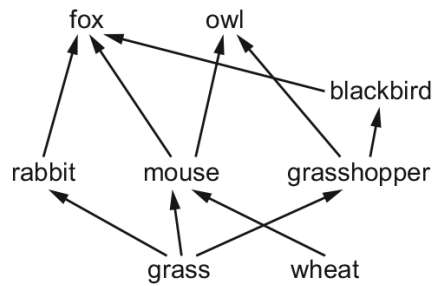


## 19.2 Food chains and food webs

01. 0610\_s21\_qp\_21 Q: 38

The diagram shows the feeding relationships in a food web.

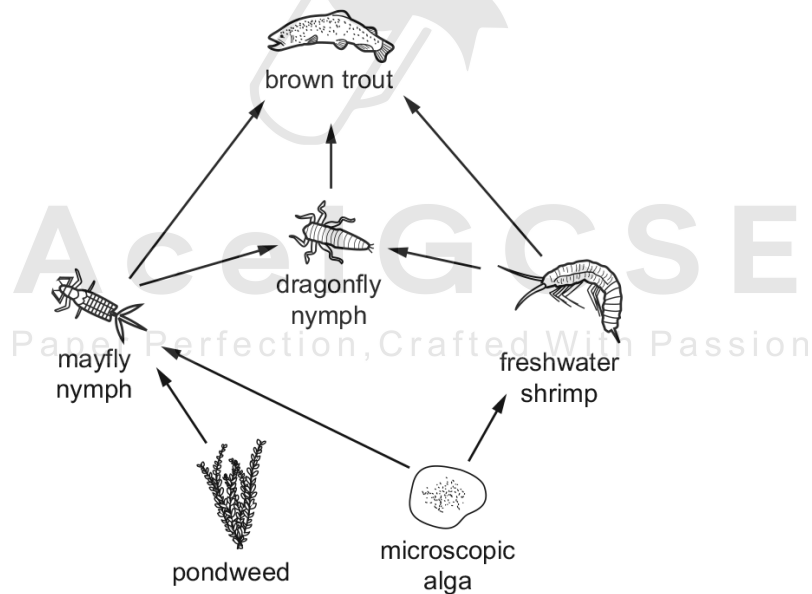


Which organism may feed as both a secondary and a tertiary consumer?

- A fox
- B owl
- C blackbird
- D rabbit

02. 0610\_s21\_qp\_22 Q: 38

The diagram shows a food web.



How many organisms feed at more than one trophic level?

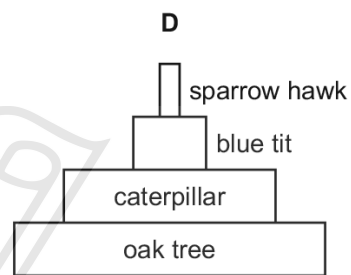
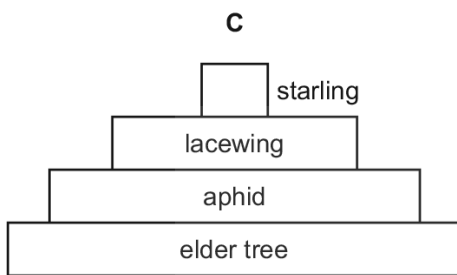
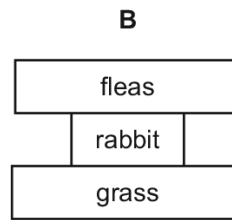
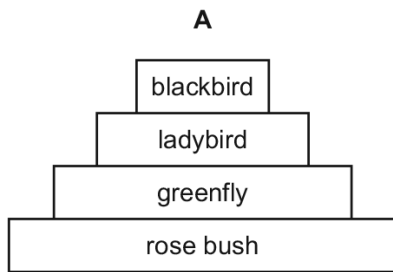
- A 0
- B 1
- C 2
- D 3

19.2. FOOD CHAINS AND FOOD WEBS

03. 0610\_s21\_qp\_23 Q: 38

The organisms in a food chain can be represented by pyramids of numbers or pyramids of biomass.

Which diagram represents a pyramid of numbers?



04. 0610\_m20\_qp\_22 Q: 38

The diagram shows a food chain.

