



## Connecting the Global Ocean to Inland Audiences

### *Module 3: Connecting Oceans, Energy, and Weather*

This module explores the physical dynamics that link oceans to weather through energy exchange and processes related to the behavior of gases and states of water. This helps set the stage for more detailed investigations into conduction and convection.

#### **Learning Sequence:**

1. Carry out the [Weather Stations Lesson \(PDF\)](#) by following these steps. You will need to assemble materials for station #3.
  - a. Watch the video demonstration of the [Smoke Box](#)\* (Station 1) and answer the procedural questions for this station.
  - b. Watch the video demonstration of the [Cloud Chamber](#) (Station 2).
  - c. Carry out the Bubble Bottle station using your own materials (Station 3). Note your observations and answer the procedural questions for this station.
2. Review the [Essential Principles of Ocean Literacy](#), reading and taking notes on Principle #3 in particular.
3. Based on your reading, think about how the Weather Stations you observed can be connected to the ocean.
4. View the video lecture by Ola Persson, [“The Disappearing Arctic Sea Ice and the Role of the Atmosphere”](#). You may want to print out a copy of the [Persson Lecture Notetaking \(PDF\)](#) to take notes on the PowerPoint slides as you watch. Focus particularly on how to apply the activities in the Weather Station and simulations to the science described by Dr. Persson.

\* If you would like to order a Smoke Box or “Convection of a Gas Apparatus” for your classroom, it is available from Carolina Biological Supply as item # 753449.