Name:

IGCSE Biology: **w25 21**

37 Eutrophication results in a reduction in the dissolved oxygen in streams and lakes.

What causes the reduction in dissolved oxygen?

A decreased aerobic respiration by decomposers

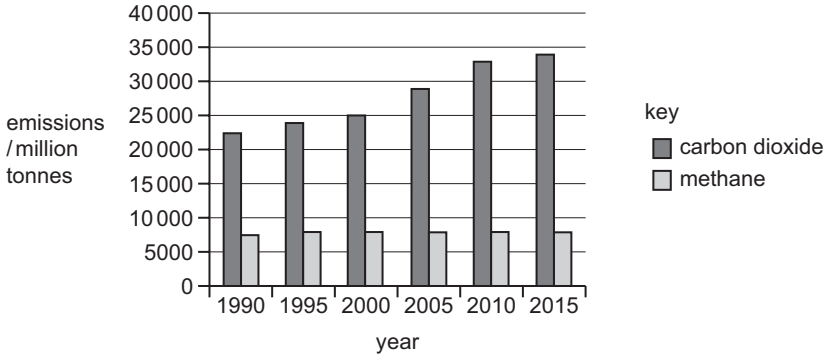
B decreased aerobic respiration by fish

C increased aerobic respiration by decomposers

D increased aerobic respiration by fish

IGCSE Biology: **w25 22**

39 The graph shows the global emissions of carbon dioxide and methane from 1990 to 2015.



A student makes four statements about carbon dioxide and methane.

- Carbon dioxide and methane were the only sources of greenhouse gases produced in 1990.
- Carbon dioxide emissions continue to rise to the present day.
- Carbon dioxide has a greater effect on climate change than methane.
- Methane emissions were lower than carbon dioxide emissions between 1990 and 2015.

How many statements are supported by these data?

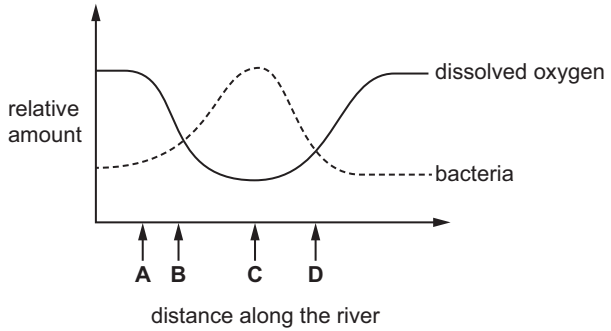
A 1 **B** 2 **C** 3 **D** 4

IGCSE Biology: **w25 23**

39 The graph shows the relative amounts of bacteria and dissolved oxygen at different locations along a river.

Fertiliser has entered the river.

At which distance along the river did the fertiliser enter the river?



IGCSE Biology: **s25 21**

39 Which source of pollution can cause eutrophication?

A carbon dioxide

B methane

C non-biodegradable plastic

D sewage

IGCSE Biology: **m25 22**

39 How does eutrophication lead to the death of fish?

A A sudden increase in the number of bacteria increases the spread of disease.

B Algae respire instead of photosynthesise.

C Decomposer bacteria lower the oxygen concentration in the water.

D Fertilisers reduce the availability of nitrates in the water.

6 **(a)** Microplastics are pieces of plastic with a diameter less than 0.5 cm.

Fig. 6.1 shows the mass of microplastics in the oceans between 2000 and 2040. The data between 2000 and 2020 is an estimate. The data after 2020 is a prediction.

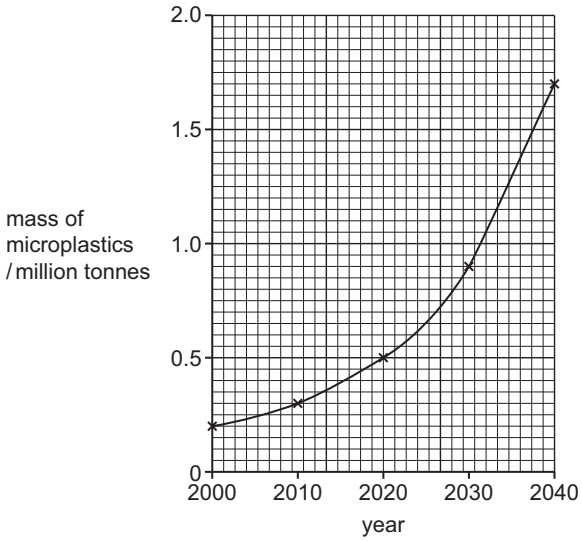


Fig. 6.1

(i) Suggest why the mass of microplastics between 2000 and 2020, shown in Fig. 6.1, is an estimate.

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..... [2]

(ii) Using Fig. 6.1, calculate the predicted percentage increase in the mass of microplastics in the oceans between 2000 and 2040.

Space for working.

.....%
[2]

(b) Phytoplankton are producers found in the ocean. Phytoplankton absorb microplastics into their cells.

(i) Describe what is meant by the term producer.

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..... [2]

(ii) Fig. 6.2 shows a shearwater bird.

Shearwater birds feed on fish in the ocean.

Fig. 6.2

Suggest how microplastics can end up in consumers such as shearwater birds.

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..... [2]

(iii) The population of shearwater birds is decreasing.

Describe **three** ways the population of shearwater birds can be conserved.

1 .....

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2 .....

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3 .....

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[3]

(iv) Explain the risks to a population if its population size decreases.

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..... [3]

[Total: 14]