**Pre-Post Test**

1. How can the principle of ***conservation of energy*** be used to link climate changes in the deep past with our ability to predict climate changes in the future?
2. Over 10’s of millions of years, the main geologic thermostat for climate seems to be controlled by (a) periodic brightening and dimming of the Sun; (b) changes in the Earth’s orbit and passing clouds of interplanetary dust; (c) changes in volcanic emissions of CO2 related to plate tectonics; (d) changes in geothermal heat rising from the Earth’s core.
3. Since the dinosaurs went extinct around 65 million years ago, the Earth’s climate has generally (a) been pretty steady; (b) warmed up quite a bit; (c) cooled down quite a bit; (d) gone through several huge cycles of cooling and warming.
4. What are ***two independent ways*** scientists can estimate the sensitivity of Earth’s climate to future changes in CO2?
5. Positive feedback processes amplify warming or cooling of the Earth’s climate. Circle each positive feedback in the following list:

* Ice-albedo feedback
* Water vapor feedback
* High cloud feedback
* Lapse-rate feedback
* Low cloud feedback

1. After fossil fuel combustion ceases completely, how many years will it take for atmospheric CO2 to return to preindustrial conditions: (a) 50 years; (b) 200 years; (c) 1000 years; (d) more than 10,000 years.
2. In a high-CO2 world, the climate of Colorado is likely to warm: (a) a bit less than the global average; (b) a bit more than the global average; (c) about the same as the global average; or (d) almost twice as much as the global average.
3. Climate change impacts in Colorado are likely to be dominated by (a) tornados; (b) blizzards; (c) water shortages; or (d) extreme winds.
4. Rank the following emissions reduction strategies from least expensive to most expensive: (a) carbon capture & sequestration; (b) energy efficient buildings; (c) wind power; (d) biofuels.