



Please write clearly, in block capitals.

Centre number

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Candidate number

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Surname

Forename(s)

Candidate signature

ELC SCIENCE 5960

Externally-Set Assignment

Component 2 - Biology: Environment, evolution and inheritance

Marks

Date of Exam

Time allowed: 45 minutes

Materials

For this paper you must have:

- a ruler

Instructions

- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the bottom of this page.
- Answer **all** questions in the spaces provided.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- There are 20 marks available on this paper.
- The marks for questions are shown in brackets.

Answer **all** questions in the spaces provided.

1. (a) Use the correct answers from the box to complete these sentences.

consumer digestion herbivore photosynthesis producer

A food chain always starts with a, an organism that makes food.

This is usually a green plant, because plants can make their own food
by

[2 marks]
Outcome 1

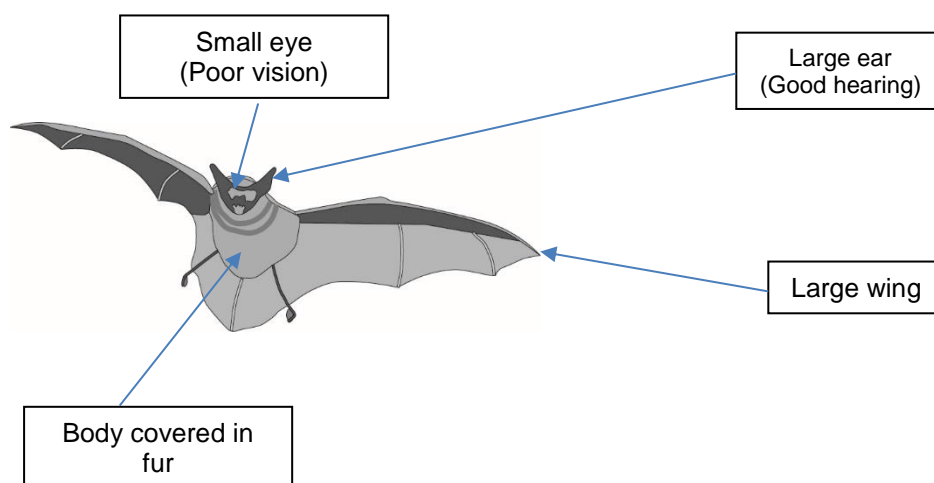
- (b) Write these organisms into the correct boxes below, to form a simple food chain.

fox **dandelion** **rabbit**



[1 mark]
Outcome 3

2. Bats are adapted to feed on insects which fly at night.



Which adaptation helps bats to catch insects?

[1 mark]
Outcome 2

Tick (✓) **one** box.

Large ears

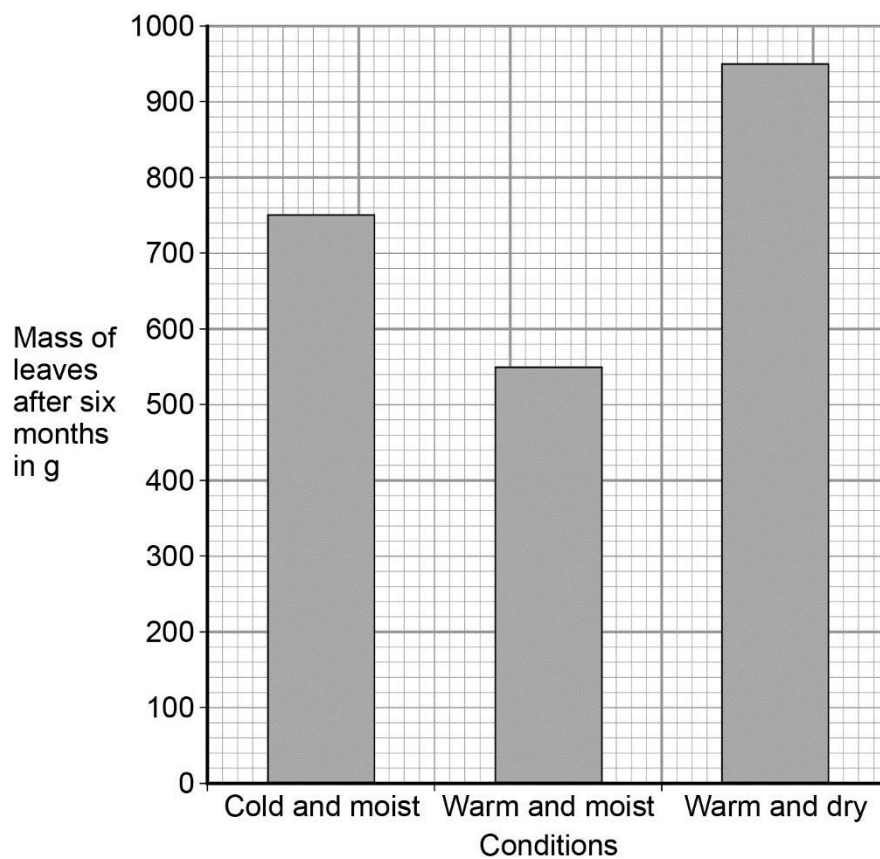
Body covered in fur

Small eyes

Turn over for the next question

3. Sophie did an investigation using dead leaves.

She left 1 kg (1000 g) of dead leaves in three different conditions for six months.



