

Organisms and their environment – 2022 June IGCSE 0610

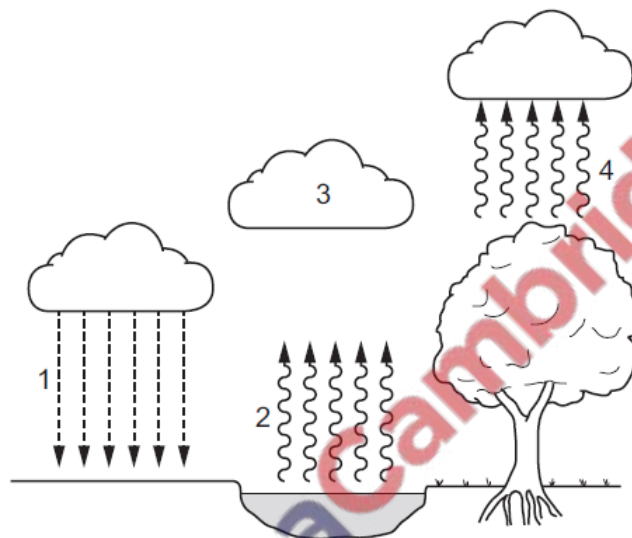
1. June/2022/Paper_11/No.36

Which process uses the principal source of energy input to biological systems?

- A ingestion
- B decomposition
- C photosynthesis
- D respiration

2. June/2022/Paper_11/No.37

The diagram shows the water cycle. Four different processes are numbered.



Which row identifies the processes correctly?

	condensation	evaporation	precipitation	transpiration
A	1	4	3	2
B	2	1	4	3
C	3	2	1	4
D	4	3	2	1

3. June/2022/Paper_11/No.38

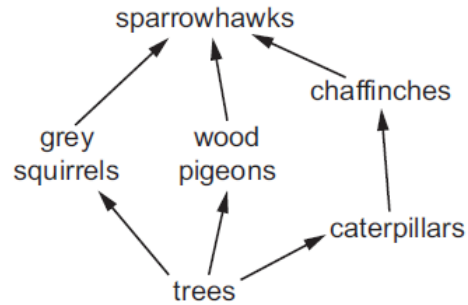
A herd of red deer live in a forest that contains snakes and a large variety of birds.

Which group of organisms is an example of a population?

- A all the animals in the forest
- B all the red deer in the forest
- C all the organisms in the forest
- D all the plants in the forest

