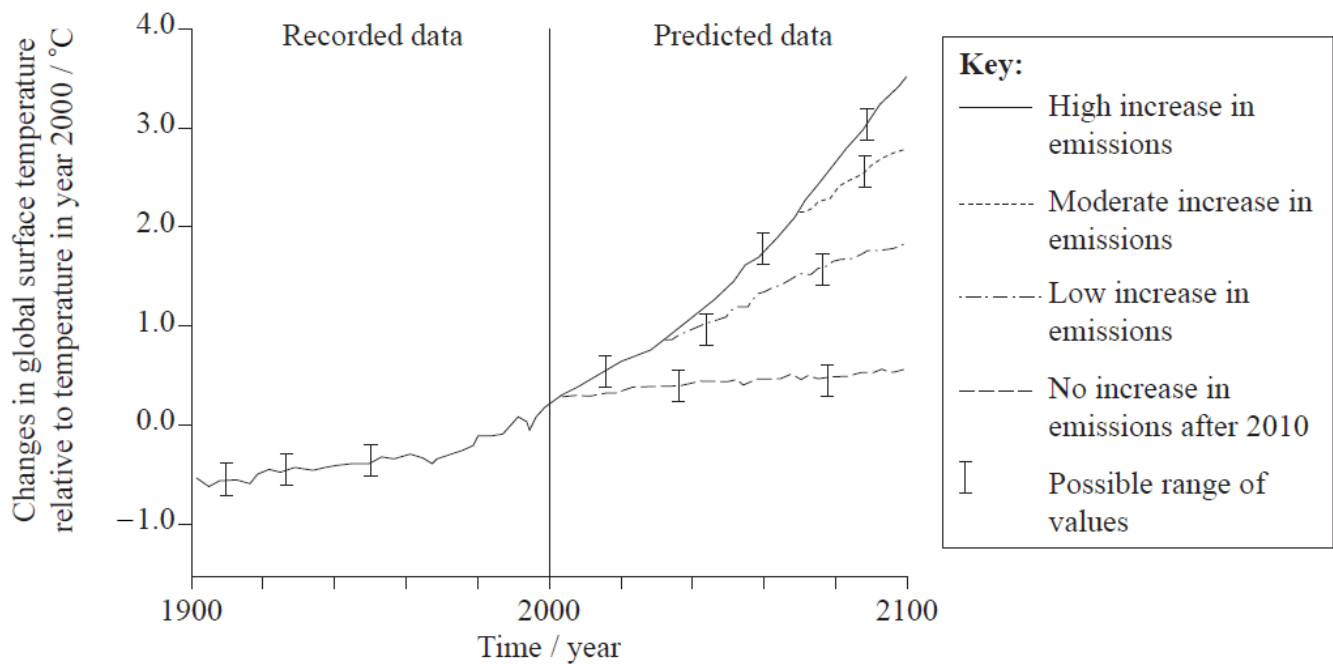


Subtopic: 1.2 System

- Figure 1 below shows how increases in greenhouse gas emissions are predicted to affect global surface temperatures beyond the year 2000.

Figure 1



- Explain why the changes in global surface temperature between the years 1900 and 2000 are likely to have some degree of uncertainty, even though they are based on recorded data. [1]
- State two reasons why computer models cannot predict exactly how global surface temperatures will change during the twenty-first century. [2]

- 2.
- a. Distinguish between transfer processes and transformation processes. [2]

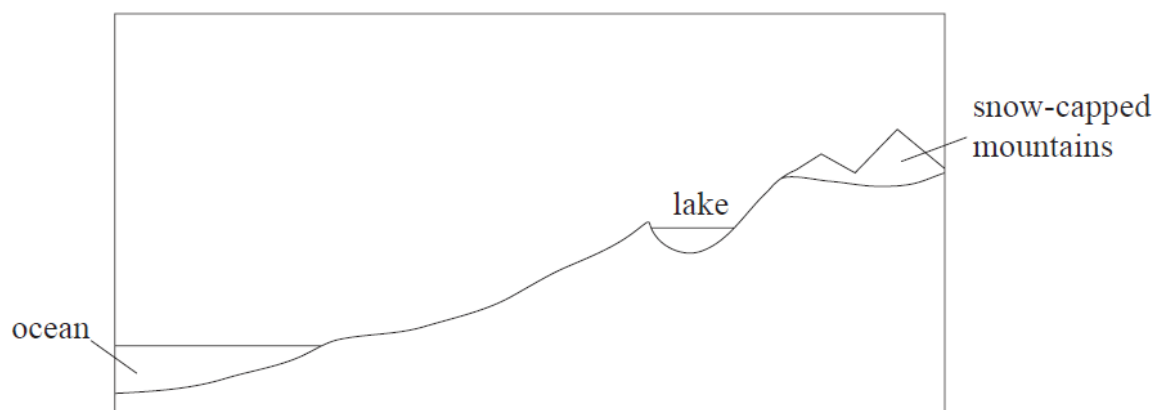
- b. Figure 5 below shows a freshwater lake in a temperate forest biome, close to an ocean.

Figure 5



[Source: Photo by Peter Moore. http://en.wikipedia.org/wiki/Wast_Water]

Annotate the diagram below to show the natural transfer and transformation processes which move water from the ocean to the lake. [2]





3. Outline the basic components of an ecosystem using the systems approach. [4]
4.
 - a. Distinguish between negative feedback and positive feedback. [2]
 - b. Construct a diagram to show how a positive feedback process involving methane may affect the rate of global warming. [2]
5. Explain, with the aid of a diagram, what is meant by the term negative feedback. Refer to two examples of negative feedback in your answer. [5]