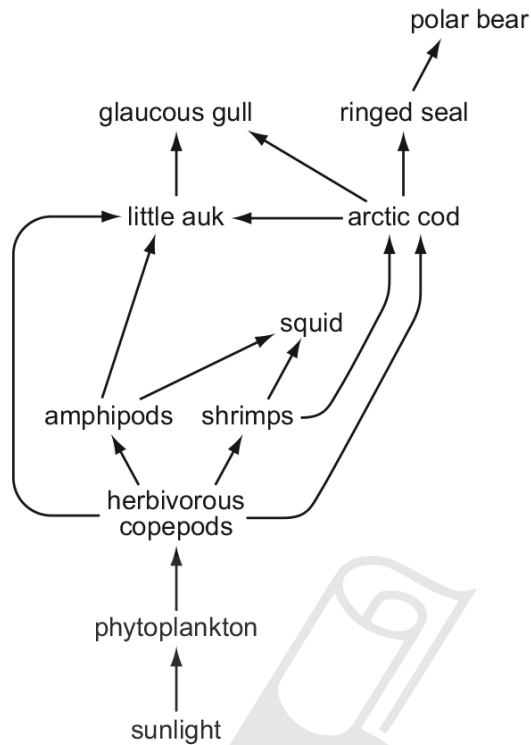
grass → mouse → owl

Which terms describe the position of the owl in this food chain?

	consumer	trophic level
<b>A</b>	secondary	second
<b>B</b>	secondary	third
<b>C</b>	tertiary	second
<b>D</b>	tertiary	third

05. 0610\_p20\_qp\_20 Q: 34

The diagram shows an Arctic ecosystem.



How many organisms can act as tertiary consumers in this food web?

- A 3                      B 4                      C 5                      D 6

06. 0610\_s20\_qp\_21 Q: 35

The diagram shows a food chain in a rock pool.

seaweed → whelks → crabs → seagulls

What will happen if the number of secondary consumers increases?

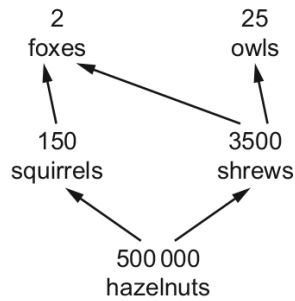
There will be

- A fewer crabs.  
 B fewer seagulls.  
 C fewer whelks.  
 D less seaweed.

19.2. FOOD CHAINS AND FOOD WEBS

07. 0610\_w20\_qp\_21 Q: 35

The diagram contains information about the number and mass of organisms in a food web.



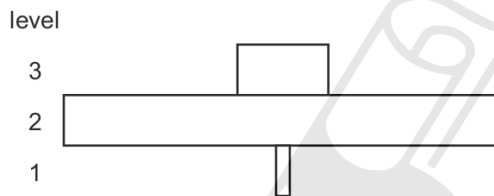
organism	average mass/g
fox	13 000
hazelnut	3
shrew	20
owl	600
squirrel	400

What is the total biomass of all the primary consumers in this food web?

- A** 130 kg      **B** 420 kg      **C** 3650 kg      **D** 130 000 kg

08. 0610\_w20\_qp\_22 Q: 35

The diagram shows a pyramid of numbers.



What is the correct description of the trophic levels?

	trophic level		
	1	2	3
<b>A</b>	producers	primary consumers	secondary consumers
<b>B</b>	producers	secondary consumers	tertiary consumers
<b>C</b>	secondary consumers	primary consumers	producers
<b>D</b>	secondary consumers	tertiary consumers	producers

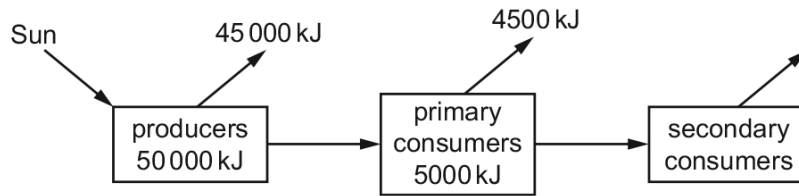
09. 0610\_s19\_qp\_22 Q: 37

Which trophic level has the greatest amount of energy?