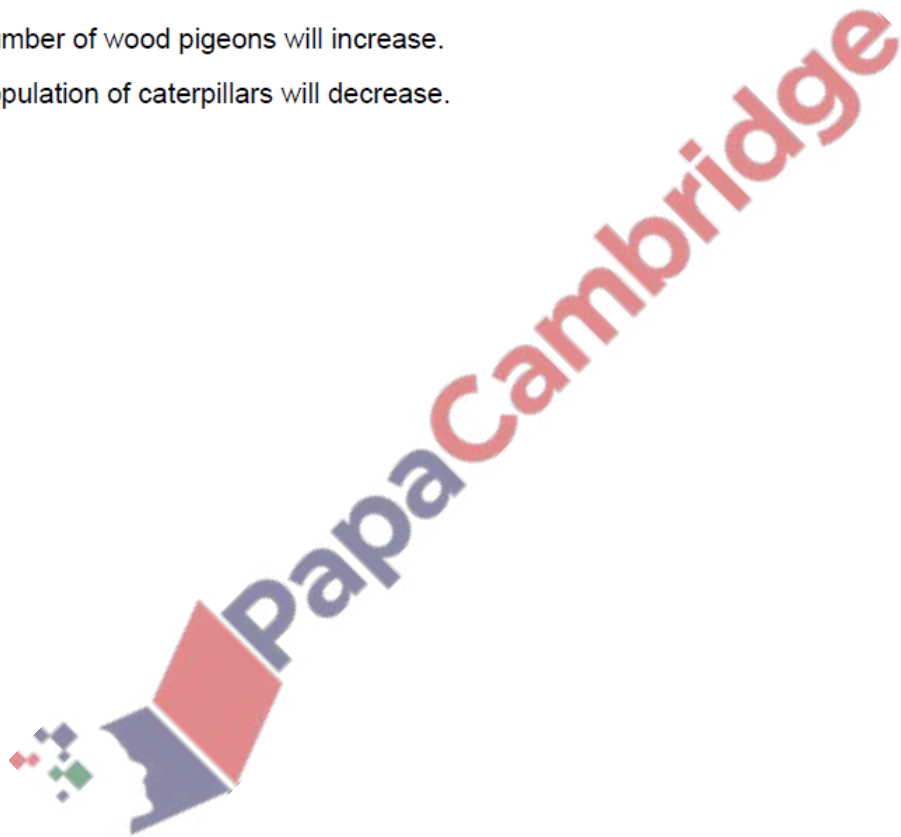
4. June/2022/Paper_11/No.40

The food web shows the feeding relationships in a woodland.



If all the chaffinches in the food web die, which effect would this have?

- A The amount of damage to trees will increase.
- B The food supply for grey squirrels will increase.
- C The number of wood pigeons will increase.
- D The population of caterpillars will decrease.



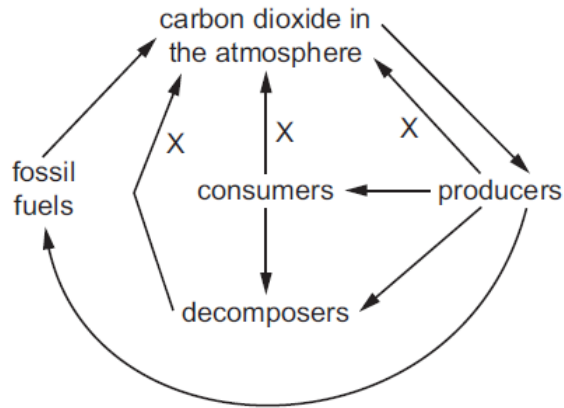
5. June/2022/Paper_12/No.36

Which process uses the principal source of energy input to biological systems?

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- C photosynthesis
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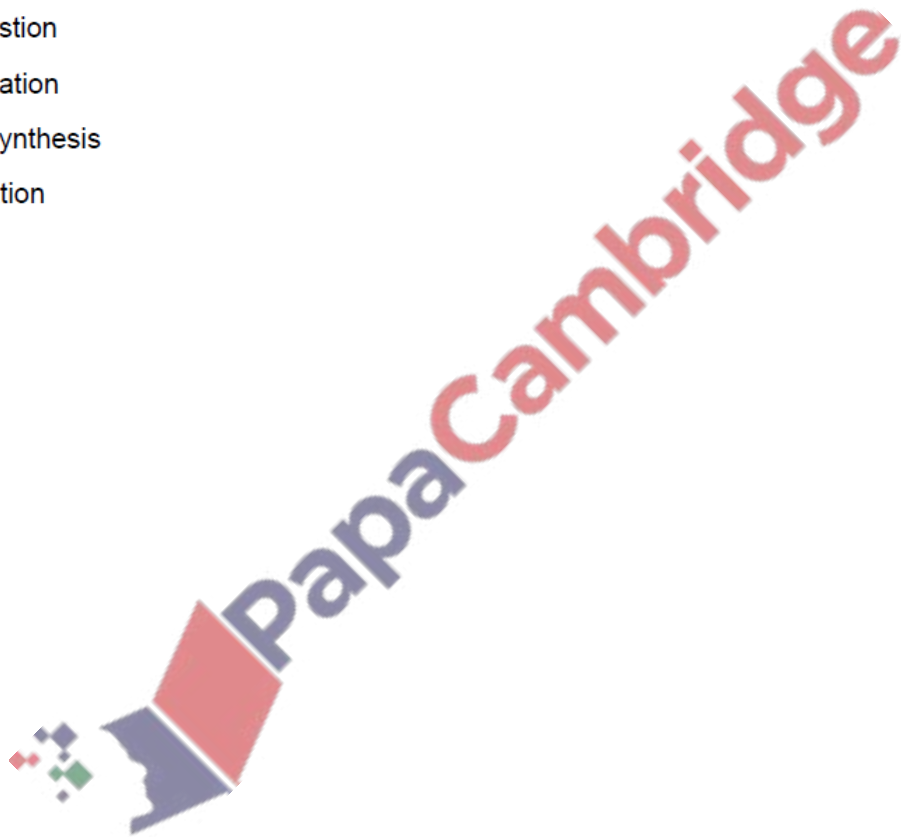
6. June/2022/Paper_12/No.37

