

INTRODUCTION

The world around us is full of life – and not just in nature reserves and national parks. There are plants, animals and all kinds of living things right in your town or city. They live in your back garden, in your house and even *inside you!*

Many of us take care of potted plants and share our homes with pets, while some people are lucky to live in a jungle or forest or next to a body of water where a wide variety of animals and plants also live.

No matter where you call home, nature is there. You just have to look for it. **But how much do you really know about nature?**

We all know that prehistoric animals like dinosaurs roamed Earth before humans were around. They're all extinct. . . aren't they?



And everyone knows that plants, unlike animals, get all the energy they need from sunlight instead of food. . . right?

And we're familiar with animals like camels that have water-filled humps to survive desert journeys, penguins that are all cold-weather birds and little lemmings that are rodents that run off the edges of cliffs. . . aren't we?

OH NO THEY AREN'T!

In fact, quite a lot of what you think you know about all creatures great and small turns out to be false!



READ ON to encounter **critters** so small you'll need a microscope to see them, living things that inhabited our planet millions and millions of years before people, and familiar organisms from **whales and cows to vegetables and fruits, birds and bugs to flowers and mushrooms.**

NATURE AHEAD

PREHISTORIC LIFE

THE FIRST CREATURES

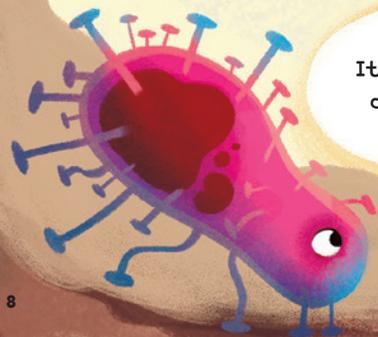
Life first appeared on Earth about 3.8 billion years ago, but it didn't look like you or me. Humans are made of trillions of cells, but the first living organisms had just one cell each. They were so tiny you would have needed a microscope to see them. They were a lot like single-celled creatures called bacteria, which are still around today. Like humans, bacteria and their ancestors are organisms that breathe oxygen and prefer temperatures that aren't too hot or too cold. . . aren't they?

OH NO THEY AREN'T!

Early life forms such as **bacteria** lived on an Earth that looked very different. There was no oxygen, and it was a lot hotter than it is today. Massive storms and volcanic eruptions were frequent.

Just like their ancient ancestors, many bacteria today make their homes in extreme habitats such as freezing glaciers and superheated hot springs – places where most animals and plants would never consider living. I suppose home is where the heart is!

It's a balmy 75 degrees out!



Life on Earth stayed in the sea for billions of years. The first living things to make a home on dry land were early plants and bug-like animals. . . weren't they?

OH NO THEY WEREN'T

The first life forms to leave the ancient seas were – once again – single-celled organisms like bacteria, as well as plant-like **algae**. Plants were the first living things made up of more than one cell to make it on to land. Plants were followed by the ancestors of modern insects, spiders, millipedes and other creepy-crawly critters that would, over time, grow to the size of small dogs and have wingspans larger than many modern birds!



ANCIENT SEAS

The ancient seas swarmed with all sorts of fish-like creatures.

Did you know that some of the first fish were built like tanks? Many had armour-like plates on their bodies to protect them from predators. And for good reason! Predators like the formidable **Dunkleosteus** were monsters of the sea, possibly up to 10 meters (33 feet) long.



Still a champion chomper!

Dunkleosteus had razor-sharp teeth that sliced prey into chunks for easier swallowing and, although it lived over 350 million years ago, its jaws are still among the strongest of any animal!

Giant armoured fish shared the seas with much-smaller animals such as trilobites. These bug-like creatures looked a bit like modern woodlice. But because all trilobites became extinct – or died out – about 250 million years ago, they didn't make much of an impact on prehistoric Earth. . . did they?

OH YES THEY DID!

Trilobites lived on Earth for nearly 300 million years. That's nearly 1,000 times longer than our human species, who have only clocked up about 300,000 years so far! During their long time in the ancient seas, trilobites evolved into 20,000 different species, ranging from tiny bean-sized critters to others that were as big as a domestic cat. Many had elaborate spines, movable antennae and fancy tails.



Trilobites for dinner, again?

You'll have to wait over 250 million years if you want chicken.



Predators like **Anomalocaris** relied on trilobites for food – and larger trilobites were often predators themselves. Trilobites also had important jobs as scavengers. They searched the seafloor for any edible bits that fell from above, including the poo of other animals. *Bon appétit!*