

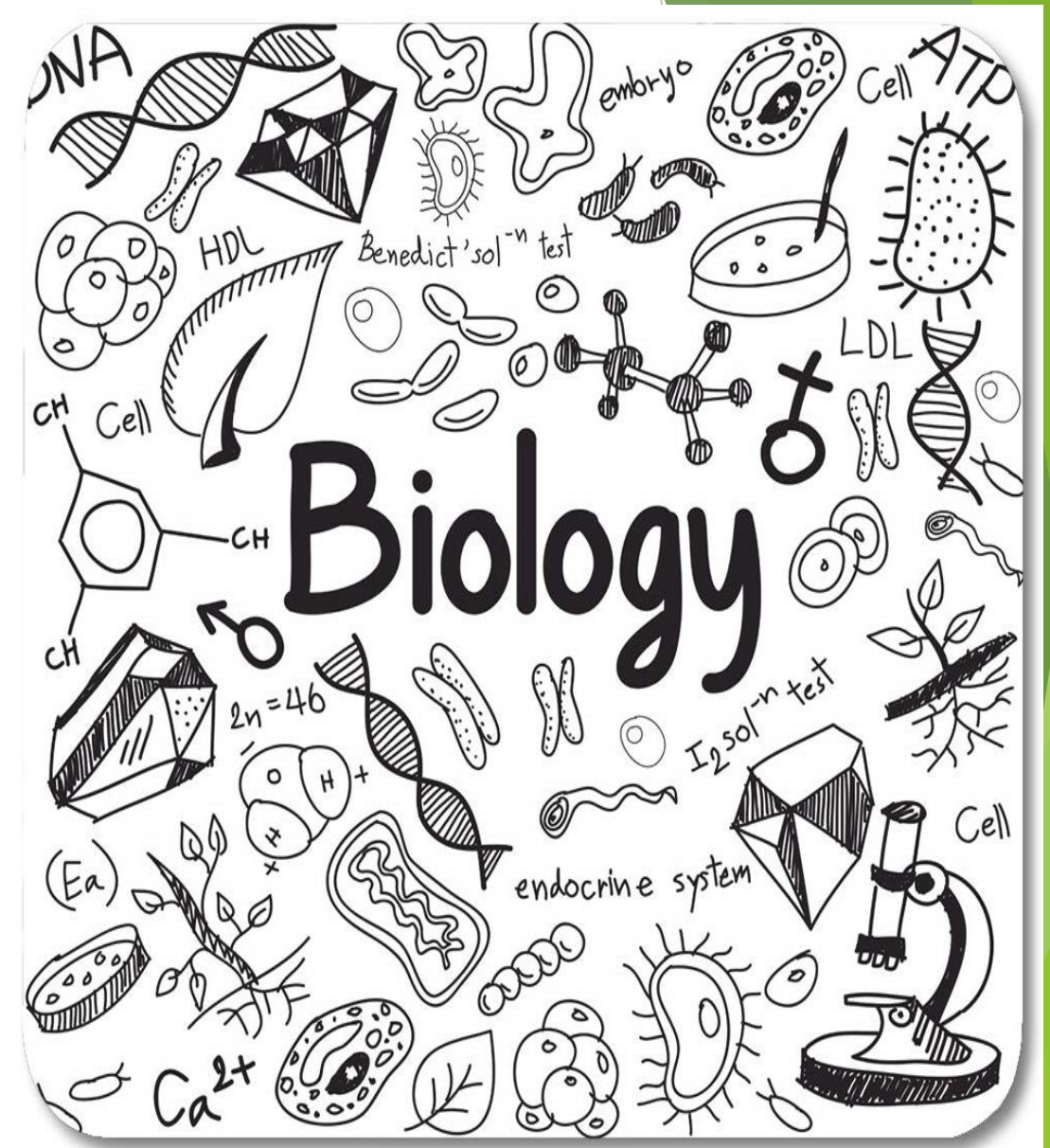


The National
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Shmaisani

Lesson: **Review questions**
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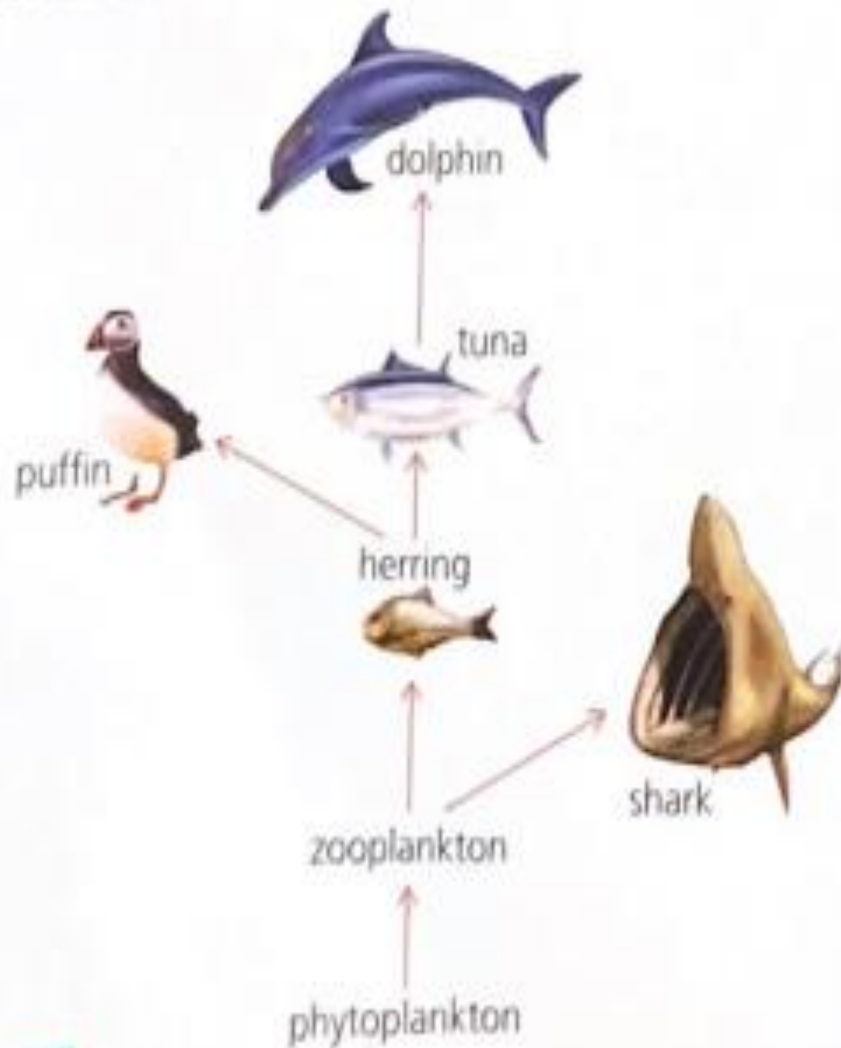
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- 3 The diagram shows a food web in the sea around an island.



- a Fishing boats have decreased the number of herring in the sea. Explain why that could affect the number of offspring puffins can raise. [2]
- b Which animals have a bigger food supply now there are fewer herrings? [1]
- c Global warming is expected to reduce the biomass of phytoplankton in the oceans. What effect will that have on the rest of the food web? [1]

- 3a The number of offspring puffins can raise could fall because there are fewer prey for them to catch.
- b Now there are fewer herrings, sharks have a bigger supply of zooplankton.
- c If global warming reduces the biomass of phytoplankton in the oceans, populations will drop in the rest of the food web because there will be less food (energy) available to feed them.

