



The National Orthodox School / Shmaisani

Subject: Biology

Extra practice

Name:

Date:

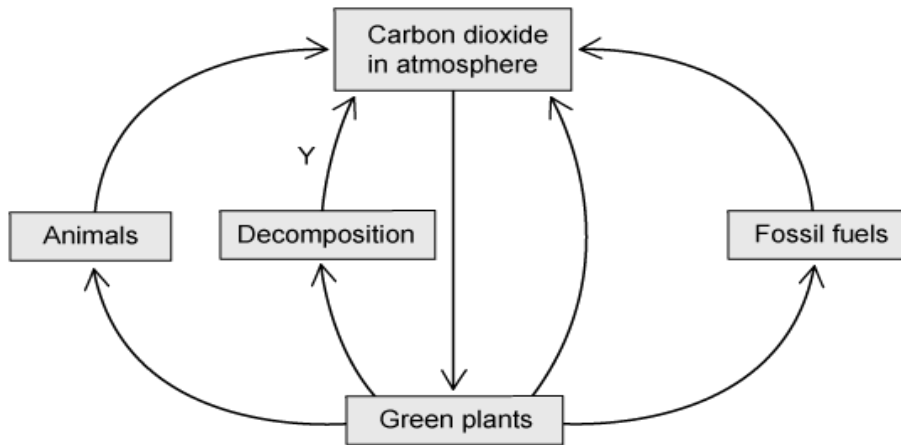
Grade 8 – all sections

Objective : be able to answer questions in ecology .

Question 1 :

a. The diagram below shows a representation of the carbon cycle. Explain how carbon is returned to the atmosphere at the stage labelled Y.

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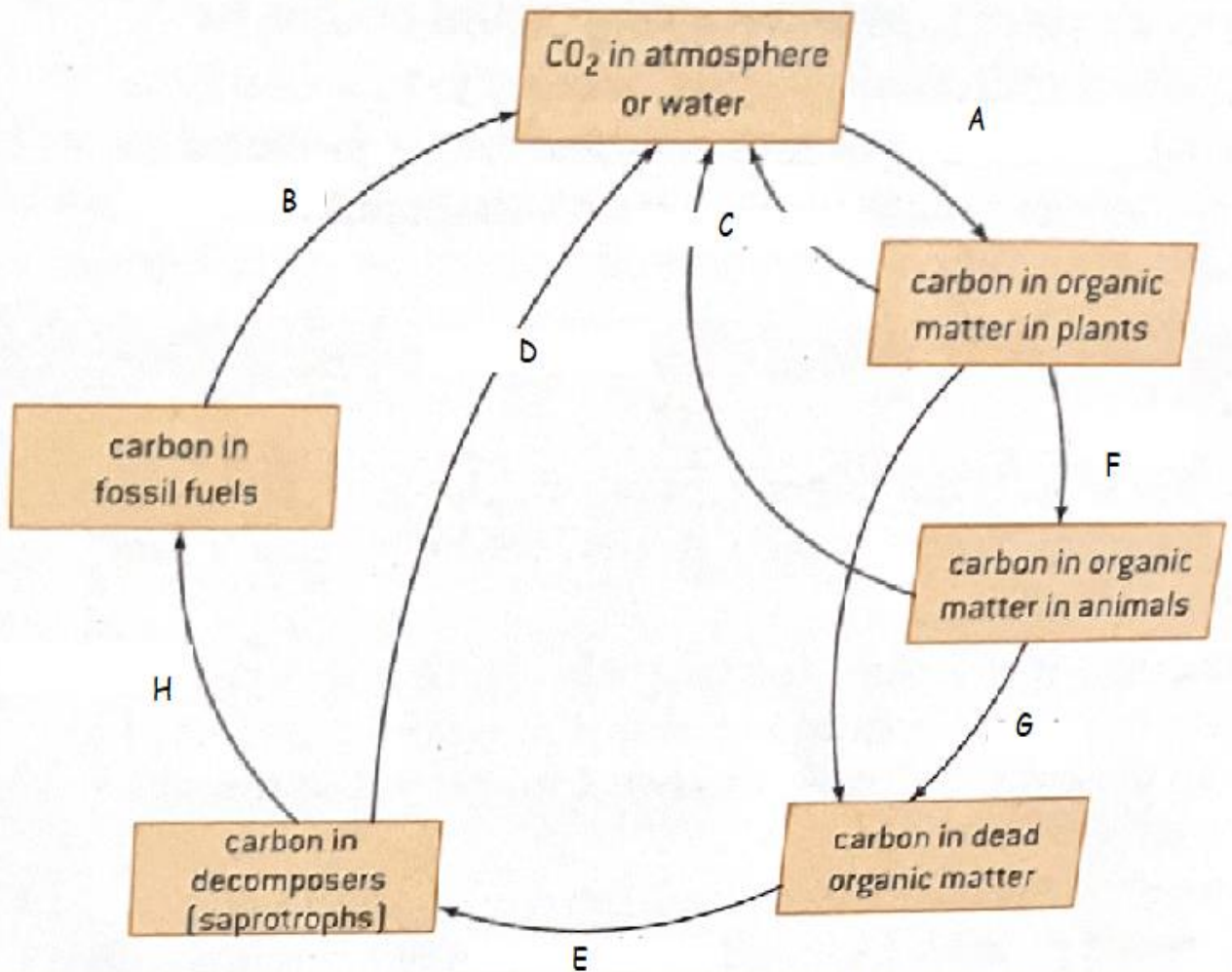
b. The diagram in part (a) is missing many details of the carbon cycle. Label the diagram as follows to show where each of the processes occurs within the carbon cycle.