The diagram shows part of the carbon cycle.



Which process is shown by the arrows labelled X?

- A combustion
- B fossilisation
- C photosynthesis
- D respiration



7. June/2022/Paper_12/No.38

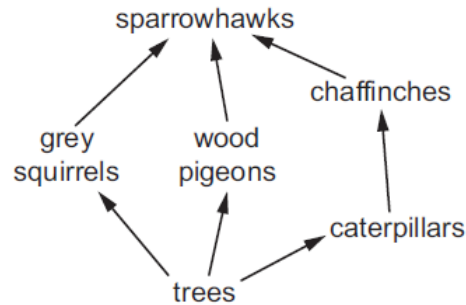
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9. June/2022/Paper_13/No.36

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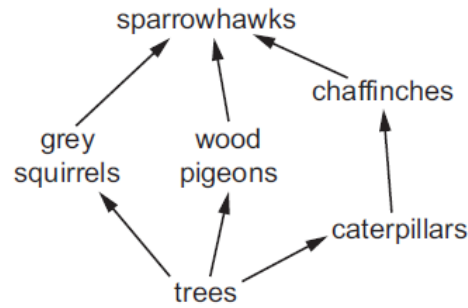
10. June/2022/Paper_13/No.37

What is the name of an organism that obtains its energy from dead organic material?

- A carnivore
- B consumer
- C decomposer
- D herbivore

11. June/2022/Paper_13/No.40

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12. June/2022/Paper_21/No.32

Which adaptation is shown in the leaves of hydrophytes?

- A hairs present on the upper and lower surfaces
- B contain large air spaces
- C stomata present on the lower surface only
- D thick cuticle present on the upper and lower surfaces

13. June/2022/Paper_21/No.36

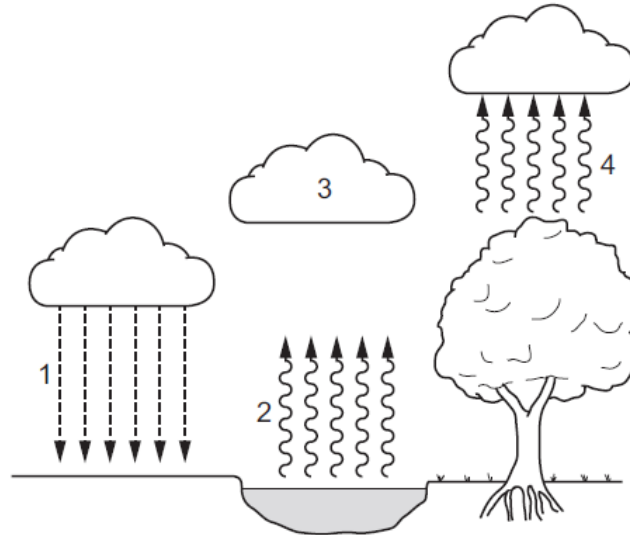
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14. June/2022/Paper_21/No.35

The diagram shows the water cycle. Four different processes are numbered.

