# Module 11: Meteorology
## Topic 3 Content: Air Pressure Notes

### Introduction


Air pressure is an important factor in determining weather conditions. At Earth's surface, low pressure causes air to rise, while high pressure causes air to sink. This rising and sinking air combined with the Coriolis effect causes air to rotate in pressure systems around a center of the lowest or highest air pressure. The pressure systems are capable of traveling across large portions of Earth, bringing along the associated weather as they move. In this interactivity, click on the pressure tabs to learn more about each type of system. Then, click on the summary to learn how the two types of systems interact.

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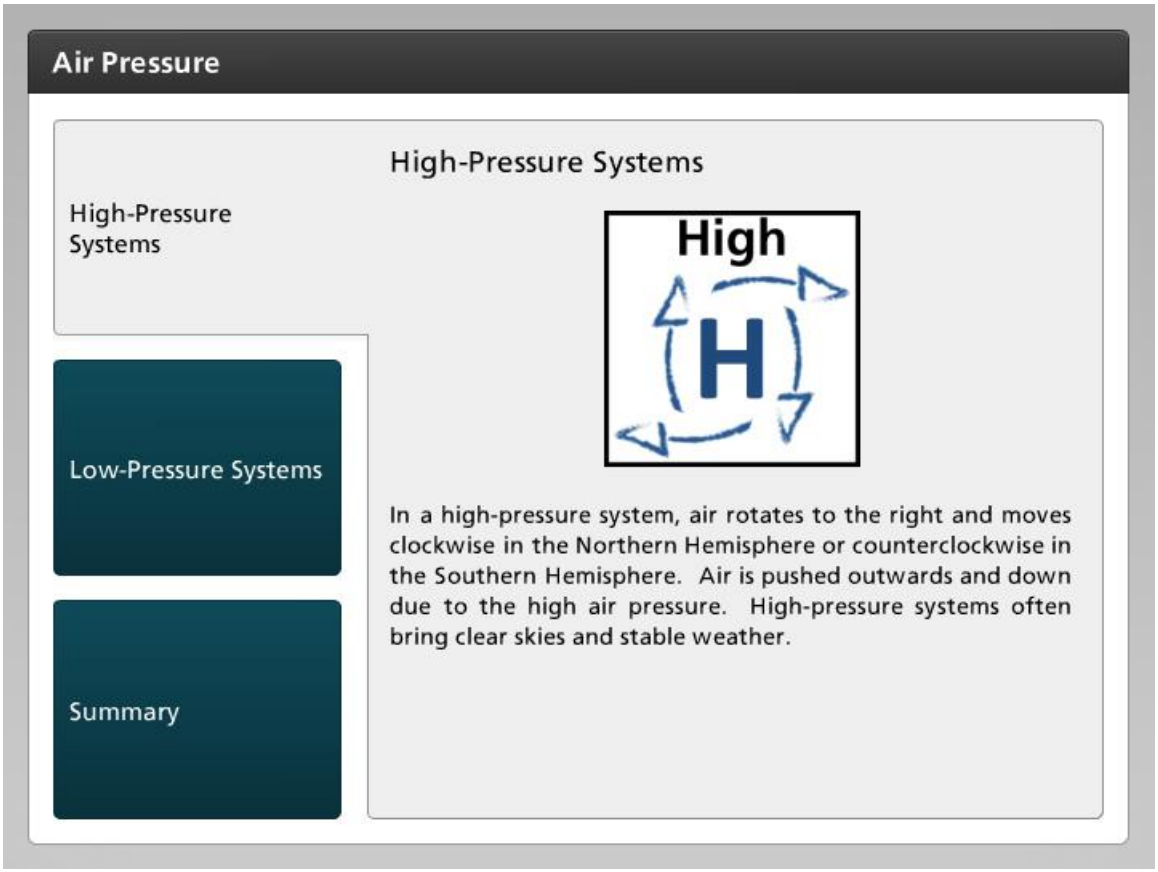
### High-Pressure Systems




In a high-pressure system, air rotates to the right and moves clockwise in the Northern Hemisphere or counterclockwise in the Southern Hemisphere. Air is pushed outwards and down due to the high air pressure. High-pressure systems often bring clear skies and stable weather.

