



## Connecting the Global Ocean to Inland Audiences

### *Module 4: The Physical Basis of Weather: Part 1*

This module is related to the course's central concept of "Ocean/Weather and Climate Connection". The ocean controls weather and climate by absorbing, storing, and moving heat, carbon, and water. The Earth's ocean, atmosphere and climate have changed over time.

#### **Learning Sequence:**

1. Watch Lesley Smith's video lecture "[Global Wind Patterns and Ocean Currents](#)" You may want to print out a [note-taking version of the powerpoint \(PDF\)](#) to take notes on as you watch. Write down any questions you have. Focus your note-taking particularly on the concept of how the Sun's energy generates atmospheric and oceanic patterns that influence weather.
2. Ideas for a guided inquiry: describe an idea that sparked your interest and why; summarize your understanding of how the Sun drives currents; summarize your understanding of how the Sun drives wind patterns; or describe your ideas for how to integrate the concepts of the lecture into something you teach.
3. Carry out the [Heat Balance – Radiation and Conduction Lesson \(PDF\)](#).