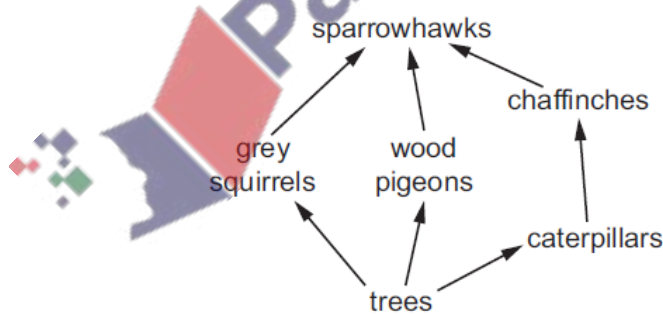


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15. June/2022/Paper_21/No.40

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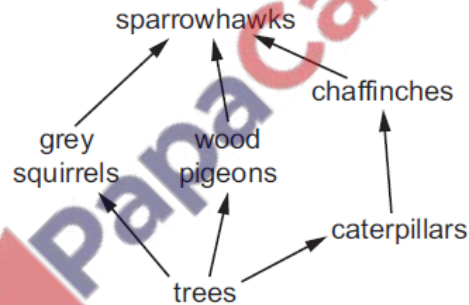
17. June/2022/Paper_23/No.39

What is a reason for conserving plant species?

- A to absorb oxygen from the air
- B to decrease rainfall
- C to obtain drugs for medicinal use
- D to release carbon dioxide into the air

18. June/2022/Paper_23/No.40

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(a) Fig. 8.1 is a diagram showing part of the carbon cycle.

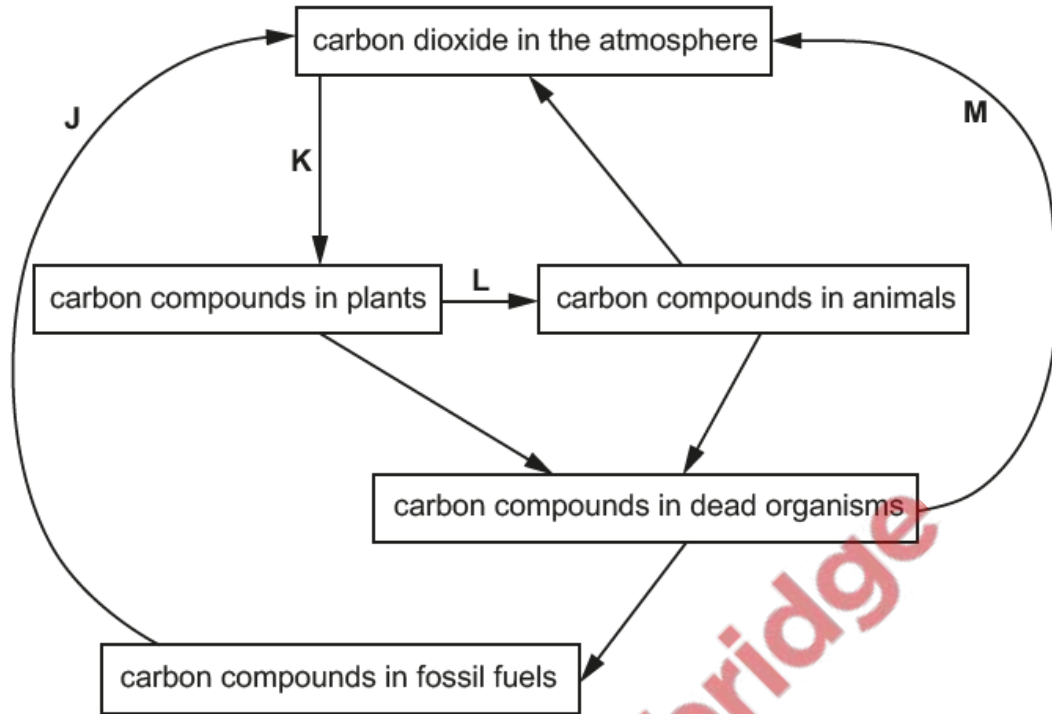


Fig. 8.1

(i) Draw **one** arrow on Fig. 8.1 to represent respiration in plants. [1]

(ii) Identify the processes labelled **J**, **L** and **M** in Fig. 8.1.

