

1. According to the text, what does adaptation mean?

Adaptation is when a plant or an animal has changed in some way (over a long period of time) in order to better suit and survive in its environment.

2. Give two examples of adaptations a polar bear has made in order to survive in the wild.

Choose any two from the following:

- White fur (helps them to blend in with the ice and snow)
- Thick layer of fat under its skin (helps them to stay warm in cold temperatures)
- Small, round ears (helps them to maintain body heat and helps to avoid water going into their ears)
- Thick, rough paws (helps them get good traction on the slippery ice)

3. What do you think would happen if a polar bear was missing one of these adaptations?

Children give a plausible response, such as:

If a polar bear was missing one of these adaptations then it would make it weaker and less able to survive in its natural environment. It would die quicker than a full adapted polar bear as it would be less likely to be able to survive.

4. Look at the section headed: *Examples of adaptation*

Complete the table below with one piece of evidence from the article to support each statement.

	Evidence
Cacti are full of water	Large, thick stems (allows lots of water to be stored)
Polar bears can camouflage from predators	White fur (helps them to blend in with the ice and snow)

5. “With this theory, Darwin shocked religious Victorian Society by suggesting that animals and humans shared a common ancestry”

Why was society shocked? Tick the closest possible answer.

They were shocked that he thought humans were related to animals

They thought they were superior to animals, not related

They were religious and followed the teachings of the church, which are not influenced by science

6. Look at the section headed: *Natural selection: A Case Study*

What does ‘favoured’ mean in the following example from the text – “resting on their favoured lichen-covered tree trunks”?

Children give a response similar to:

It is the tree that they most like / most prefer / more enjoy / love the most

7. Which section of the text is written to inform readers what natural selection is?

Write the name of the section:

What does natural selection mean?

8. Look at the section headed: *Natural selection: A Case Study*

Find and copy one word that tells the reader peppered moths were more likely to be harmed/killed by predators.

susceptible

9. Why did the dark coloured moths survive better than the peppered moths?

The dark coloured moths were better suited to their environment as they could camouflage more easily on the soot covered trees.



10. Look at the section headed: *What is evolution?*

How do we know that not everyone in society believes that humans have evolved from apes?
Find and copy the phrase that tells us.

It says 'some scientists believe'

Also accept:

'Evolution is a theory'

11. Look at the section header: *What is inheritance?*

Summarise how genetics are significant in family history.

Children's responses are similar:

- Parents pass on similar characteristics through their genes
- Through our genes, we pass on DNA which helps to make up our own genetic identity
- Parents pass their genetic identity onto their offspring

12. Look at the whole text. Using information from the text, tick one box in each row to show whether each statement is true or false.

	True	False
Charles Darwin was a natural scientist	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Species are eliminated from the ecosystem by adapting to their environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Only humans create similar offspring	<input type="checkbox"/>	<input checked="" type="checkbox"/>

