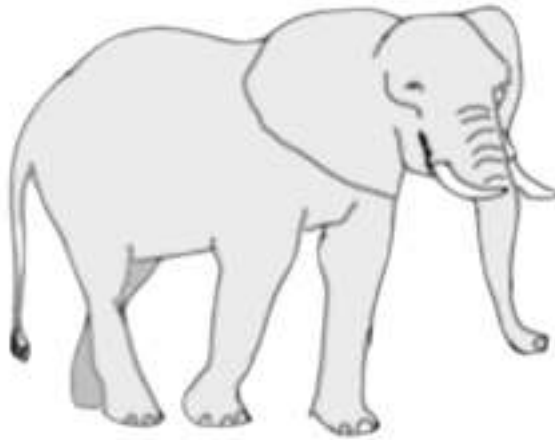


0	1
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The diagram shows an African elephant.



Here is some information about the African elephant.

- * It uses its trunk to reach for vegetation and suck up water for drinking and bathing.
- * It has large ears, which give off heat and help keep it cool.
- * It has tusks for foraging, digging, stripping bark off trees.

0	1
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1

Use Lamarck's theory for how the African elephant evolved its trunk.

[3 marks]

A change in environment or reaching for food or stretching or holding water led to more use of the trunk [1]

The extra use led to increased size or length of the trunk during lifetime [1]

This longer trunk was passed to offspring [1]

0	1
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2

Darwin suggested a different theory for the evolution of characteristics.

Give an outline of Darwin's theory of the evolution of characteristics.

Use the example of the development of elephant's ears.

[4 marks]

Individuals in an elephant population show variation in ear size [1]
due to a mutation [1]

larger ear sizes are better for staying cool [1]

those with larger ears are more likely to survive [1]

genes/DNA for larger ear size are passed onto offspring [1]

0	1	.	3
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There is a large amount of evidence that supports the theory of evolution.

However, scientists are uncertain about how life started on Earth.

Explain why.

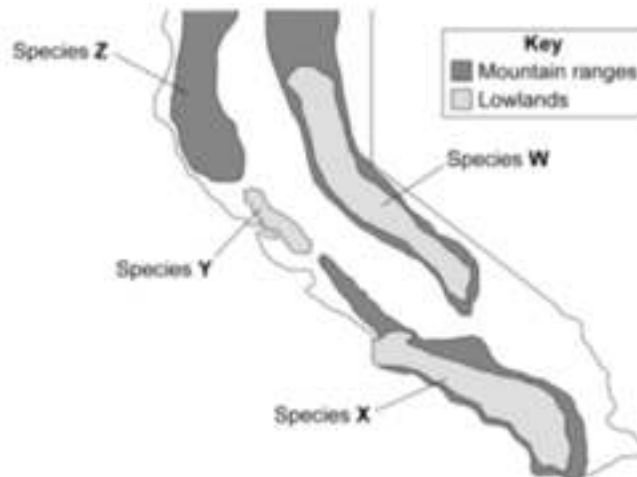
[2 marks]

There is a lack of valid / reliable evidence [1 mark]

Because the early organisms were soft bodied or because remains were destroyed [1 mark]

0	1	.	4
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Salamanders are amphibians (live in water and on land). The diagram show the distribution of four different species of salamander in a country.



Originally, there was only one species of salamander in the country.

Suggest an explanation for the development of the four different species

[5 marks]

Populations of salamanders became isolated / separated [1 mark]
by areas between mountains [1 mark]

There was genetic variation in these isolated communities [1 mark] Natural selection acted differently on these isolated communities [1 mark]

Eventually resulting in interbreeding being no longer possible and so new species have been formed [1 mark]