J

L

M

[3]

(b) Photosynthesis is the process occurring at **K** in Fig. 8.1.

State the **two** products of photosynthesis.

1

2

[2]

(c) Explain the effect of deforestation on the concentration of carbon dioxide in the atmosphere.

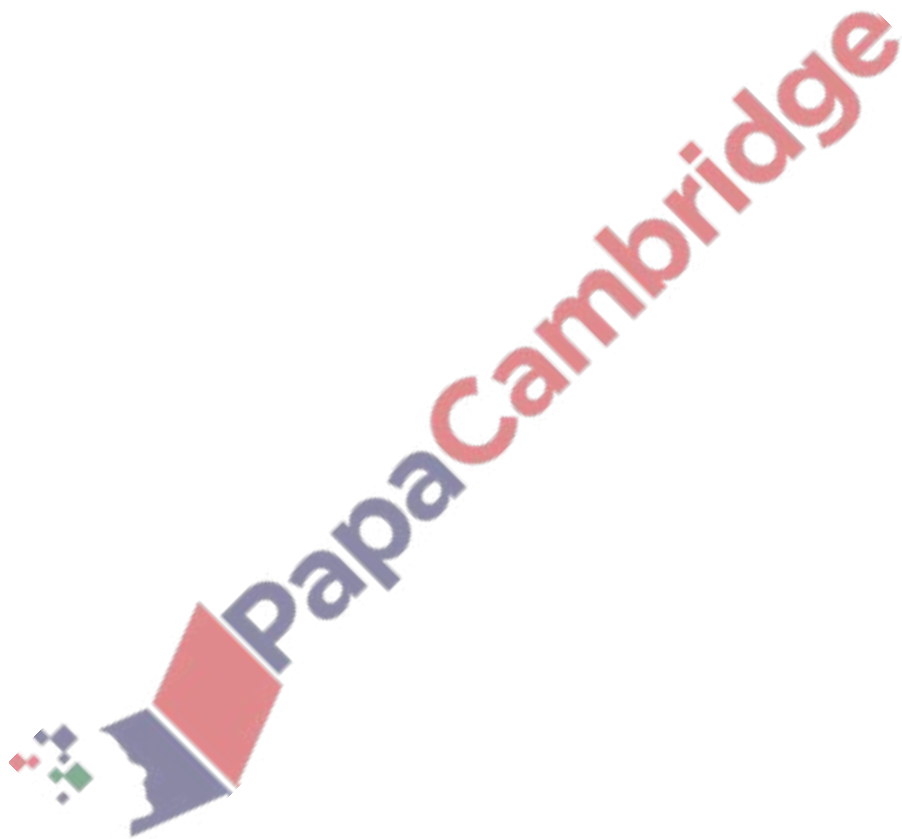
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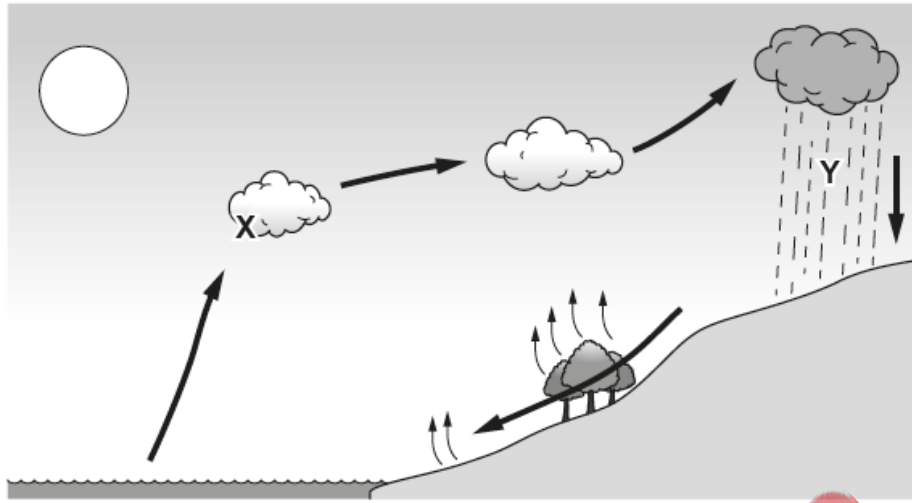
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.....

