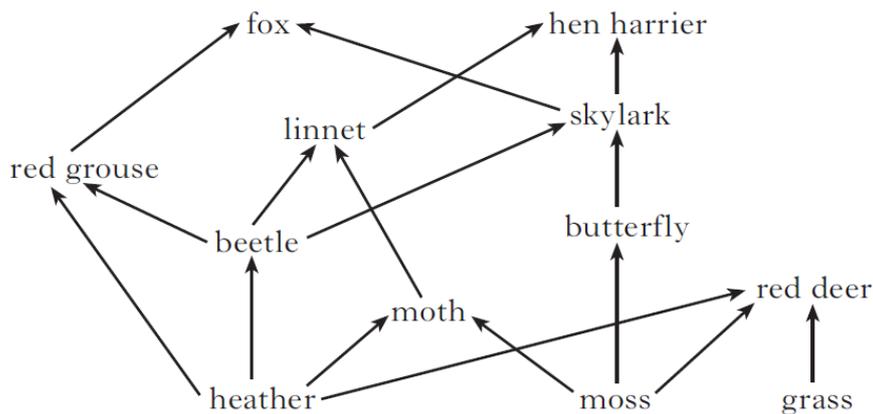


N5 Biology LE4 Energy in Ecosystems Homework

1. The diagram shows a food web from a moorland ecosystem.



a) The following statements refer to the food web. For each statement decide if it is True (T) or False (F).

	<i>Statement</i>	<i>T or F</i>
i)	Linnets are eaten by beetles and moths	
ii)	Foxes and hen harriers are not eaten by anything	
iii)	Butterflies are eaten by skylarks which are eaten by foxes	

[3]

b) Give an example of a producer and a consumer from the food web.

[2]

c) Which plant provides energy for the greatest number of different species in this food web?

[1]

d) Suggest what will happen to the number of foxes if the number of red grouse decreases. Give a reason for your answer.

[2]

2. A forest food chain is shown below.

Oak tree → Caterpillar → Robin → Sparrowhawk

a) What do the arrows in the food chain represent?

[1]

b) Which organism in the food chain has

i) the **most** energy?

ii) the **least** energy?

[2]

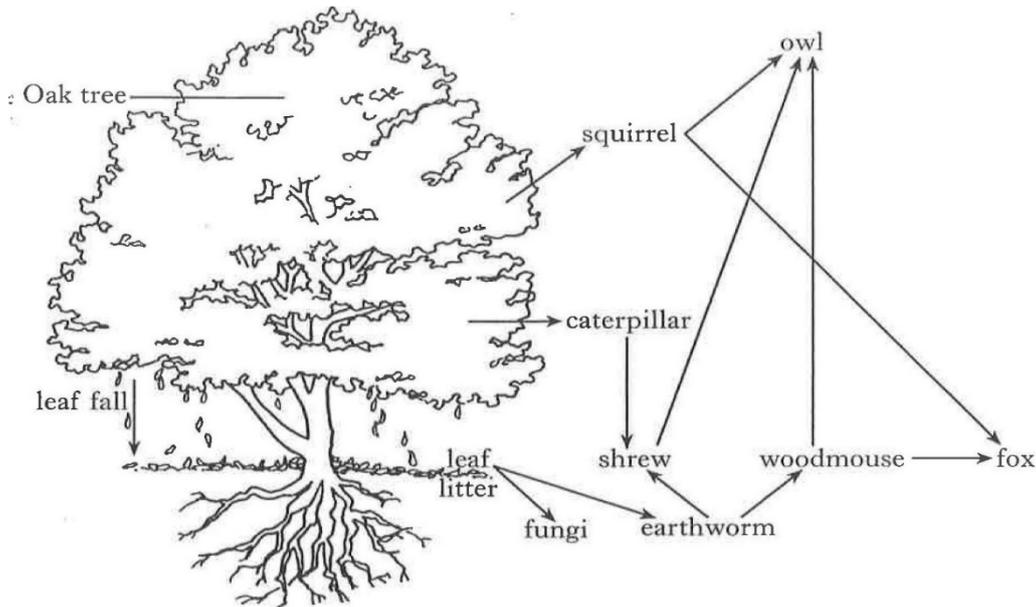
c) What happens to most of the energy in a food chain?

[1]

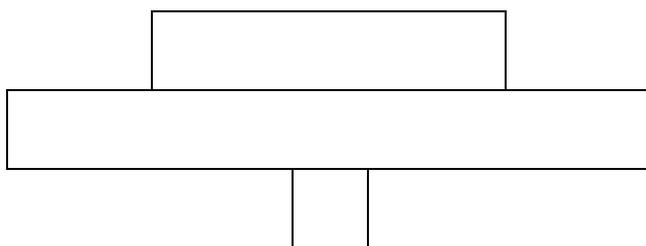
d) Name two ways energy is lost in a food chain.

[2]

3. The diagram below shows part of a woodland food web.



a) The diagram below shows a pyramid of numbers taken from the food web above. Suggest a food chain, from the woodland web, which would give this pyramid.



[2]

b) i) Describe how a pyramid of energy would be different from this.

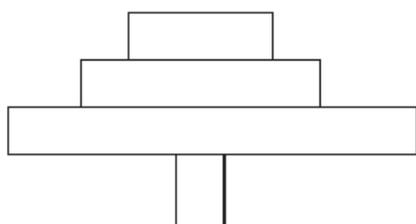
[1]

ii) Explain why a pyramid of energy would be different from this.

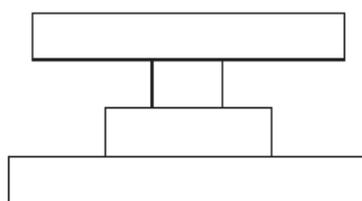
[1]

4. A food chain is shown below along with three pyramids of numbers

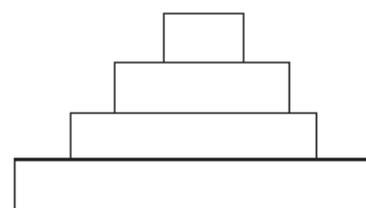
Grass → zebra → lion → fleas



Pyramid K



Pyramid L



Pyramid M

a) Identify the pyramid which represents the food chain shown.

[1]

b) Calculate the energy in the lions if there is 97,00kJ of energy in the grass and 90% of energy is lost at each step in the food chain.

[1]

total = 20marks