Figure 14.1 Eunice Newton Foote was the first to determine the relationship between carbon dioxide, water vapor, and the potential for global heating. She designed and conducted a number of experiments to uncover the ability of different gases to trap heat, describing what would later be referred to as greenhouse gases. (credit: Carlyn Iverson, NOAA Climate.gov)

Chapter Outline

Introduction to Heat and Heat Transfer Methods

Energy can exist in many forms and heat is one of the most intriguing. Heat is often hidden, as it only exists when in transit, and is transferred by a number of distinctly different methods. Heat transfer touches every aspect of our lives and helps us understand how the universe functions. It explains the chill we feel on a clear breezy night, or why Earth's core has yet to cool. This chapter defines and explores heat transfer, its effects, and the methods by which heat is

transferred. These topics are fundamental, as well as practical, and will often be referred to in the chapters ahead.