

## **Foote vs Tyndall Answer Key**

### **Eunice Newton Foote**

#### **1. What is the Greenhouse Effect? Which gas did Foote and Tyndall discover can cause it?**

The Greenhouse Effect is when a gas traps heat. Because it traps heat, the gas can cause the atmosphere to warm. Foote and Tyndall discovered the potential of carbon dioxide to absorb heat.

#### **2. How did Foote's experiment differ from Tyndall's?**

She conducted a very qualitative experiment measuring the temperature of gases as they were exposed to the sun. Tyndall exposed gases to a heating mechanism and used a spectrograph to figure out how much heat the gases absorbed at different wavelengths.

#### **3. What factors contributed to Tyndall receiving credit for the same discovery?**

[Students could write some combination of the following reasons.] Tyndall was a male scientist, so he did not have to face barriers because of sexism. For instance, he was able to attend university and obtain his doctorate in physics, something that would have been difficult for a woman to do at the time. It is also likely people took his work more seriously because he was a man and because he was already well-known in science. In addition, Tyndall was European, and Europe had more infrastructure and international respect in science than the United States at the time.

#### **4. Why is it important that Foote receive credit for her discovery?**

There could be many answers to this depending on each student. Example answers include

- It is important to credit Foote because modern climate science is built on her work.
- It is important to credit Foote to show how influential women are in sciences and prevent future discrimination.
- It is important so we can learn from Foote's story and evaluate if there are members of the science community today who are not receiving credit for their work.