..... [2]



(d) Fig. 1.3 is a diagram of the water cycle.



not to scale

Fig. 1.3

Identify processes X and Y in Fig. 1.3.

X

Y

[2]

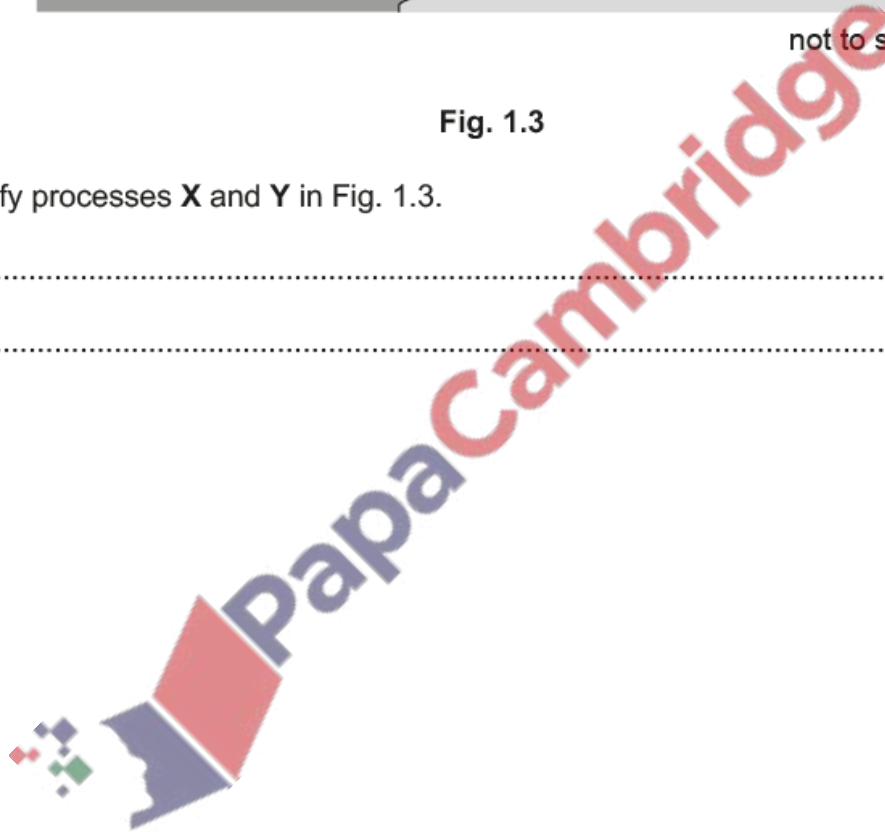


Fig. 4.1 is a drawing of a rainforest food web.

