

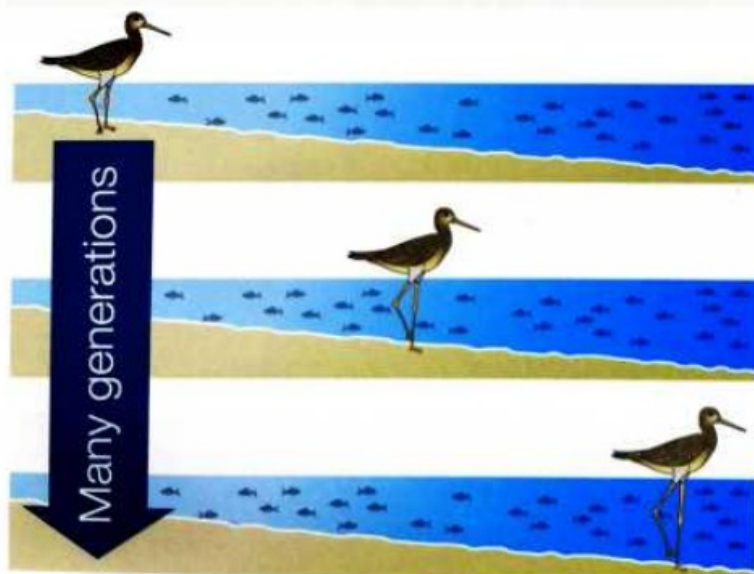
9Ae NATURAL SELECTION

1 What causes inherited variation? Genes

2 Many times a year, a certain river suddenly floods. Over many years, a species of lizard living by the river evolved longer legs. Darwin might have explained this using the sentences below. Number them in their correct order.

- 4 In the next generation, more of the lizards have longer legs.
- 3 The surviving lizards produce offspring that also have longer legs.
- 2 The lizards with slightly longer legs are more likely to survive the flood.
- 5 This process of natural selection repeats over and over again.
- 1 When the river floods, the lizards with slightly longer legs run faster.

3 Charles Darwin and Jean-Baptiste Lamarck developed theories of evolution. The diagram shows the evolution of long legs in some birds over many years.



Lamarck would say: Birds that could wade into deeper water could get more fish. When there were fewer fish in the lake, the birds stretched their legs a bit. This allowed them to go deeper. They passed their longer legs onto their offspring. Their offspring also stretched their legs a bit. Over time, the birds' legs got longer and longer.

Discuss in your groups how Darwin would explain this. Then write down your agreed explanation.

Darwin would say: 1. Some birds naturally have longer legs
2. When there are fewer fish in the lake, those birds get more of the fish and so are more likely to survive
3. Their offspring also have longer legs
4. So, in the next generation, more of the birds have longer legs. 5. This process of natural selection repeats over and over again.