- A**                                      **B**                                      **C**                                      **D**
- 1 mahogany tree with several thousand leaves    →    1500 aphids    →    10 small birds    →    2 eagles

10. 0610\_s19\_qp\_23 Q: 36

The diagram shows the energy within the producers in an ecosystem and how much is transferred to primary consumers and eventually lost to the environment.

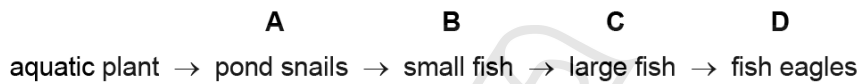


How much energy is transferred from primary consumers to secondary consumers?

- A 5 kJ                      B 50 kJ                      C 500 kJ                      D 5000 kJ

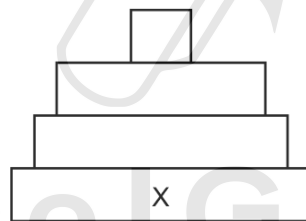
11. 0610\_s19\_qp\_23 Q: 37

Which is the tertiary consumer in this food chain?



12. 0610\_w19\_qp\_22 Q: 34

The diagram shows a pyramid of biomass.



Which organisms are found in position X?

- A decomposers  
 B herbivores  
 C primary consumers  
 D producers

19.2. FOOD CHAINS AND FOOD WEBS

13. 0610\_w19\_qp\_22 Q: 35

What is a trophic level?

- A a group of interconnected food chains
  - B all of the consumers in an ecosystem
  - C an organism's position in a food web
  - D the transfer of energy between organisms
- 

14. 0610\_w19\_qp\_23 Q: 20

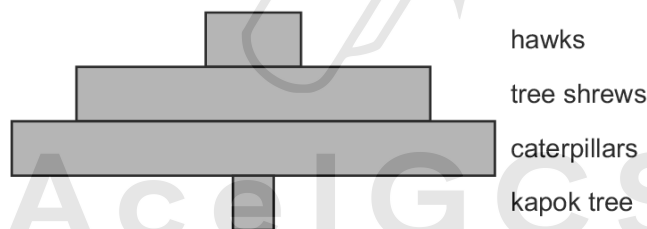
How do green plants and mammals obtain their energy?

	green plants	mammals
A	from the soil	from sleeping and resting
B	from the air around the plant	from the air they breathe
C	from the Sun	from digested and absorbed food
D	from water and carbon dioxide	from water and oxygen

---

15. 0610\_w19\_qp\_23 Q: 36

The diagram shows a pyramid of numbers in a food chain.



What type of organism is the tree shrew?

- A producer
  - B primary consumer
  - C secondary consumer
  - D tertiary consumer
-

16. 0610\_s18\_qp\_21 Q: 35

The diagram shows a food chain.

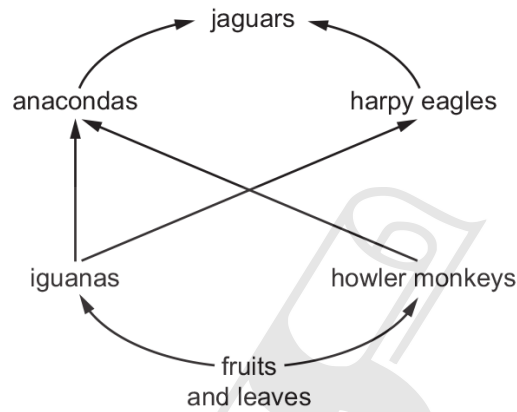
maize	→	locusts	→	lizards	→	snakes
10 000 kJ		1 000 kJ		100 kJ		10 kJ

What is the efficiency of energy transfer between the maize and the lizards in this food chain?

- A** 0.01%      **B** 0.1%      **C** 1%      **D** 10%
- 

17. 0610\_s18\_qp\_21 Q: 36

The diagram shows part of a food web from a rainforest.



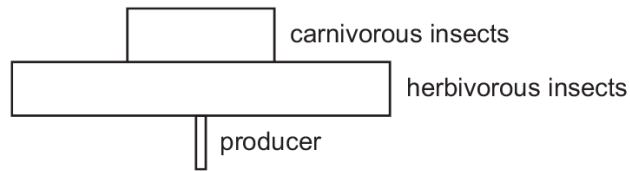
In this food web, at which trophic level are the anacondas?