(a) In which conditions did decomposition happen fastest?

[1 mark]

Tick (✓) **one** box.

Warm and moist conditions

Cold and moist conditions

Warm and dry conditions

(b) Complete this sentence.

The decay of dead plants and animals by microorganisms returns carbon to the atmosphere as a gas called

[1 mark]
Outcome 4

4. Animals and plants compete for many things.

Draw **one** line from each example of competition to the resource competed for.

We have done one to help you.

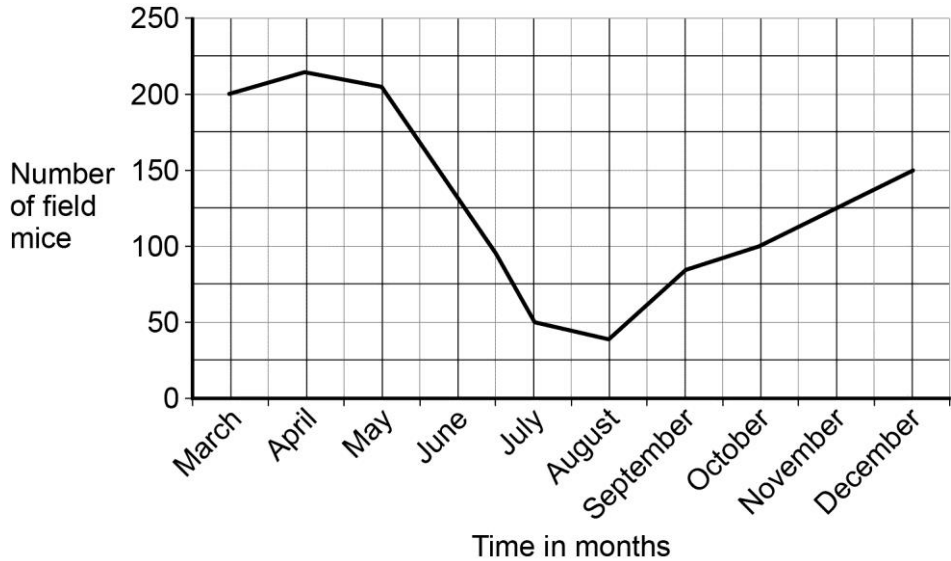
[3 marks]
Outcome 5

Example of competition	Resource competed for
In deserts, cacti with very long roots grow but plants with short roots die.	food
Some sea birds cannot find a nest site on a crowded cliff.	water
In a large family of piglets, the smaller ones do not grow as well as the larger ones.	light
Trees which are planted very close together will grow very tall.	territory

Turn over for the next question

5. Predators, such as hawks, are animals which hunt other animals such as mice, for food. Some birds come to Britain to breed in the summer.

Use the graph below to answer the questions.



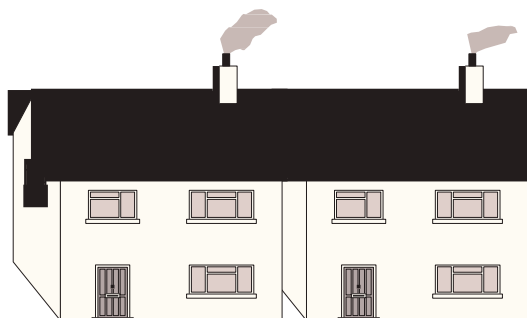
(a) When were most field mice eaten? [1 mark]

(b) How many more mice were there in December than July? [1 mark]

(c) How does the graph show that the hawks are summer visitors? [1 mark]
Outcome 6

.....
.....

6. Fifty years ago, most houses had coal fires.



Use the correct answers from the box to complete the sentences.

