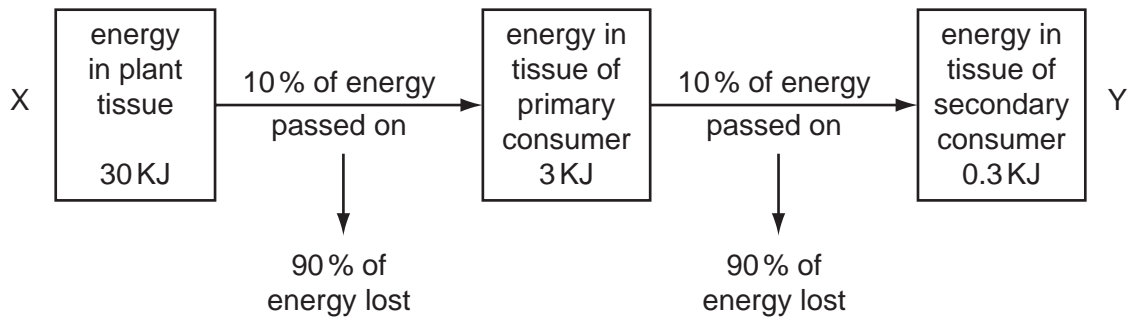


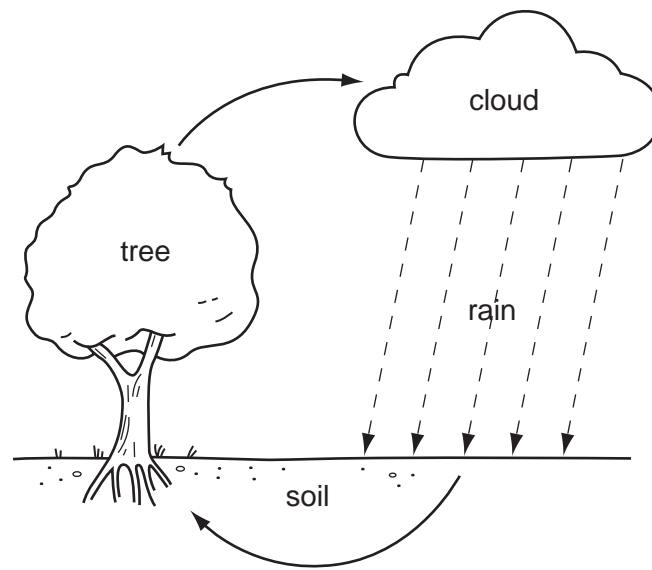
1 The diagram shows energy flow through a food chain.



By which processes is energy lost between X and Y?

- A digestion and excretion
- B digestion and photosynthesis
- C excretion and respiration
- D photosynthesis and respiration

2 The diagram shows a simple water cycle.



What is responsible for water loss from the tree?

- A decomposition
- B photosynthesis
- C translocation
- D transpiration

3 Which shows from where most plants and most animals obtain carbon?

	most plants obtain carbon from	most animals obtain carbon from
A	the air	plants
B	the soil	the air
C	the air	the soil
D	the soil	plants

4 The table shows the changes in the world population over a period of two hundred years.

year	estimated population (millions)
1790	850
1890	1500
1990	5000

What has made the largest contribution to this population change?

- A decreased food supply
- B decreased use of chemical contraception
- C increased food supply
- D increased use of chemical contraception

5 From which food chain is **least** energy lost?

- A corn → hens → humans
- B grass → cows → humans
- C potatoes → humans
- D water plants → small fish → large fish → humans

6 In which process is oxygen a waste product?

- A active transport
- B aerobic respiration
- C anaerobic respiration
- D photosynthesis

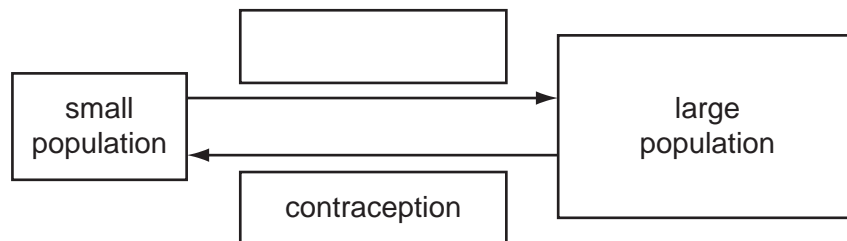
7 The diagram shows the movement of two gases during the day and during the night.



Which letters represent carbon dioxide?

- A W and Y
- B W and Z
- C X and Y
- D X and Z

8 The diagram shows part of a chart explaining the effect of different factors on a human population.



Which factor goes in the empty box?