- A** primary consumers  
**B** secondary consumers  
**C** tertiary consumers  
**D** quaternary consumers
-

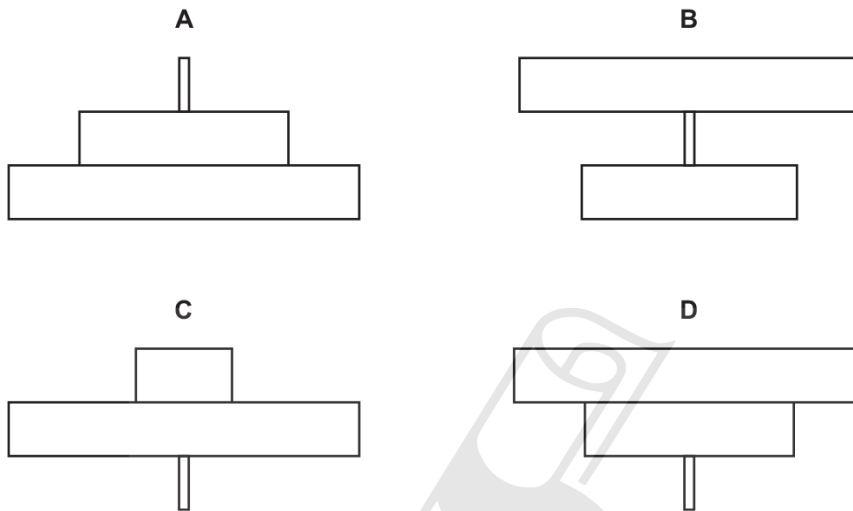
19.2. FOOD CHAINS AND FOOD WEBS

18. 0610\_s18\_qp\_22 Q: 35

A food chain has the pyramid of numbers shown.

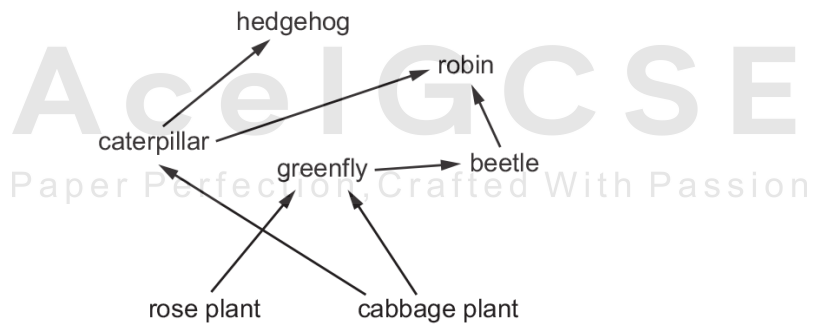


What is the pyramid of biomass for the same food chain?



19. 0610\_w18\_qp\_22 Q: 35

The diagram shows a food web.

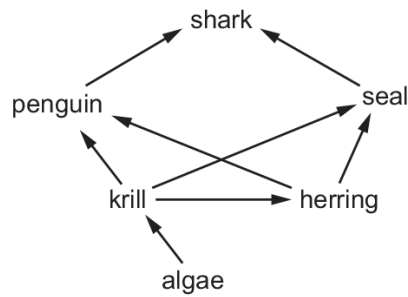


Which row shows a food chain in this food web?

	producer	primary consumer	secondary consumer
<b>A</b>	hedgehog	caterpillar	robin
<b>B</b>	cabbage plant	greenfly	beetle
<b>C</b>	cabbage plant	beetle	robin
<b>D</b>	rose plant	hedgehog	greenfly

20. 0610\_w18\_qp\_23 Q: 35

The diagram shows a food web in the ocean.

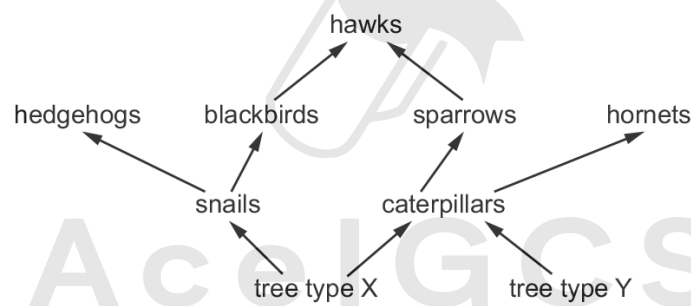


Which two animals are secondary **and** tertiary consumers?

