fronts



**SAFETY!!**  
**Goggles are required during this investigation.**

**Problems:** To model air masses.  
Observe the location of a front.  
Infer the type of front that forms.

**Background Information:** Fronts form where air masses of different temperatures meet.


**Materials:**

Plastic box with lid	Water	Paper
Match	Lamp	Ice
Ruler	Paper towels	

**Procedure:**

1. Cover the bottom of the box with 5cm of water. Keep the walls of the box dry.
2. Light the paper. Blow it out, directing the smoke into the box so that the box is filled with smoke.
3. Place the lid upside down on the box.
4. Put five ice cubes inside one end of the lid.
5. Turn on the lamp so that it shines above the other end of the box.
6. Observe what happens inside the box and on the bottom of the lid. Record your observations.
7. Move the lamp so that it shines over the middle of the box.
8. Observe what happens inside the box and on the bottom of the lid. Record your observations.

**Data:**

	<b>Observations</b>
<b>Ice on end of box</b>	
<b>Lamp on end of box</b>	
<b>Lamp in middle of box</b>	

**Conclusions:**

1. Infer where clouds come from.
  
2. Describe where condensation and precipitation form.
  
3. Identify what section of your box represents a cold air mass.
  
4. Identify what section represents a warm air mass.
  
5. Infer where the weather front is in your box.
  
6. Describe where the front moved.
  
7. Identify which kind of front you made.