AQA GCSE Combined Science - Trilogy | 8464

SPECIFICATION POINT 4.7.3.6

Maintaining biodiversity

Past-paper questions

Tier	**Foundation**
Question groups	**2**
Available paper years	**2020–2021**

Using this booklet

1. Answer the questions in order and show your working.
2. Original question numbers and marks are retained.
3. Print at actual size (100%) for measuring questions.
4. Use the companion answer booklet to check your work.

Name: _____ **Date:** _____

Whole questions are retained for context, so some parts assess other specification points. Current and legacy sources are labelled. Continue on extra paper if needed.

4.7.3.6 Maintaining biodiversity

Question 01

November 2020 | 8464/B/2F | Original Q5

0 5 This question is about biodiversity.

A farmer:

- grows only wheat crops
- has used all his small fields to make a few large fields
- cuts down trees in his woodlands to burn as fuel.

0 5 . 1 What are **two** ways the farmer could increase biodiversity on his farm?

[2 marks]

Tick (✓) **two** boxes.

Cut down trees to grow wheat	☐
Plant hedgerows around his fields	☐
Plant many different crops in his fields	☐
Put fences around his fields	☐
Put fertiliser on his wheat crop	☐

4.7.3.6 Maintaining biodiversity

Question 01 · continued

Students investigated the effect of cutting down trees in the woodland.

This is the method used.

1. Mark out a 10 m by 10 m area where trees have been removed.
2. Place a 1 m × 1 m quadrat at six random positions in the area.
3. Record the number of plant species present.
4. Record the number of invertebrate species seen among dead leaves on the ground.
5. Repeat steps 1 to 4 in an area where there are trees.

0 5 . 2 Suggest **one** improvement the students could make to their method.

[1 mark]

0 5 . 3 The students made this prediction:

'There will be more invertebrate species living in the area where there are trees.'

Explain why the students' prediction may be correct.

[2 marks]

Question 5 continues on the next page

Question 01 · continued

Table 1 shows the students' results.

Table 1

Quadrat	Number of plant species		Number of invertebrate species	
	Area with no trees	Area with trees	Area with no trees	Area with trees
1	8	2	4	10
2	6	2	3	6
3	7	0	4	8
4	6	3	5	14
5	20	4	2	9
6	8	1	6	13
Mean	7	2	4	10

0 5 . 4 The students decided that one result was anomalous.

Draw a ring around the anomalous result in **Table 1**.

[1 mark]

0 5 . 5 How does removing trees affect the number of invertebrate species living among the dead leaves on the ground?

Use **Table 1**.

[1 mark]

4.7.3.6 Maintaining biodiversity

Question 01 · continued

0 5 . 6 There were more plant species growing in the area where there were no trees.

Explain why.

[3 marks]

10

Turn over for the next question

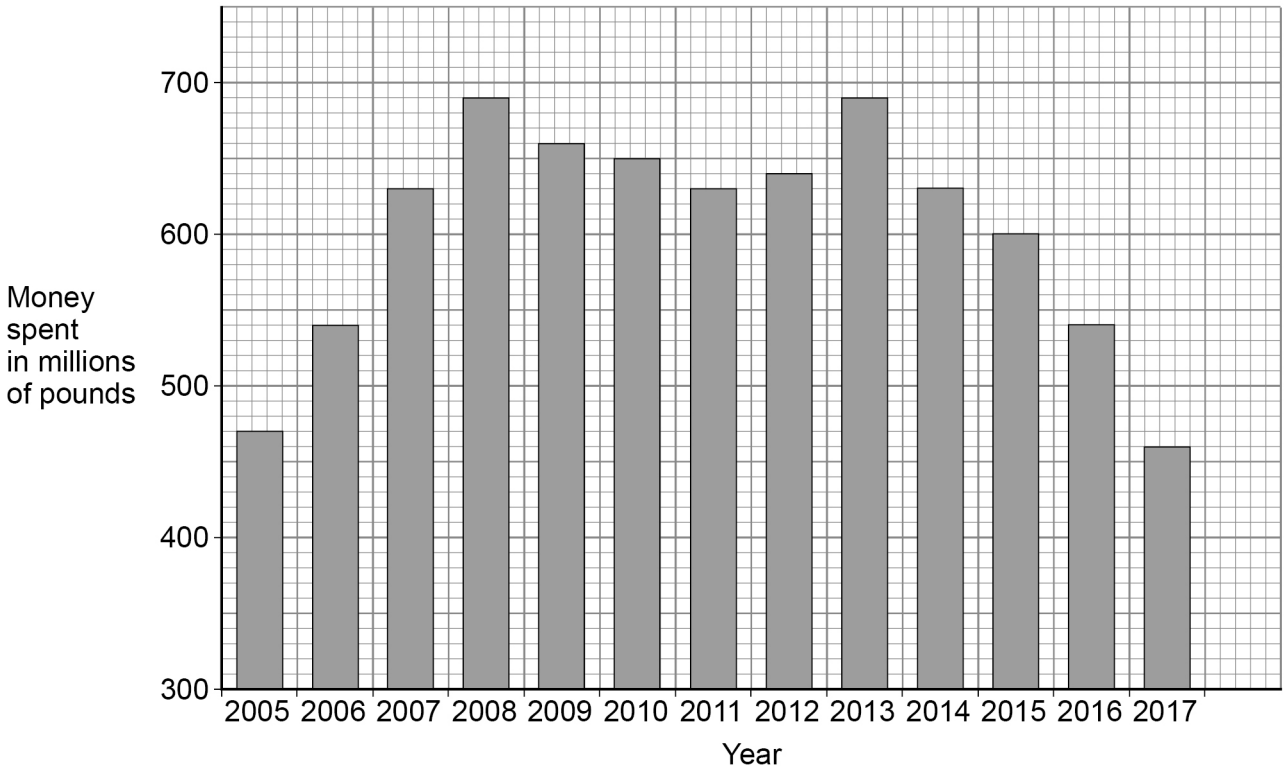
4.7.3.6 Maintaining biodiversity

Question 02

November 2021 | 8464/B/2F | Original Q7

0 7 **Figure 6** shows the money spent on conserving biodiversity in the UK by the government.

Figure 6



0 7 . 1 Describe the trends in the money spent on conserving biodiversity from 2005 to 2011.

Use data from **Figure 6** in your answer.

[2 marks]

4.7.3.6 Maintaining biodiversity

Question 02 · continued

0 7 . 2 Calculate the percentage decrease in the money spent on conserving biodiversity from 2013 to 2017.

Use the equation:

$$\text{percentage decrease} = \frac{\text{change in money spent from 2013 to 2017}}{\text{money spent in 2013}} \times 100$$

Give your answer to 2 significant figures.

[3 marks]

Percentage decrease (2 significant figures) = _____ %

0 7 . 3 Conservation of peat bogs can help maintain biodiversity.

Give **two** uses of peat taken from peat bogs.

[2 marks]

1 _____

2 _____

Question 7 continues on the next page

4.7.3.6 Maintaining biodiversity

Question 02 · continued

November 2021 | 8464/B/2F | Original Q7

0 7 . 4 Describe **two** ways to **increase** biodiversity in the UK.

Do **not** refer to money spent or to peat in your answer.

[2 marks]

1 _____

_____

2 _____

_____

9