- A penguin and herring
- B penguin and shark
- C seal and penguin
- D seal and shark

21. 0610\_w18\_qp\_23 Q: 39

The diagram shows a food web in a woodland.



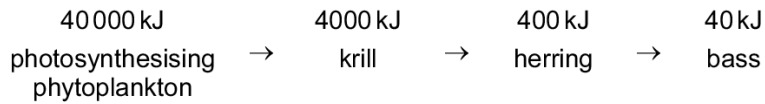
What is most likely to happen if all of tree type X is removed by humans?

- A The carbon dioxide concentration in the woodland will decrease.
- B The population of hedgehogs will increase.
- C The population of hornets will increase.
- D The population of sparrows will decrease.

19.2. FOOD CHAINS AND FOOD WEBS

22. 0610\_m17\_qp\_22 Q: 35

The diagram shows the energy present in a food chain.

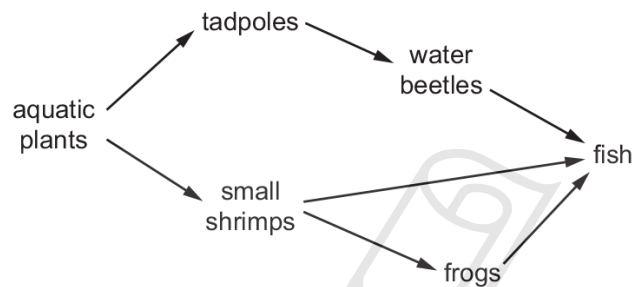


What percentage of energy present in the producer is transferred to the secondary consumer?

- A** 0.01%                      **B** 0.1%                      **C** 1%                      **D** 10%
- 

23. 0610\_s17\_qp\_23 Q: 35

The diagram represents part of an aquatic food web.



Which organisms are primary consumers in this food web?

- A** small shrimps and tadpoles  
**B** tadpoles and frogs  
**C** water beetles and fish  
**D** water beetles and frogs
- 

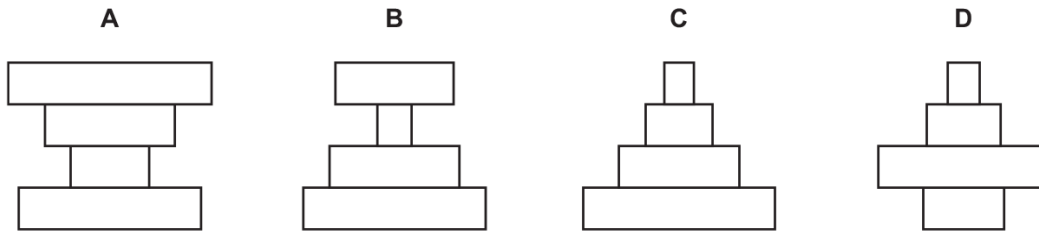
24. 0610\_w17\_qp\_21 Q: 36

What is shown by the widest block in a pyramid of numbers for a grassland ecosystem?

- A** all the consumers in the pyramid  
**B** the carnivores in the pyramid  
**C** the organisms at the top of the pyramid  
**D** the producers in the pyramid
-

25. 0610\_w17\_qp\_22 Q: 36

Which pyramid of numbers has more herbivores than producers?



26. 0610\_w17\_qp\_23 Q: 35

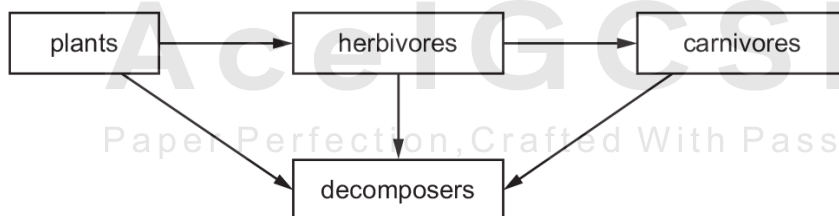
The biomass at each trophic level in an ecosystem is measured. The results are shown in the table.