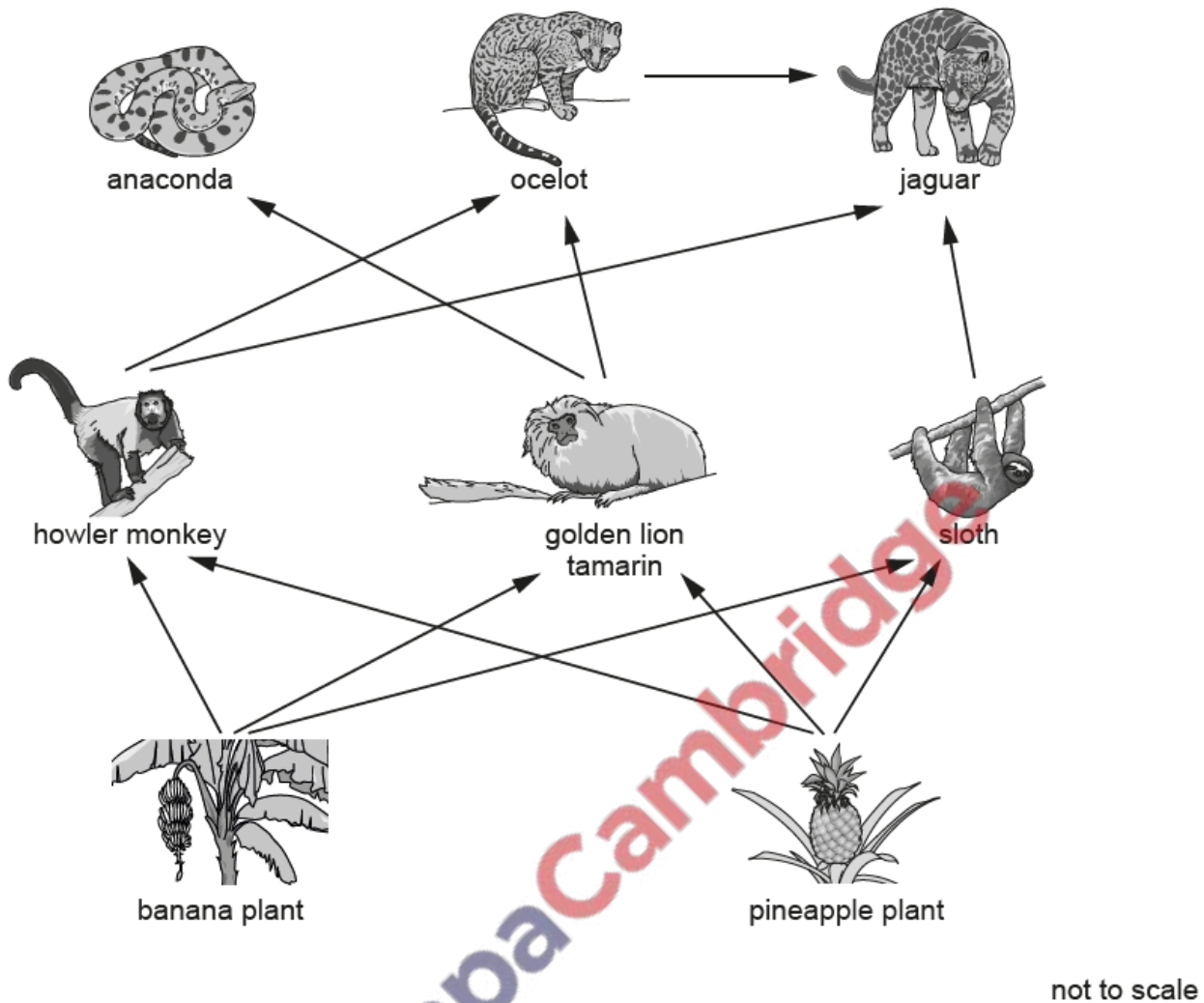


Fig. 4.1

(a) (i) State the name of **one** producer shown in Fig. 4.1.

..... [1]

(ii) State the name of **one** herbivore shown in Fig. 4.1.

..... [1]

(iii) State the number of carnivore species shown in Fig. 4.1.

..... [1]

(iv) Use the information in Fig. 4.1 to complete the food chain that contains the howler monkey and three other organisms.



