



Next Generation Science Standards

Lesson: [Microclimates](#)

Activity: [Heat Source and Sink](#) / [Growing Fruit in the Great Lakes](#)

Prior Knowledge Should Include:

- Climate describes patterns of typical weather conditions over different scales and variations. Historical weather patterns can be analyzed.
- Complex interactions determine local weather patterns and influence climate.

Performance Expectations:

- MS-ESS2-5 Earth's Systems: Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

Disciplinary Core Ideas:

- **ESS2. C The Roles of Water in Earth's Surface Processes:** The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms and ocean temperatures and currents are major determinants of local weather patterns.
- **ESS2.D Weather and Climate:** Because these patterns are so complex, weather can only be predicted probabilistically.

Practices:

- **Planning and Carrying Out Investigations (3)** – Progresses to include investigations that use multiple variables and provide evidence to support explanations or solutions.

Crosscutting Concepts:

- **Cause and Effect** – Events have causes, sometimes simple, sometimes multifaceted. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.

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