

Combined science - Biology - Key stage 4  
Ecology

# Review 2

Dr Clapp



# Independent practice

Place the following statements in order to describe the water cycle:

Transpiration happens in plants

The water then runs off the surfaces and collects as ground water or in bodies of water

Evaporation happens from the surface of the water

The water vapour rises into the atmosphere where clouds form

The water vapour condenses

Water falls as precipitation



# Independent practice

Write out the word equations for the following processes and indicate where the carbon is found:

1. Photosynthesis
2. Combustion
3. Respiration



# Independent practice - answers

Evaporation happens from the surface of the water

Transpiration happens in plants

The water vapour rises into the atmosphere where clouds form

The water vapour condenses

Water falls as precipitation

The water then runs off the surfaces and collects as ground water or in bodies of water



# Independent practice - answers

1. Photosynthesis

**carbon dioxide + water → glucose + oxygen**

1. Combustion

**fuel + oxygen → carbon dioxide + water**

1. Respiration

**glucose + oxygen → carbon dioxide + water**



# Independent practice

ExamBuilder: OCR, J250/10, Specimen

Gases such as methane and carbon dioxide absorb infrared radiation that is radiated by the Earth's surface. As a result, the Earth's surface is warmed. This is called the greenhouse effect.

Look at the graph.

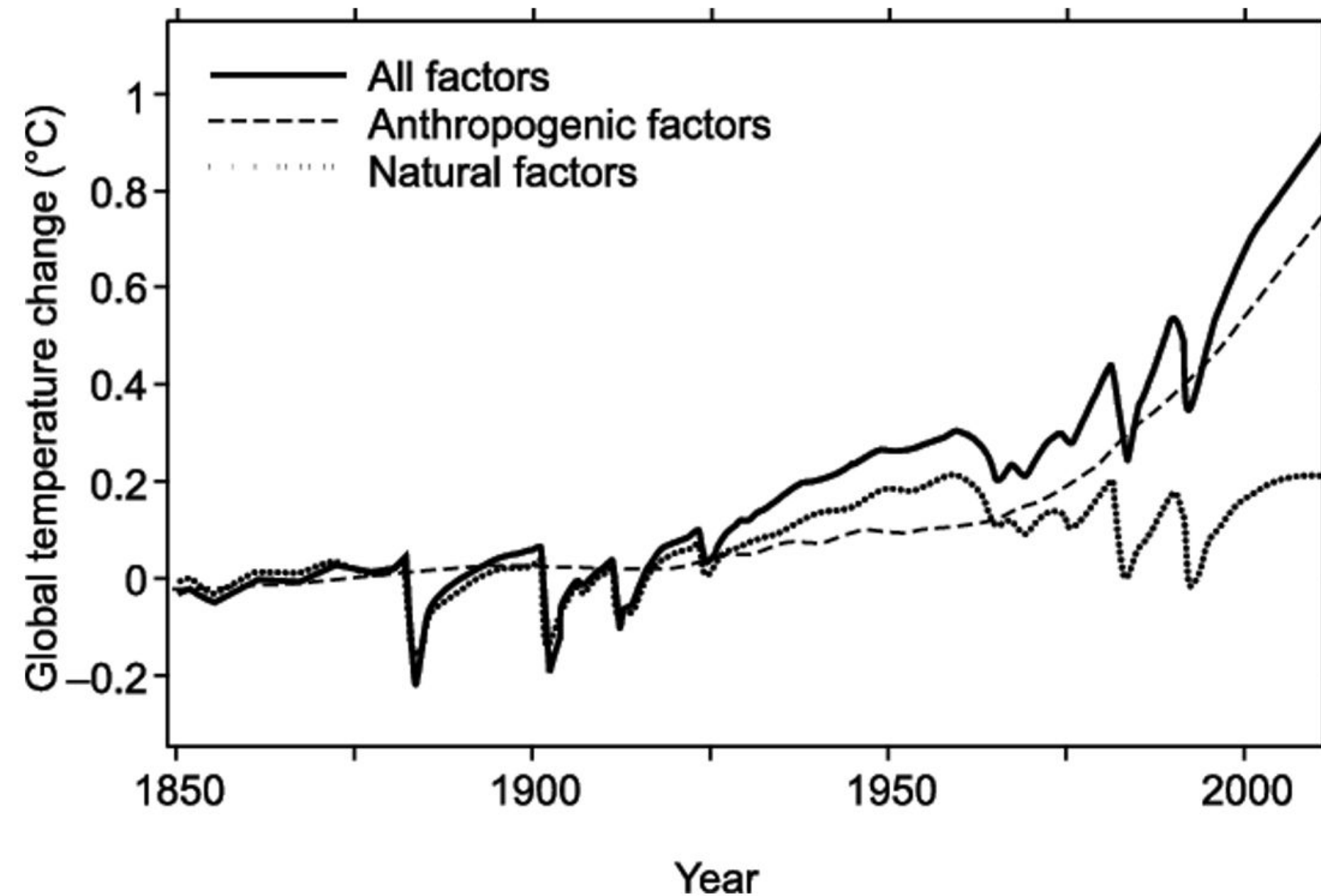
It show how global temperatures have changes as a result of:

