



Calculate the efficiency of biomass transfer between trophic levels in pyramids of biomass

Task 1. The picture shows a food chain.

(A) Which diagram shows a pyramid of biomass for the food chain in the picture?

(B) The plants at the start of the food chain absorb energy. Where does this energy come from? Draw a ring around one answer.

the water

the sun

minerals

(C) Some energy is lost at each stage of the food chain. Give two ways in which energy may be lost from the food chain.

1. _____
2. _____



Task 2. Scientists investigated a food chain in a wheat field immediately after the wheat had been harvested. Red kites are birds of prey.

(A) The food chain for the wheat field is:



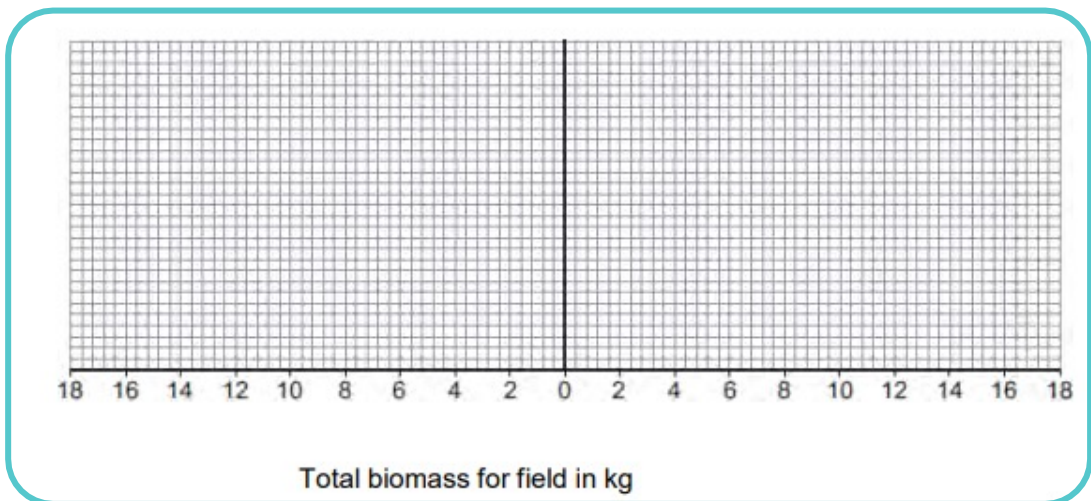
What is the source of energy for the food chain?

(B) The table shows the data the scientists collected.

Organism	Estimated number in the field	Biomass of one organism in kg	Total biomass for field in kg
Fallen wheat grains	40 000	0.0006	24.0
Red kites	2	1.0	----
Field mice	200	0.04	----

(i) Complete the table by calculating the total biomass of red kites and of field mice. Write your answers in the table.

(ii) Use data from your completed table to draw a pyramid of biomass for the food chain shown in the table.



(C) The scientists could not find the exact number of organisms in the wheat field. Suggest two reasons why.

- _____
- _____