- 4 The diagram shows the food web in one part of a forest.



- a Which organism is both predator and prey? [1]
- b Which organism's population will have the smallest biomass? [1]
- c Explain why the biomass of secondary consumers is always lower than the biomass of primary consumers. [2]

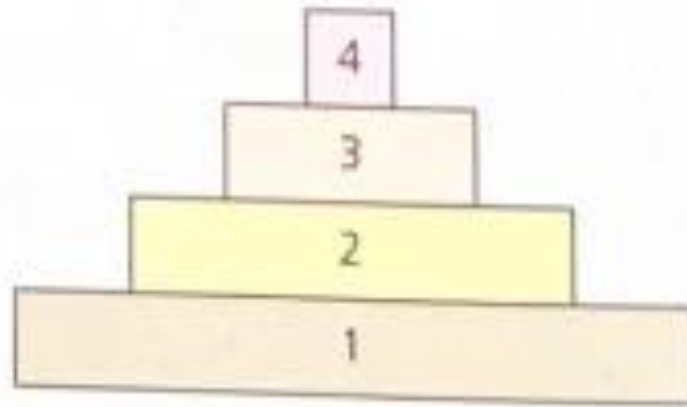
- 4a B
- b A
- c The biomass of secondary consumers is always lower than the biomass of primary consumers because primary consumers use most of the energy in their food for respiration. Only a small percentage is passed to the next trophic level.

5 Which of these statements about food webs are correct? [3]

- a** Producers form the first trophic level.
- b** Some food chains start with a primary consumer.
- c** Most food chains rely on the Sun as the source of their energy.
- d** Herbivores form the second trophic level.
- e** Energy is transferred from tertiary consumer to producer.