Which trophic level contains herbivores?

trophic level	mass/g m <sup>-3</sup>
<b>A</b>	0.1
<b>B</b>	0.6
<b>C</b>	1.2
<b>D</b>	17.9

27. 0610\_w17\_qp\_23 Q: 36

The diagram shows a food web.



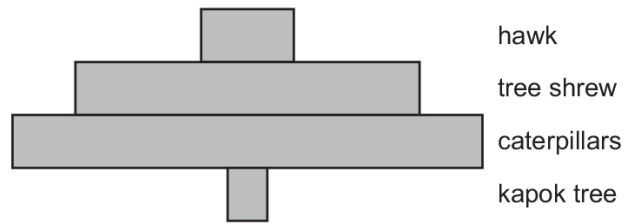
What do the arrows represent?

- A** the absorption of oxygen
- B** the absorption of water
- C** the flow of energy
- D** the release of carbon dioxide

19.2. FOOD CHAINS AND FOOD WEBS

28. 0610\_m16\_qp\_22 Q: 37

The diagram shows a pyramid of numbers in a food chain.



What type of organism is the hawk?

- A producer
- B primary consumer
- C quaternary consumer
- D tertiary consumer

29. 0610\_m16\_qp\_22 Q: 38

The diagram shows organisms feeding on a dead rat and one of the organisms which, in turn, feeds on them.

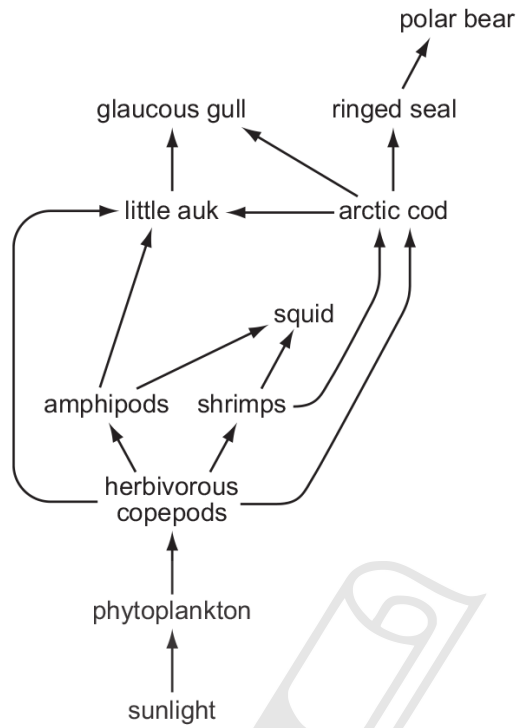


What is needed to complete the food chain?

- A carnivore
- B consumer
- C predator
- D producer

30. 0610\_p16\_qp\_20 Q: 34

The diagram shows an Arctic ecosystem.



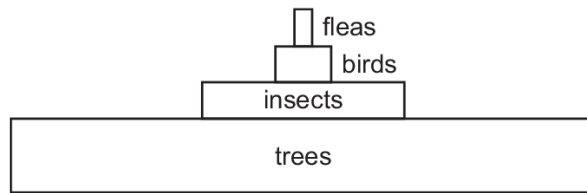
How many organisms can act as tertiary consumers in this food web?