- (i) Use a letter R to show where respiration occurs.
- (ii) Use a letter P to show where photosynthesis occurs.
- (iii) Use a letter F to show where feeding occurs.

Question 2:

Name the processes labelled with the letters on the diagram below :

The carbon cycle



Question 3 :

Moose, *Alces americanus*, shown in Fig. 6.1, are large herbivores that primarily live in northern parts of North America. They have a varied diet that includes young shoots of willow trees and aquatic plants.



Fig. 6.1

Isle Royale is a large island in Lake Superior in the United States where there is a population of moose that has been studied by ecologists for a long time. The animals' only predator is the wolf. The island has a population of wolves that has changed in numbers over the years.

- (a) (i)** Draw a food chain for the organisms in the passages above.

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- (ii)** Complete Table 6.1 by stating the name and identifying the trophic level of each organism in the food chain.

Table 6.1

name of organism	trophic level



Question 4 :

Fig. 1.2 shows eight species of arthropod that are pests of date palms.

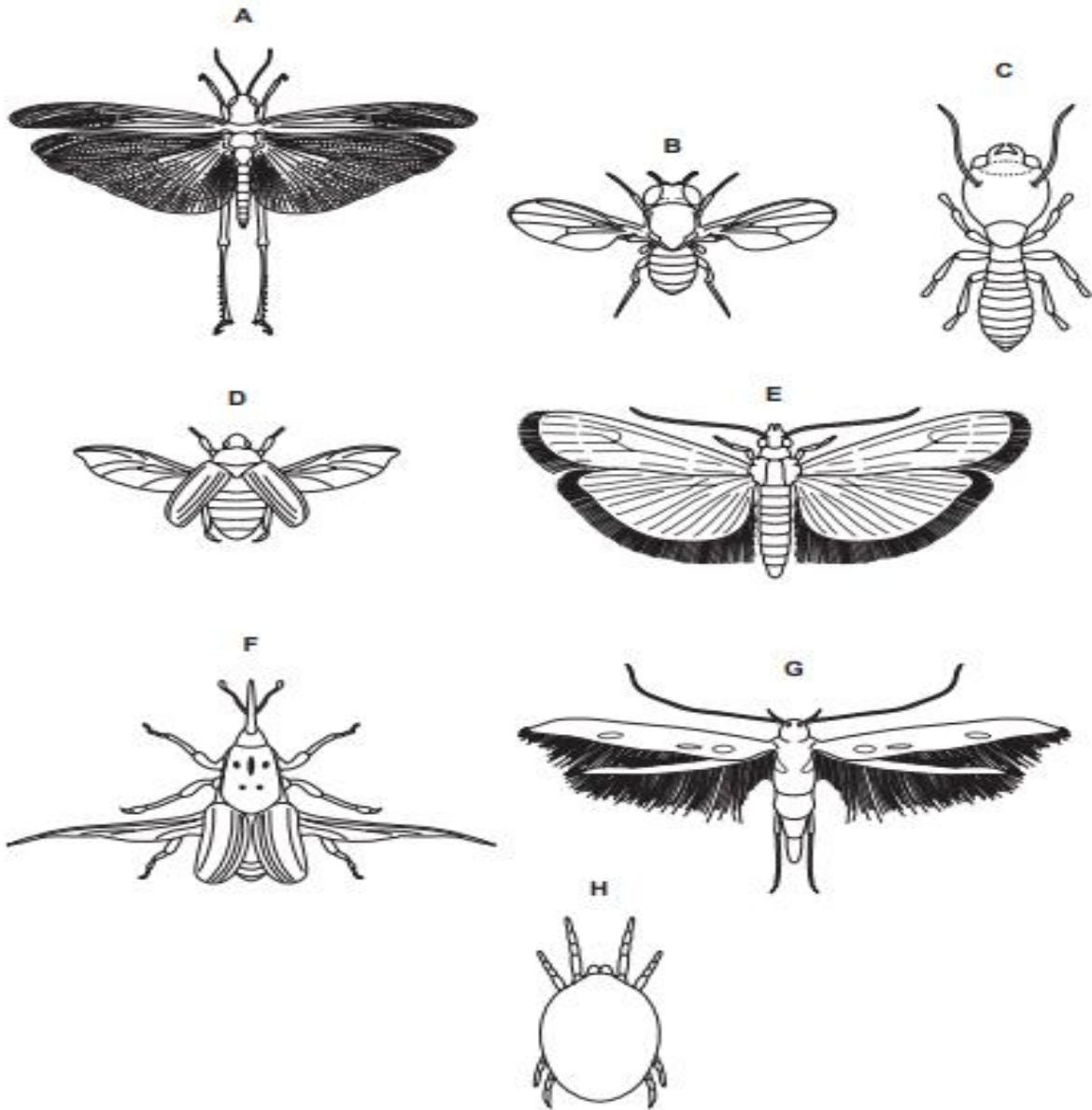


Fig. 1.2

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(b) Use the key to identify each species. Write the letter of each species, **B** to **H**, in the correct box in the key. One, **A**, has been done for you.

Key

1 (a)	Wings present	go to 2	
(b)	Wings absent	go to 7	
2 (a)	Back legs adapted for jumping	<i>Schistocerca gregaria</i>	A
(b)	Back legs not adapted for jumping	go to 3	
3 (a)	Two pairs of wings	go to 4	
(b)	One pair of wings	<i>Drosophila melanogaster</i>
4 (a)	Wings with hairs	go to 5	
(b)	Wings with no hairs	go to 6	
5 (a)	Hairs on back wings longer than width of back wing	<i>Ephestia cautella</i>
(b)	Hairs on back wings shorter than width of back wing	<i>Batrachedra amydraula</i>
6 (a)	Thorax with spots	<i>Rhynchophorus ferrugineus</i>
(b)	Thorax with no spots	<i>Oryctes agamemnon</i>
7 (a)	Three pairs of legs	<i>Microcerotermes diversus</i>
(b)	Four pairs of legs	<i>Oligonychus afrasiaticus</i>