

On a positive note, responses to this question included a number of good answers that were short and concise.

On the other hand, weaker responses suggested students with weak knowledge of the enhanced greenhouse effect.

Too many talked about light reflected by the Earth, ultraviolet radiation being absorbed by greenhouse gases, or clouds/atmosphere absorbing infrared energy from the sun, while a reasonable number included material on ozone depletion.

Some stronger students became embroiled in a lengthy discussion of absorption/re-radiation of energy (sometimes falling into error with terminology) and failed to adequately address the issue of human activities and link them with two specific greenhouse gases.

In describing human activities that could disrupt the thermal balance, students were often vague and used general terms such as 'transportation', 'open burning', or 'farming'. Some activities were essentially the same, for example, driving cars, transport, and engines all rely on the burning of carbon-based fuels.

The impact of deforestation was generally explained well. Many students were unclear about which gases were greenhouse gases and mentioned a host of possibilities, including CO, NO, NO<sub>2</sub>, SO<sub>2</sub>, and even N<sub>2</sub>.

– *Chief Assessor's Report, 2013*

*Exemplar plan:*

7 marks so 7 – 2 = 5 points of information

Two activities

- burning fossil fuels
  - increased concentration of greenhouse gas CO<sub>2</sub>
- increased number of cattle
  - increased concentration of greenhouse gas CH<sub>4</sub>

Thermal balance

- greenhouse effect enhanced