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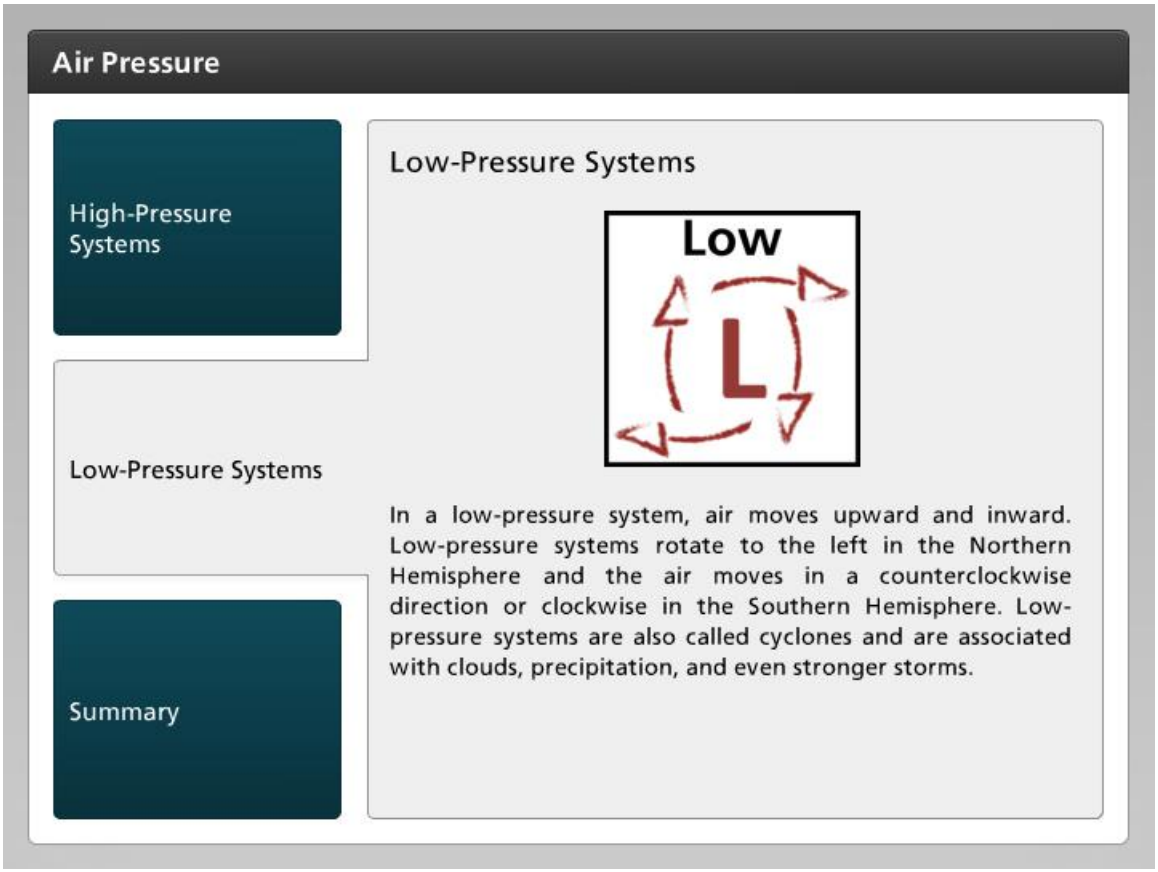
### Low-Pressure Systems




In a low-pressure system, air moves upward and inward. Low-pressure systems rotate to the left in the Northern Hemisphere and the air moves in a counterclockwise direction or clockwise in the Southern Hemisphere. Low-pressure systems are also called cyclones and are associated with clouds, precipitation, and even stronger storms.

