Investigation 3: Weather Maps

This investigation will help you to:

- Learn more about weather maps.
- Learn more about atmospheric pressure.
- Learn more about high-pressure areas and low-pressure areas.
- Learn more about air-masses and fronts.
- To complete Part A, steps 1-3 of this investigation, you will need weather maps.
- Complete Part B, steps 3-7 of this investigation, you will need weather maps highlighting specific weather variables.

To learn more about weather maps, visit the following web sites:

Present Weather Symbols, **National Weather Service**
This site provides an explanation on weather symbols used for forecasting.

To learn more about atmospheric pressure, visit the following web sites:

Atmospheric Pressure: The force exerted by the weight of air, **NASA**
Review some general facts about air pressure, how it changes, and what happens if it changes. The page includes a list of suggested additional activities as well as a web site demonstration of air pressure changes on a hot air balloon.
It's a Breeze: How Atmospheric Pressure Effects the Weather, **NASA**
Find out about how a mercurial barometer measures atmospheric pressure.

To learn more about high-pressure areas and low-pressure areas, visit the following web sites:

Atmospheric Pressure, **Department of Atmospheric Sciences (DAS) at the University of Illinois at Urbana-Champaign.**
Introduces pressure, associated characteristics, and high and low pressure centers.

To learn more air-masses and Fronts, visit the following web sites:

Air Masses and Fronts, **Cooperative Institute for Meteorological Satellite Studies, University of Wisconsin**
This page about weather and why there is weather. In addition, it explains some of the symbols often seen on weather maps.
Air Masses and Fronts, **Naval Meteorology and Oceanography Command Public Affairs Office**
Read about cold or warm air mass source regions and consider how your weather may vary depending on the air mass source that affects your area.
Air Masses and Fronts, **Online Meteorology Guide, University of Illinois**
Topics discussed on this site include:

- Air Masses,
- Fronts,
- and Advection.

To complete Part A, steps 1-3 of this investigation, you will need weather maps, visit the following web sites:

How to find maps

To complete Part B, steps 3-7 of this investigation, you will need weather maps highlighting specific weather variables, visit the following web sites:

How to find maps