- A** 3                      **B** 4                      **C** 5                      **D** 6

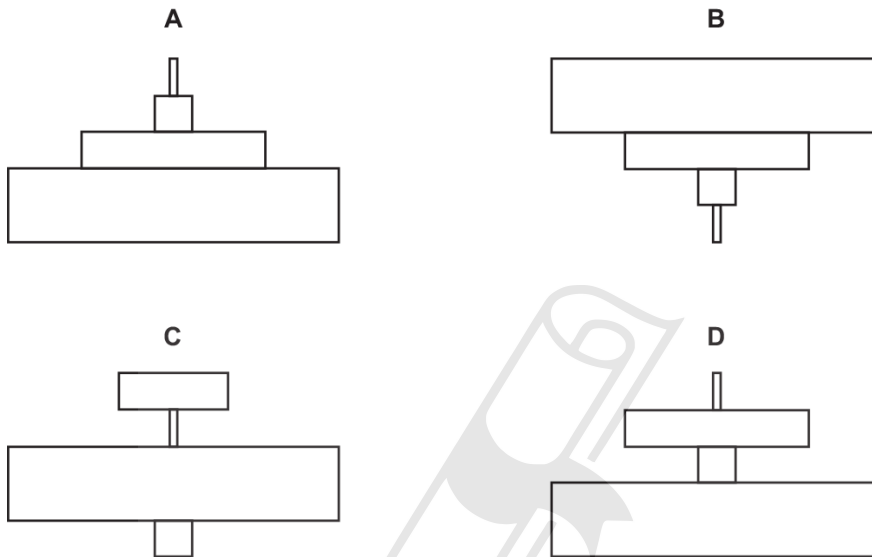
19.2. FOOD CHAINS AND FOOD WEBS

31. 0610\_s16\_qp\_21 Q: 35

The diagram shows a pyramid of biomass for a food chain in a woodland ecosystem.



What is the pyramid of numbers for this food chain?



32. 0610\_s16\_qp\_22 Q: 36

In the food chain below, the population of snakes is halved owing to a viral disease.

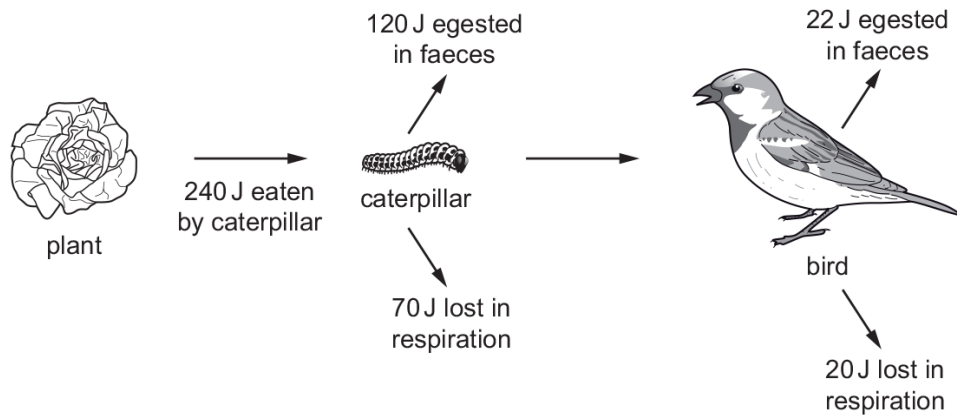
grass → locusts → snakes → eagles

What effect does this have on the other members of the food chain?

	grass	locusts	eagles
<b>A</b>	decrease	increase	decrease
<b>B</b>	decrease	increase	increase
<b>C</b>	increase	decrease	decrease
<b>D</b>	increase	increase	decrease

33. 0610\_w16\_qp\_21 Q: 34

The diagram shows a food chain.



How much energy is transferred to the bird?

- A 8J                      B 42J                      C 50J                      D 240J



SN	Paper	Q. No.	Answer
01	0610_s21_qp_21	38	A
02	0610_s21_qp_22	38	B
03	0610_s21_qp_23	38	B
04	0610_m20_qp_22	38	B
05	0610_p20_qp_20	34	C
06	0610_s20_qp_21	35	C
07	0610_w20_qp_21	35	A
08	0610_w20_qp_22	35	A
09	0610_s19_qp_22	37	A
10	0610_s19_qp_23	36	C
11	0610_s19_qp_23	37	C
12	0610_w19_qp_22	34	D
13	0610_w19_qp_22	35	C
14	0610_w19_qp_23	20	C
15	0610_w19_qp_23	36	C
16	0610_s18_qp_21	35	C
17	0610_s18_qp_21	36	B
18	0610_s18_qp_22	35	A
19	0610_w18_qp_22	35	B
20	0610_w18_qp_23	35	C
21	0610_w18_qp_23	39	D
22	0610_m17_qp_22	35	C
23	0610_s17_qp_23	35	A
24	0610_w17_qp_21	36	D
25	0610_w17_qp_22	36	D
26	0610_w17_qp_23	35	C
27	0610_w17_qp_23	36	C
28	0610_m16_qp_22	37	D
29	0610_m16_qp_22	38	D
30	0610_p16_qp_20	34	C
31	0610_s16_qp_21	35	C
32	0610_s16_qp_22	36	A
33	0610_w16_qp_21	34	C