

Question 37 (Answer: C)

- Extra nutrients make algae bloom, and the algae then die in large numbers.
- Decomposer bacteria multiply on the dead algae and respire aerobically.
- It is that *increased* aerobic respiration by decomposers that strips the oxygen from the water.

Question 39 (Answer: A)

- Read the two lines separately and compare their scales before drawing any conclusion.
- Carbon dioxide is emitted in far greater quantity than methane.
- But both have risen over the period, which is what drives the greenhouse effect.

Question 39 (Answer: A)

- The fertiliser causes algae to bloom and then die, so decomposer bacteria multiply.
- Those bacteria respire aerobically, using up the dissolved oxygen.
- So the oxygen is lowest where the bacterial count is highest, a little downstream of the input.

Question 39 (Answer: D)

- Eutrophication is caused by an excess of nitrate or phosphate entering the water.
- Sewage is rich in both, as are fertiliser run-offs.
- Carbon dioxide and methane are greenhouse gases and plastic is a physical pollutant, not a nutrient.

Question 39 (Answer: C)

- Extra nitrate makes algae grow rapidly, then die in large numbers.
- Decomposer bacteria feeding on the dead algae multiply and respire aerobically.
- They use up the dissolved oxygen, so the fish suffocate.

6(a)(i)	<i>any two from:</i> <i>idea that</i> not all microplastics are able to be, collected / measured / weighed ; because the area is, (too) large / inaccessible / deep / undiscovered ; because some microplastics were eaten ; only samples were taken / described ;
6(a)(ii)	750 (%) ;;
6(b)(i)	(organism) makes its own (named organic) nutrients ; using energy from <u>sunlight</u> / <u>through</u> photosynthesis ;

6(b)(ii)	<i>any two from:</i> microplastics, can't breakdown / are non-biodegradable / can't be excreted ; (microplastic-containing) producers / phytoplankton, are eaten by fish (which are eaten by birds) ; AVP ;
6(b)(iii)	<i>any three from:</i> monitoring species ; <i>idea of</i> protecting, habitat / nest sites ; education / awareness ; captive breeding programmes ; ban, hunting / poaching ;
6(b)(iv)	<i>any three from:</i> 1 reduction in genetic genetic variation ; 2 inbreeding ; 3 less chance of population adapting to a (named) change in the environment ; 4 increased chance of harmful recessive alleles being expressed / increase in genetic disease ; 5 extinction ; 6 <i>idea that</i> more difficult to find a mate ; 7 AVP ;