- A crop failure
- B disease
- C improved health care
- D natural disaster

9 In an ecosystem, plants absorb sunlight.

Which other organisms in the ecosystem depend on this process for their energy?

	animals	deco
A	✓	✓
B	✓	x
C	x	✓
D	x	x

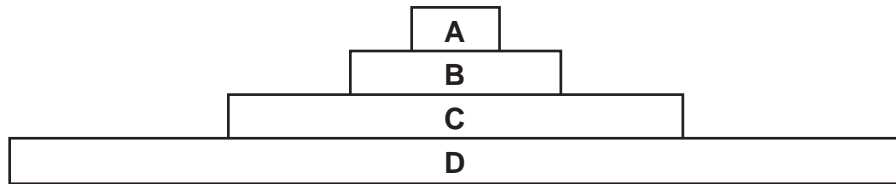
key

✓ = depend

x = do not depend

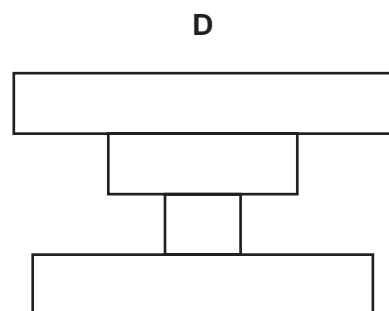
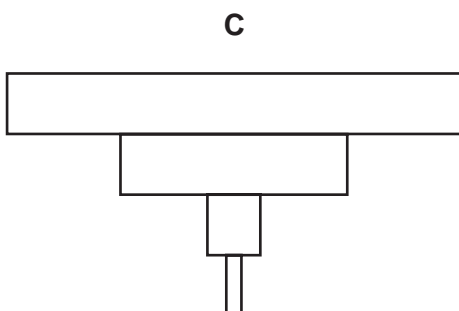
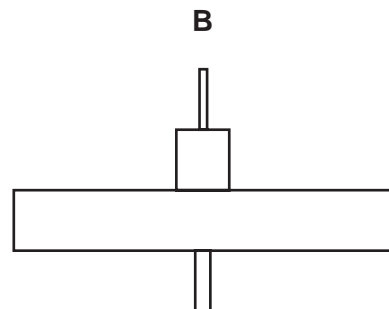
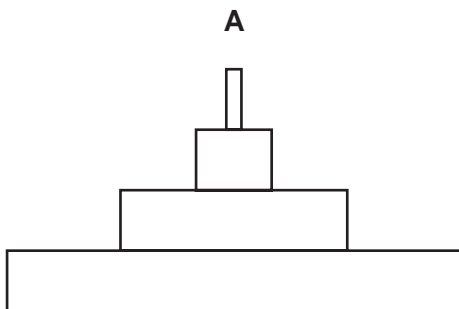
10 The diagram shows a pyramid of biomass for all organisms in an ecosystem.

Which organisms are herbivores?

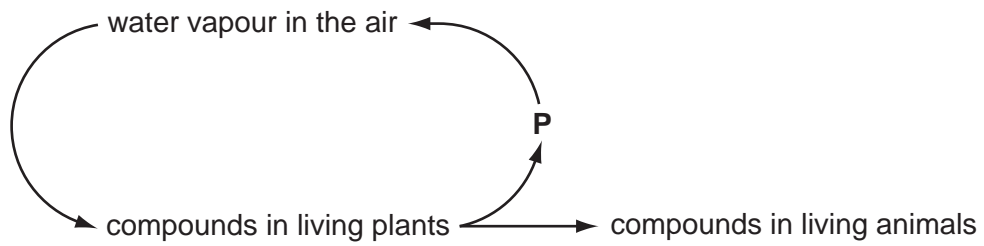


11 A single tree is food for a large population of caterpillars. Several small birds eat the caterpillars. The small birds are eaten by a bird of prey.

Which is the pyramid of numbers for this food chain?



12 The diagram shows part of the water cycle.



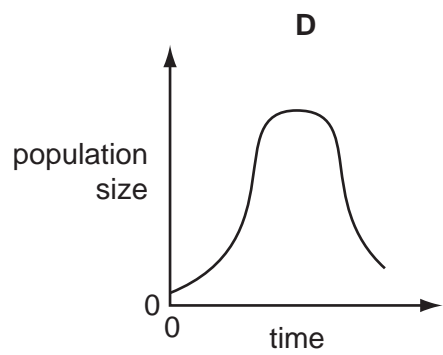
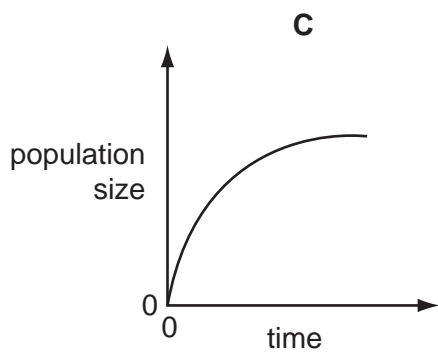
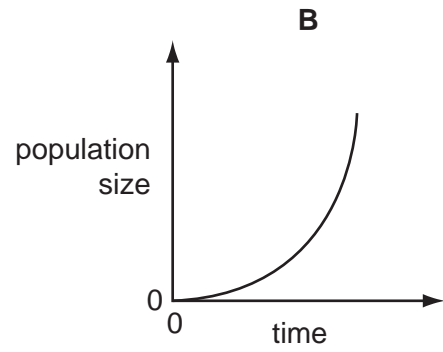
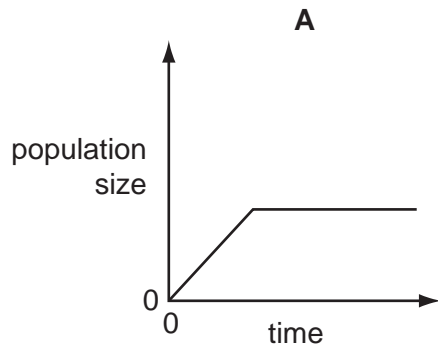
Which process in living plants is responsible for returning water vapour to the air at **P**?