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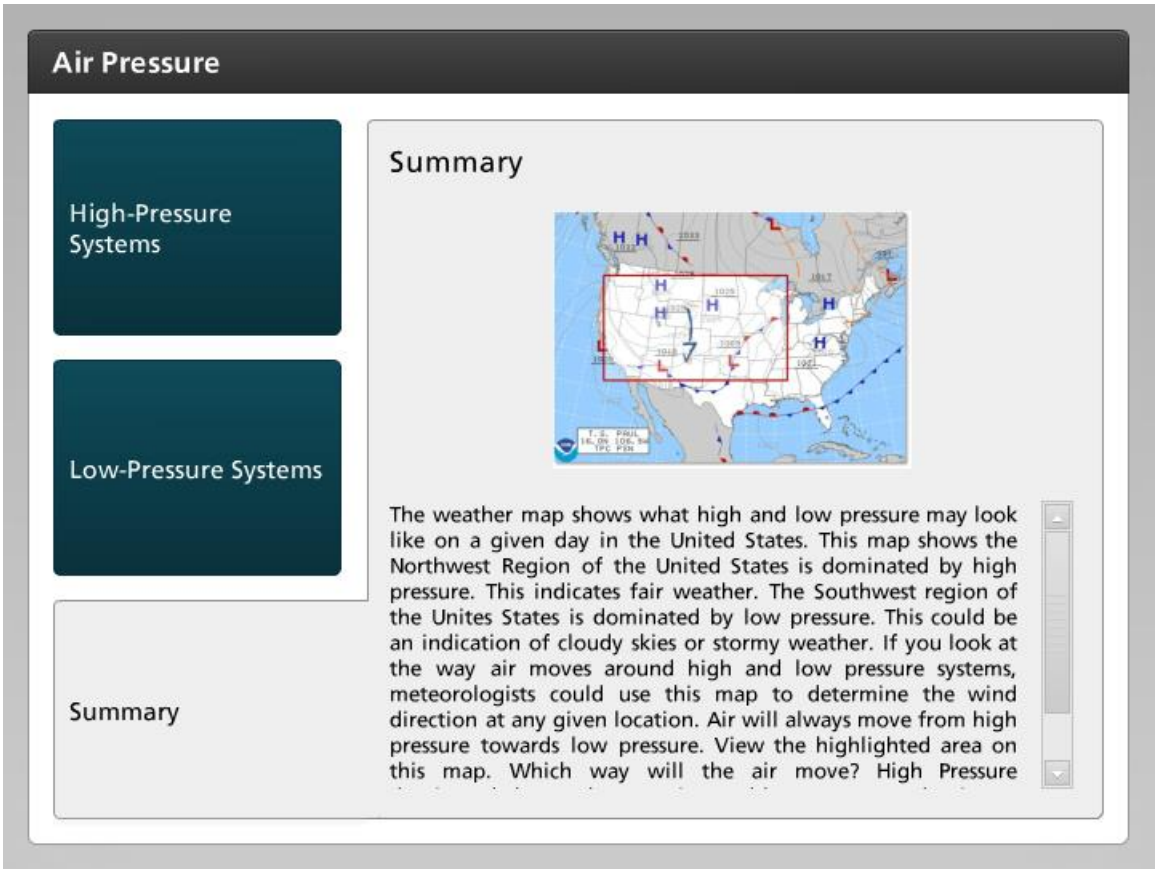
### Summary




The weather map shows what high and low pressure may look like on a given day in the United States. This map shows the Northwest Region of the United States is dominated by high pressure. This indicates fair weather. The Southwest region of the Unites States is dominated by low pressure. This could be an indication of cloudy skies or stormy weather. If you look at the way air moves around high and low pressure systems, meteorologists could use this map to determine the wind direction at any given location. Air will always move from high pressure towards low pressure. View the highlighted area on this map. Which way will the air move? High Pressure dominated the northern section and lower pressure dominates the southern section. The air will travel out of the high and towards the low. This means air will move from north to south.