

# Charles Darwin

## The Evolution of an Idea

Charles Darwin was born in 1808 and grew up in Shrewsbury, Shropshire. He was a shy student at school, but went on to become one of the most famous scientists in history. Darwin studied at the University of Cambridge and was interested in **ENTOMOLOGY**, the study of insects.

He went on a journey around the world aboard the *HMS Beagle* where he learnt about fossils and **GEOLOGY** (the study of rocks) but most importantly he looked at how living things adapt, or change, to survive, helping him to form his theory of **EVOLUTION**.

**FACT!**

### SURVIVAL OF THE FITTEST

This means that the animals and plants that have the best suited characteristics for their habitats will survive. BUT, this was not Darwin's phrase—it was said by another scientist called Herbert Spencer, after reading about Darwin's work.

### What did DARWIN do?

Darwin came up with the 'theory of evolution by natural selection'. Other scientists at the time had also been thinking about evolution but Darwin's theory looked closely at natural selection.

### NATURAL SELECTION

An animal or plant will change over generations to fit in with any changes in its environment. They pass on their strengths to their young, like being faster, more camouflaged or having long, strong arms for climbing like this **orang utan**, so that the young will survive.



### Salty Sneezers

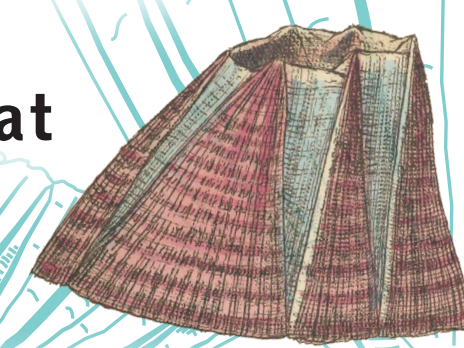
Darwin studied marine iguanas on the Galápagos Islands. They are the only sea-dwelling lizards in the world.

**WHY?** They feed on algae found on the rocks and in the water, so over time have developed the ability to swim underwater in order to get to their food. Only the largest marine iguanas will dive deep for food as the water is so cold—smaller iguanas might lose too much heat in the cold water and die. Drinking salt water can hurt them, so they have evolved special glands that shoot the salt out of their nostrils. **So don't get too close!**



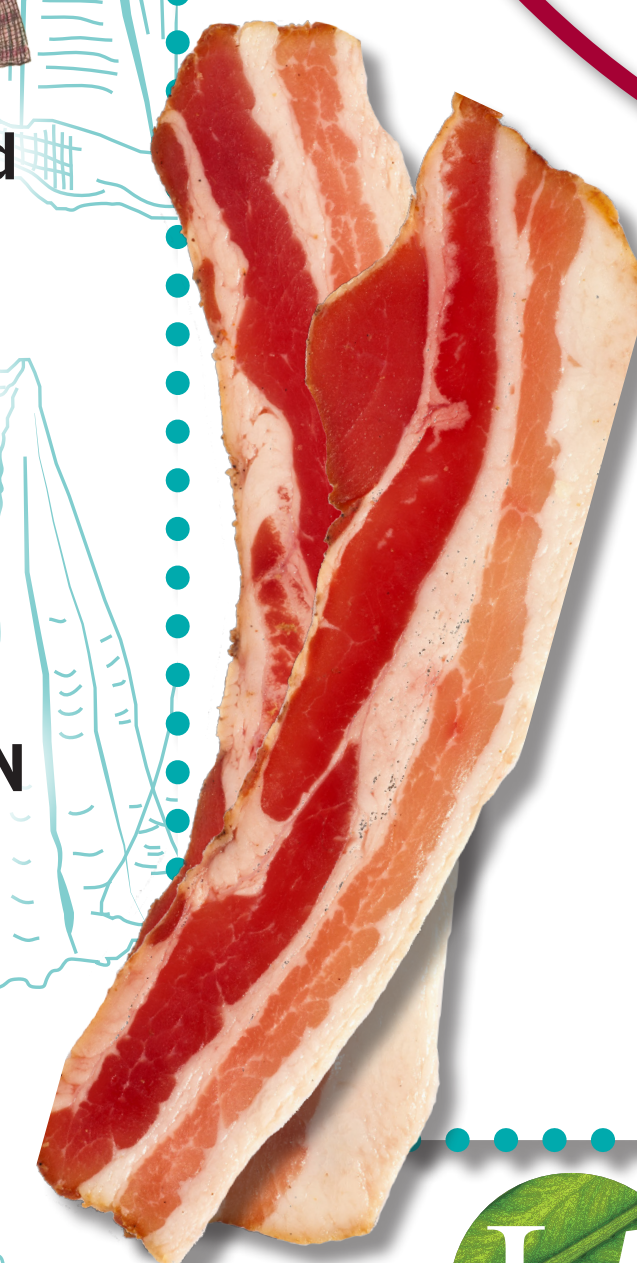
## DARWIN'S DIGITS!

- 5** Years Darwin spent travelling the world on the *HMS Beagle*
- 8** Number of years that Darwin studied barnacles
- 10** Number of children Darwin had with his wife Emma
- 15** Number of years Darwin spent working on his theory of evolution by natural selection
- 1,250** Copies of Darwin's book **ON THE ORIGIN OF SPECIES** printed in November 1859
- 1** Number of days it took for Darwin's book to sell out



### Achin' for BACON!

Darwin did a lot of his work in his garden at Down House in Kent. One of his experiments looked at carnivorous plants—plants that eat insects. To test what a **Drosera** liked to eat, he fed it:



Darwin realised that carnivorous plants get **NITRATES** from the insects—plants need these to grow. Carnivorous plants grow in places where there aren't many **NITRATES** in the soil, so they have evolved a way to get them from somewhere else—the insects they attract.



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