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

13 How will soil erosion and rainfall be affected by deforestation?

	soil erosion	rainfall
A	decrease	decrease
B	decrease	increase
C	increase	increase
D	increase	decrease

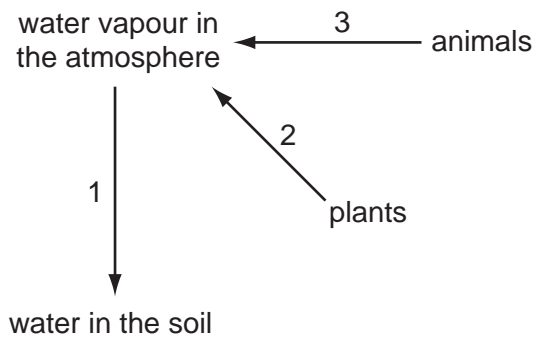
14 Which graph shows the growth of a population where there are no limiting factors?



15 Which term can be described as ‘many different species living together, interacting with each other and with their physical environment’?

- A a food chain
- B a food web
- C a nutrient cycle
- D an ecosystem

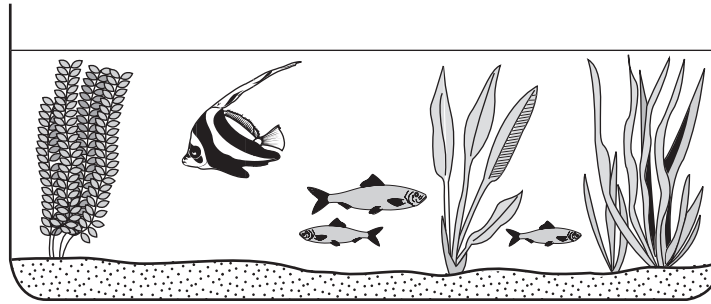
16 The diagram shows a simplified water cycle.



Which processes do arrows 1, 2 and 3 represent?

	respiration	precipitation	transpiration
A	2	1	3
B	3	1	2
C	3	2	1
D	1	3	2

17 The oxygen concentration in this aquarium was measured over a period of time.

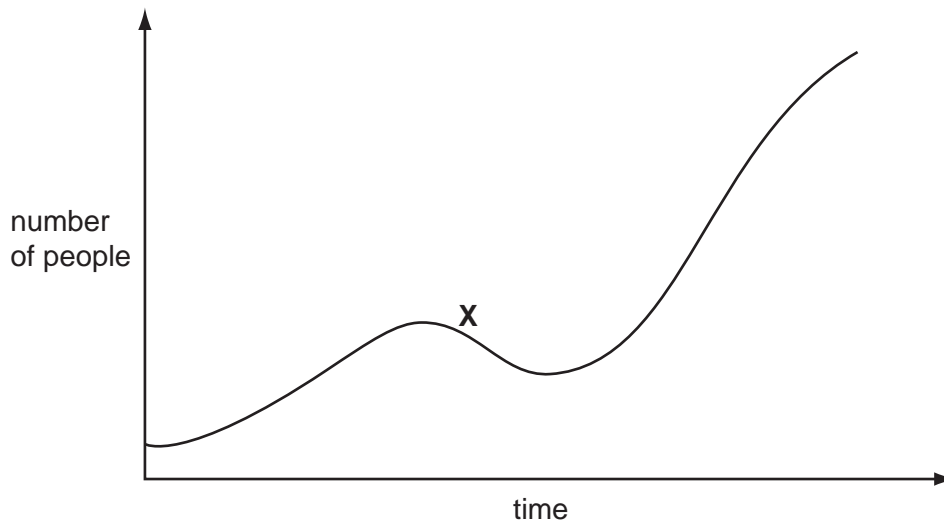


It increased during daylight and decreased at night.

Which processes caused these results?

	oxygen increase (day)	oxygen decrease (night)
A	animal nutrition	decay
B	decay	animal nutrition
C	movement	photosynthesis
D	photosynthesis	respiration

18 The graph shows the changes in a human population.



What could have caused the decrease in population at **X**?

- A** more medicines available
- B** introduction of new diseases
- C** increasing food supply
- D** decrease in population of predators