

Name:

Date:

Science Assessment Year 6: Evolution and Inheritance



Evolution and Fossils

1. Explain what evolution means.

.....

1 mark

2. Explain what a fossil is.

.....

1 mark

3. On average, how long does it take to make a fossil? Circle **one**.

100 years

1,000,000 years

10,000 years

1000 years

1 mark

4. Describe one way in which an animal or insect's body can be preserved in the fossilisation process.

.....

1 mark

5. How can we use fossils as evidence of evolution?

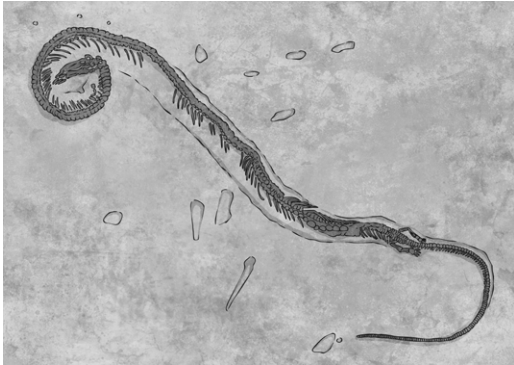
.....

1 mark

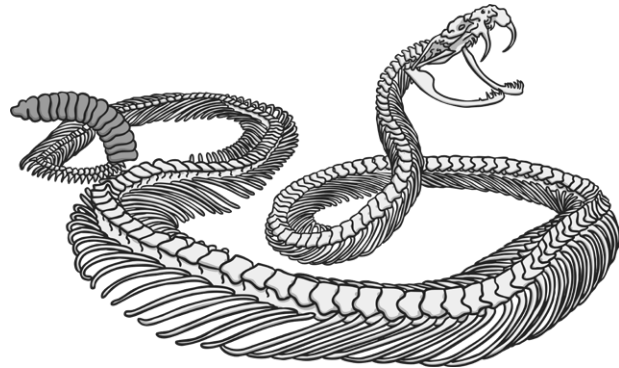
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6. Compare the snake fossil with the snake skeleton and write down one similarity and one difference you can see between them.

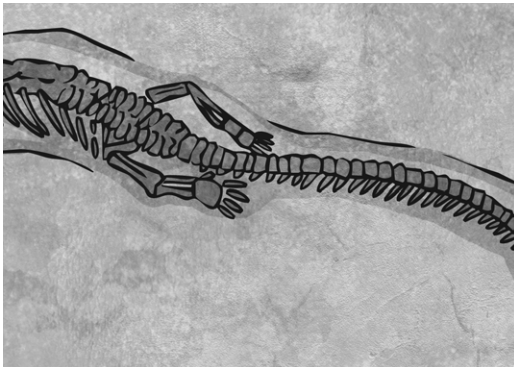
Early Snake Fossils



Modern Day Snake Skeleton



Close up of the back end:



Similarity:

.....

.....

.....

1 mark

Difference:

.....

.....

.....

1 mark

Total for this page

Inheritance

7. Explain what inheritance means.

1 mark

8. True or false?

Inherited characteristics are always physical?

1 mark

9. True or false?

A child gets half of its characteristics from its mother and the other half from its father.

1 mark

10. Explain why siblings who inherit the same characteristics from their parents are not identical to each other.

1 mark

Total for this page

11. Draw lines to sort these characteristics into inherited characteristics and acquired characteristics.

Characteristics
Eye colour
Roller skating
The ability to roll your tongue
Natural blonde hair
Reading books
Playing guitar

Type
Inherited
Acquired

3 marks



Adaptation

12. Explain what adaptation is.

.....

1 mark

13. Give one example of how an animal or plant has adapted to suit its environment.

.....

1 mark

Total for this page

14. Give two ways a penguin is suited to swimming under the water.

.....

1 mark

15. Explain how adaptation may lead to evolution.

.....

