

GCSE Biology A (Gateway)

J247/04 Biology A B4-B6 and B7 (Higher Tier)

Question Set: 7

1

The rock pocket mouse is a small grey coloured mouse that lives in Mexico.



These mice are the main food for owls. Rattlesnakes also feed on these mice.

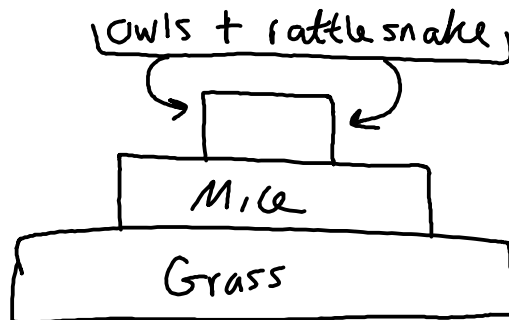
The mice get most of their food from grass plants and grass seeds.

- (a) (i) How many trophic levels are there in the feeding relationships described?

3

[1]

- (ii) Draw a labelled pyramid of biomass for these feeding relationships.



[2]

- (b) Scientists have been studying an area of Mexico that is covered with black rocks. Most of the rocks in other areas are grey.

The black rocks were formed about 1000 years ago when a volcano erupted.

They found that most of the mice that lived on this rock were black in colour.

- (i) Explain how the population of mice in this area became mostly black.

The black colour is caused by mutation. The black mice are better camouflaged so are less likely to be eaten from predators. So they survive to reproduce and pass on the gene for black colour. [5]

- (ii) Changes to populations of mice, bacteria and insects can happen over fairly short time periods.

Explain why changes to species such as humans take much longer.

Humans reproduce more slowly and go through less generations in a certain time -

[2]

Total Marks for Question Set 7: 10

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