

Lesson 2: The Greenhouse Effect

An Example Set of Student Greenhouse Effect Role Cards

(Make enough cards for half of the class to play solar and heat energy and half of the class to play a contributor to the greenhouse effect: greenhouse gasses, particulates, and clouds)

Solar and Heat Energy Cards (1/2 of the class will wear these)

Side one: **Solar (Radiant) Energy** (with a sun sketched on it in orange marker)

Side two: **Heat (Thermal) Energy**

***Greenhouse Gas Cards**

1. **Water Vapor (Gas) (H₂O)**
2. **Carbon Dioxide (Gas) (CO₂)**
3. **Nitrous Oxide (Gas) (N₂O)**
4. **Natural Gas (Methane) (CH₄)**
5. **Ozone (Gas) (O₃)**
6. Optional manmade greenhouse gas cards (examples: **Chlorofluorocarbons or CFCs** and **Hydrofluorocarbons or HFCs**)

***Particulate Cards (optional)**

1. **Dust** (dust particles dotted in by marker)
2. **Smoke** (ash particles dotted in by marker)

***Cloud Cards (optional)**

Cloud (Liquid Water) (H₂O)

* Make enough of these cards for the second half of the class