

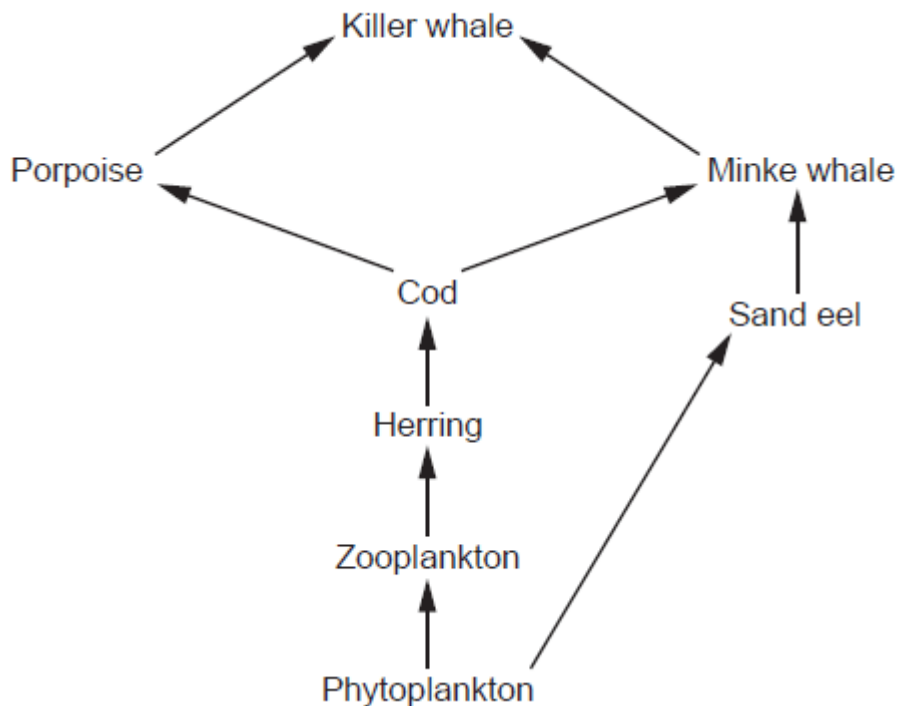
GCSE Biology B (Twenty First Century Science)
J257/01 Breadth in Biology (Foundation)

Question Set 14

Multiple Choice Questions

1. Killer whales can be found off the coast of Scotland.

The diagram shows part of their food web.



(a) If the population of killer whales decreased, what effect would this have on the population of sand eels?

- decrease

Explain your answer.

- less killer whale so number of minke whale increases so more of them feed on sand eel

[2]

(b) An adult killer whale was found dead off the coast of Scotland.

Scientists concluded that chemicals called PCBs caused the killer whale's death.

The PCBs had entered the killer whale's body from the food chain.

(i) The PCBs increased in concentration in the bodies of organisms higher up the foodchain.

Which word describes this process?

Put a ring around the correct answer.

Active transport Bioaccumulation Eutrophication Translocation

[1]

(ii) The dead killer whale's body will be decomposed.

Describe how this will happen and explain why it is important.

- microorganisms, saprobians will decay and decompose organic compounds that make up the killer whale's body by extracellular digestion (secrete enzymes out of organisms' body then absorb product of digestion)

- vital as it returns the carbon & nutrients/minerals back to availability of plants so carbon & nitrogen cycles begin again

[2]

(iii) Decomposition is affected by temperature.

Use the words from the list to complete the sentences below.

You may use each word once, more than once or not at all.

amino acids

decreases

enzymes

fats

increases

water

As the temperature.....*increases*..... the rate of decomposition increases. This is because the temperature will affect the*enzymes*..... involved in decomposition.

[2]

Total Marks for Question Set 14: 7

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