[2]

(v) Overhunting of golden lion tamarins caused the population of anacondas and sloths to change.

Explain why the populations of:

- anacondas decrease
- sloths increase.

anacondas

.....

.....

sloths

.....

.....

[2]

(vi) State the principal source of energy for food webs.

.....

[1]



Coral reefs are important ecosystems.

(a) Complete the sentence about ecosystems.

An ecosystem can be defined as a unit containing the of organisms and their, interacting together.

[2]

Fig. 6.1 is a photograph of a coral reef.



Fig. 6.1

(b) Fig. 6.2 is part of a food web for a coral reef ecosystem which is similar to the one shown in Fig. 6.1.

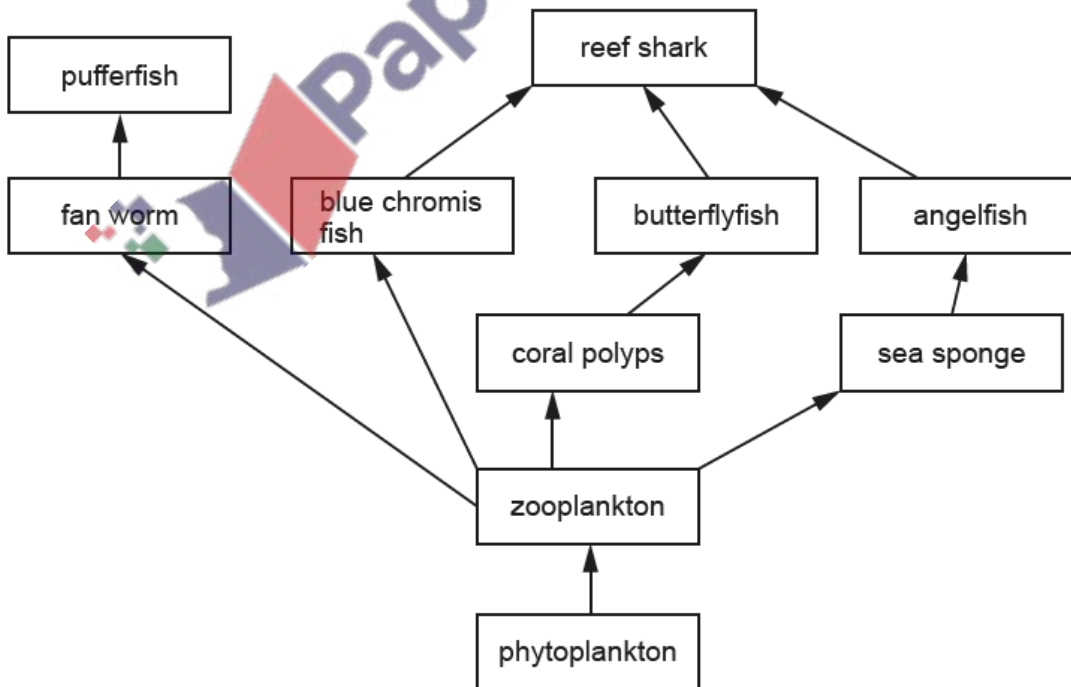


Fig. 6.2

(i) State the number of secondary consumers shown in Fig. 6.2.

..... [1]

(ii) State the name of a species that feeds at more than one trophic level in Fig. 6.2.

..... [1]

(iii) State the number of different organisms in the shortest food chain in Fig. 6.2.

..... [1]

(iv) State the evidence from the food web in Fig. 6.2, that phytoplankton are producers.

..... [1]

(v) It is rare for there to be more than five trophic levels in an ecosystem.

Explain what limits the number of trophic levels in food webs.

.....
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.....
.....
.....
.....
..... [3]

(c) One threat to aquatic ecosystems, such as coral reefs, is global climate change.

Discuss the threats to aquatic ecosystems, **other** than climate change.

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.....
.....
.....
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.....
.....
..... [3]