- All factors
- Anthropogenic factors
- Natural factors



# Independent practice

ExamBuilder: OCR, J250/10, Specimen

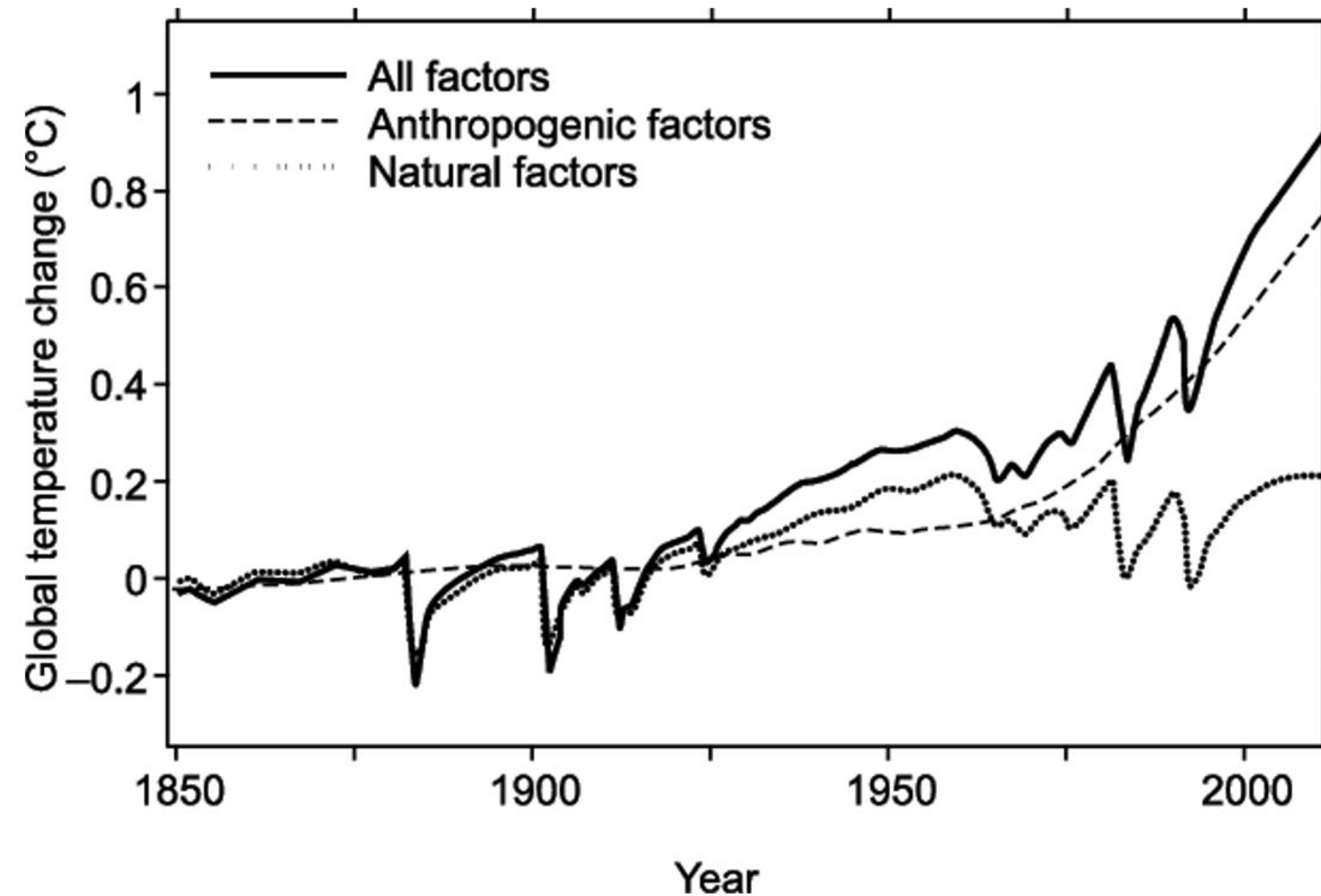


Evaluate the evidence that anthropogenic factors are contributing significantly to global temperature change. (2)



# Independent practice - answers

ExamBuilder: OCR, J250/10, Specimen



**Global temperatures have increased significantly since around 1975 along with anthropogenic factors (1)**  
**However global temperatures have not increased with natural factors (1)**





# Independent practice

1. Describe how human activities have reduced biodiversity. (2)
2. Explain how breeding programs and introducing field margins have increased biodiversity. (2)



# Independent practice - answers

1. Describe how human activities have reduced biodiversity. (2)

**Human activities such as increased farming/deforestation/building/quarrying/waste management/clearing peat bogs take up space which reduces habitat availability (1)  
If there is less habitat then it is harder for organisms to survive and so biodiversity decreases (1)**



# Independent practice - answers

2. Explain how breeding programs and introducing field margins have increased biodiversity. (2)

**Breeding programs have increased biodiversity by increasing the numbers of individuals of endangered species. (1)**

**Introducing field margins has increased biodiversity by providing more habitats for species to live in. (1)**