5 Statements a, c, and d are true.

6 The diagram below shows a pyramid of biomass.

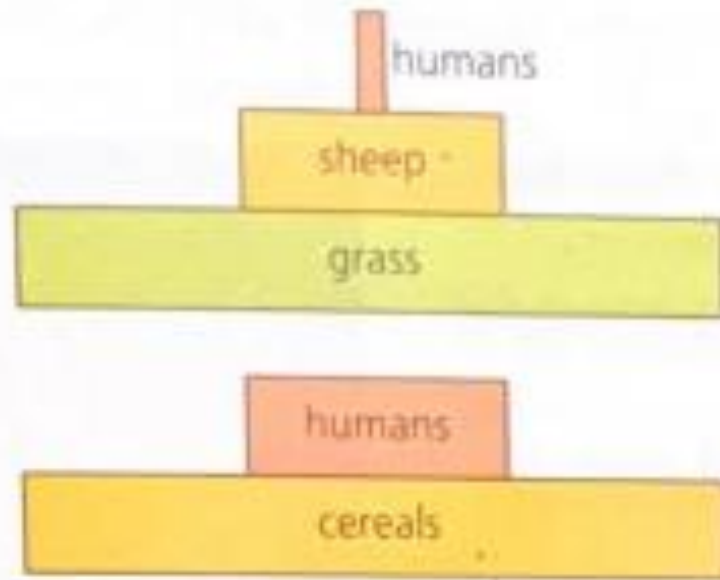


Match each of the following organisms to the correct trophic level:

- a insect
- b frog
- c snake
- d grass

6a 2
b 3
c 4
d 1

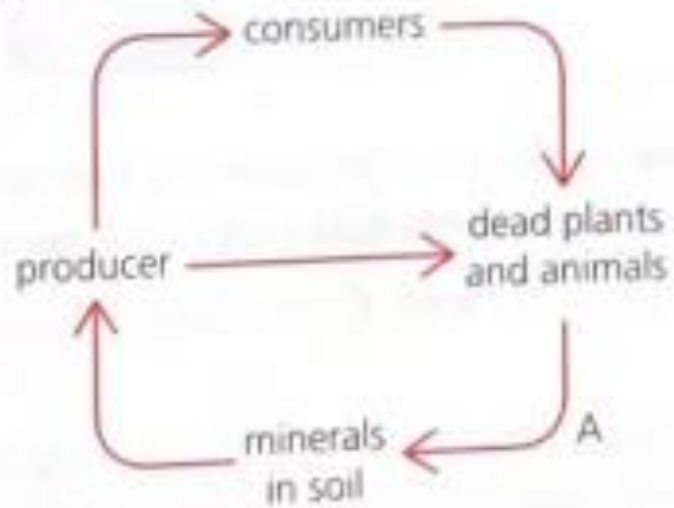
- 7 The diagram shows pyramids of biomass for two human food chains.



Explain why the same area of land can feed more people if they eat cereals instead of meat. [3]

7 The same area of land can feed more people if they eat cereals instead of meat because cereals occupy a lower trophic level. Energy is lost at each trophic level (through respiration) so the total biomass in higher trophic levels drops.

9 The diagram below shows how minerals are recycled.



- a Name the process represented by arrow A. [1]
- b What type of organism carries out process A? [1]
- c Name two examples of this type of organism. [2]
- d Explain why process A is vital to life on Earth. [2]

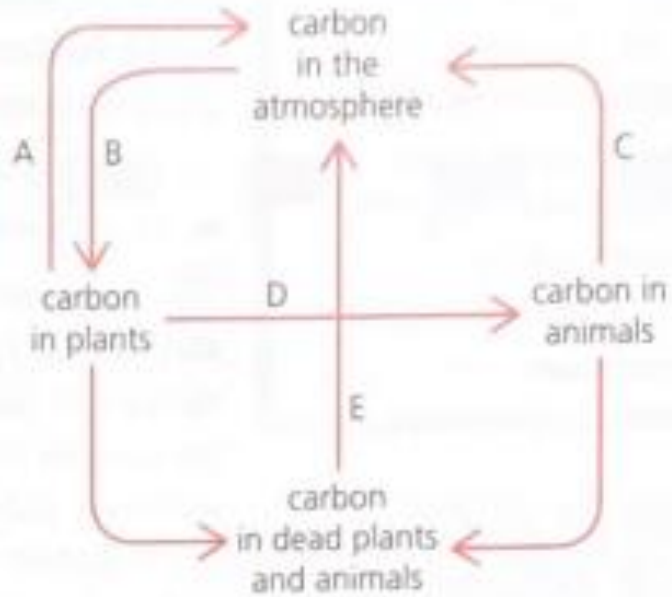
9a Decomposition.

b Decomposers.

c Any two from: bacteria; fungi; invertebrates such as worms, slugs, snails, and fly larvae.

d. Decomposers are recycles and they clean the environment from dead plants and animals and their wastes

10 The diagram below shows how carbon is recycled by living things.



Choose the correct arrow to represent each of the following:

- a photosynthesis [1]
- b animal respiration [1]
- c feeding [1]
- d the action of decomposers. [1]

10a B

b C

c D

d E