1 mark

Total for
this page

Answer Sheet: Science Assessment Year 6:

End of Unit Assessment



question	answer	marks	notes
1. Explain what evolution means.			
	<ul style="list-style-type: none"> The gradual change in characteristics of a species (animal or plant). 	1	
2. Explain what a fossil is.			
	<ul style="list-style-type: none"> The preserved remains of a plant or animal from when they existed thousands of years ago. 	1	
3. On average, how long does it take to make a fossil? Circle one.			
	<ul style="list-style-type: none"> 10,000 years 	1	
4. Describe one way in which an animal or insect's body can be preserved in the fossilisation process.			
	<ul style="list-style-type: none"> By ice By sap 	1	
5. How can we use fossils as evidence of evolution?			
	<ul style="list-style-type: none"> Comparing the same species/animal with a skeleton now To see how a skeleton has changed in a plant/animal compared with today 	1	
6. Compare the snake fossil with the snake skeleton and write down one similarity and one difference you can see between them.			
	<p>Similarities</p> <ul style="list-style-type: none"> Curved Long and thin Many vertebrae Skull similar Large jaw Thinner at the tail end <p>Differences:</p> <ul style="list-style-type: none"> The early snake fossil shows legs 	2	<p>1 mark for a correct similarity.</p> <p>1 mark for the correct difference.</p> <p>Do not accept a difference being less 'bones'/ ribs on the early fossil as this can be down to incomplete/damaged skeletons shown in fossils.</p>

question	answer	marks	notes										
7. Explain what inheritance means.													
	<ul style="list-style-type: none"> Characteristics passed (down) from parents (to offspring) Genetic information from parents to offspring 	1											
8. True or false? Inherited characteristics are always physical?													
	<ul style="list-style-type: none"> False 	1	1 mark for any two correct answers.										
9. True or false? A child gets half of its characteristics from its mother and the other half from its father.													
a	<ul style="list-style-type: none"> False 	1											
10. Explain why siblings who inherit the same characteristics from their parents are not identical to each other.													
	<ul style="list-style-type: none"> The inherited characteristics can combine in different ways which makes each child unique 	1											
11. Draw lines to sort these characteristics into inherited characteristics and acquired characteristics.													
	<table border="1"> <thead> <tr> <th>Characteristics</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>Eye colour</td> <td rowspan="3">Inherited</td> </tr> <tr> <td>Roller skating</td> </tr> <tr> <td>The ability to roll your tongue</td> </tr> <tr> <td>Natural blonde hair</td> <td rowspan="3">Acquired</td> </tr> <tr> <td>Reading books</td> </tr> <tr> <td>Playing guitar</td> </tr> </tbody> </table>	Characteristics	Type	Eye colour	Inherited	Roller skating	The ability to roll your tongue	Natural blonde hair	Acquired	Reading books	Playing guitar	3	0 marks for 0-1 correct 1 mark for 2-3 correct 2 marks for 4-5 correct 3 marks for all 6 correct
Characteristics	Type												
Eye colour	Inherited												
Roller skating													
The ability to roll your tongue													
Natural blonde hair	Acquired												
Reading books													
Playing guitar													

question	answer	marks	notes
12. Explain what adaptation is.			
	<ul style="list-style-type: none"> • The way in which living things change and adapt over time in order to survive in their environment. 	1	
13. Give one example of how an animal or plant has adapted to suit its environment.			
	Pupil's own response, such as: <ul style="list-style-type: none"> • Cacti adapted their leaves to conserve water in the desert • Polar bears have a layer of fat under their skin to keep them warm in the arctic and their fur is white so that they are camouflaged in the snow 	1	
14. Give two ways a penguin is suited to swimming under the water.			
	<ul style="list-style-type: none"> • It is a streamline shape • Smoothness • Pointy beak is streamlined • Flippers/webbed feet • Wings acting like fins • Solid bones allowing them to stay under water • Hold breathe for 22 minutes/ a long time • Muscles can hold extra oxygen to stay under water • Fat layers to keep warm in the water • Bending down to drink water is difficult • Drinking water makes them more vulnerable to predators 	1	1 mark for any two correct answers.
15. Explain how adaptation may lead to evolution.			
	<ul style="list-style-type: none"> • Living things have to adapt to survive in their environment and only the offspring that successfully adapts survives. Their offspring inherit the adaptations and so the species evolves over time. This is a process known as natural selection. 	1	