[2 marks]
Outcome 7

acid

air

dirty

oxygen

rivers

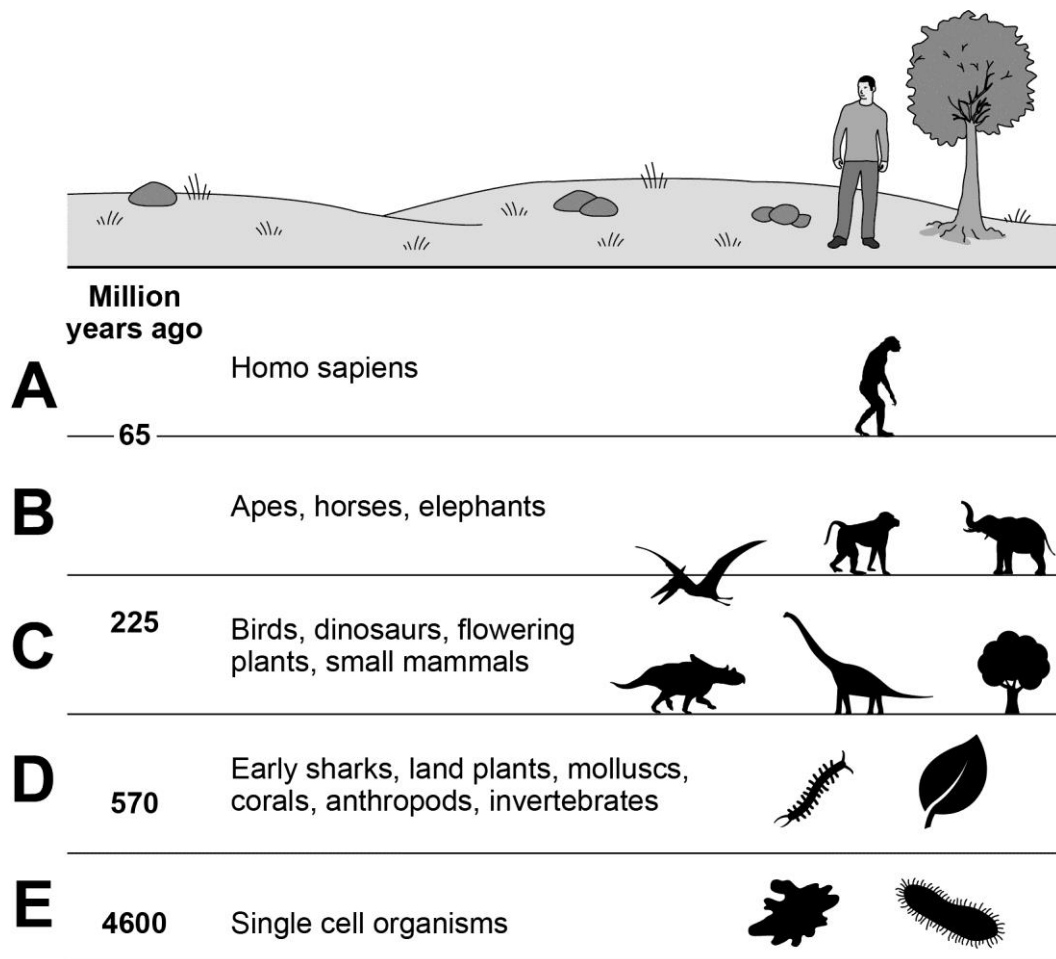
sea

The coal fires gave off smoke which polluted the

Burning coal also made gases which dissolved to form rain.

Turn over for the next question

7. Fossil remains are found in sedimentary rocks of different ages.



(a) In which layer **A – E** are fossils of the simplest life forms found?

[1 mark]

(b) Complete this sentence.

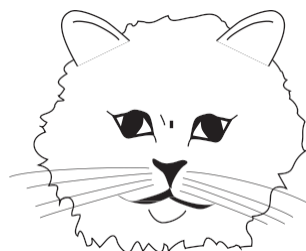
A study of fossils gives evidence for the theory of

[1 mark]
Outcome 8

8. Different sorts of cats can breed with each other.



Father
Long hair, black colour,
long pointed ears



Mother
Short hair, white colour,
short rounded ears



Kitten
Short hair, white colour
long pointed ears

- (a) Which **two** characteristics did the kitten inherit from its mother?

..... and

[1 mark]
Outcome 9

The cells in the kitten's body contain information that came from both its mother and its father.

[2 marks]
Outcome 10

Use the correct answers from the box to complete the sentence.

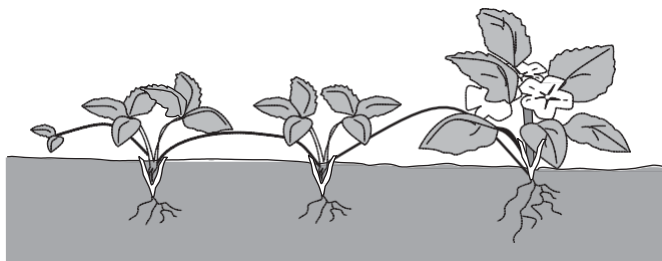
chromosomes	clones	eggs	genes	glands	nucleus
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Information is passed from parent to offspring by DNA. The DNA is contained in
..... which are found in the of a cell.

Turn over

9. Strawberry plants can reproduce **asexually** or **sexually**.

Tom grows strawberry plants in his garden.



Use the correct answer from the box to complete the sentence.

[1 mark]
Outcome 9

flower

runner

seed

Tom knows that this plant can reproduce by **asexual** reproduction because

he can see that there is a

END OF QUESTIONS