

- **EdGCM Experiment: C-ROADS Carbon Footprint Experiment -**  
<http://www.epa.gov/climatechange/ghgemissions/individual.html>
  - Students should design an experiment to compare our current warming trend versus a “If everyone did every measure suggested by the EPA, what would be the difference?” run.
- **EdGCM Experiment: No Industrial Revolution Experiment**
  - Students are develop a modeling experiment to simulate if the atmospheric carbon trend continued in absence of the industrial revolution and the release of anthropogenic carbon. This is to be compared to a control, based on the IPCC control runs, stock in EdGCM.
  - Students should compare the differences in atmospheric and oceanic temperature, as well as other metrics of interest, to decide what the impact of anthropogenic carbon has been.
- **EdGCM Experiment: Carbon vs. Methan**
  - Students are to develop an experiment to compare the relative warming effects of carbon versus methane.
  - Holding a control with flat trends for both gases, students should compare the effect of an increasing atmospheric carbon content without increasing atmospheric methane, and vice versa, comparing the effects with climatological metrics.
- **EdGCM Experiment: Orbital Eccentricity vs. Axial tilt**
  - Students are to develop an experiment to compare the relative impacts to seasonal forcings by orbital eccentricity versus the axial tilt.
  - This meant to demonstrate the relative effect of the distance of the earth to the sun, versus the tilt of the Earth’s axis, on producing seasonal effects. Students should measure the effects by comparing climatological metrics over monthly periods, versus a control perfectly circular, zero axial tilt run.
- **EdGCM Experiment: Kyoto Protocol vs. IPCC Business as Usual**
  - Students should design an experiment to compare the impact the original Kyoto Protocol treaty would have had, if it had been fully implemented versus the IPCC Business as Usual scenarios.
  - Students should also design an experiment to describe the effects if a similar treaty were implemented today.