1. Describe the greenhouse effect. (Include diagrams to aid your explanation)

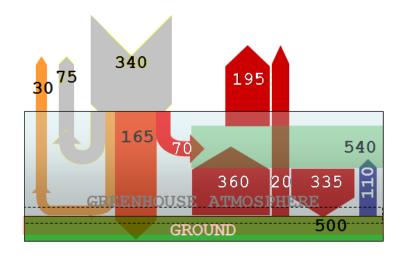
The following questions are about the greenhouse gases.



- 2. Explain the four molecular mechanisms by which greenhouse gases absorb infrared radiation.
- 3. Rank (from highest to lowest in importance) the main five greenhouse gases which absorb thermal (IR) radiation.

The following questions refer to this energy model . The units are $W m^{-2}$.

4. Does this model show a stable, or an unstable temperature. What evidence is there to justify your choice



- 5. What is the intensity of all **reflected** radiation?
- 6. What is the intensity of the radiation scattered (absorbed and released) by just the atmosphere?
- 7. What is the intensity of the radiation into space having the greenhouse gases as the source?
- 8. What is the intensity of the radiation absorbed from the greenhouse gases by the ground?