

History of Life on Earth



Life on Earth is 3,500 million years old today... well, more or less. Living things have certainly been around on our planet for a very long time. But now life is in trouble, and the reason I'm afraid is you people. I'll come to that in a moment but first, a quick history of Life on Earth.....

Early life on Earth was very simple - just tiny blobby things called [bacteria](#).



LIFE STARTED WITH TINY BLOBBY THINGS



Then algae start to appear.....

After a while, slightly different green blobby things called [algae](#) began to appear.

These had '[learned](#)' one very special thing: [how to use the sun to make food](#). This was to be the most important development ever for future life on the planet. These tiny green blobs were the first simple plants.

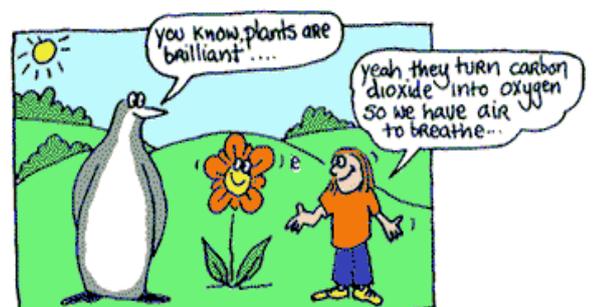
And without plants, no animals could exist. If you were to hop into a time machine and go back 3500 million years, you'd quickly die for two reasons: the air you breathed would be poisonous and there would be no food.



These clever algae WERE the first plants..

[So why isn't the air we breathe today poisonous?](#)

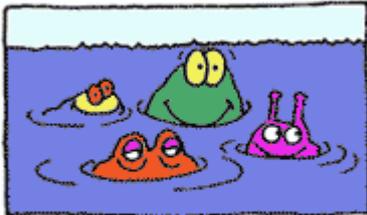
[Changing the air](#) - Part of the 'food' of all plants is a gas that is poisonous to us animals called carbon dioxide. They slurp this up, along with water and sunlight, to make



sugars by a very clever process called photosynthesis. And in doing this, they make what to them is a waste gas called oxygen. I'll bet you know that no animal can live without it. So you see how important these little plants were then and still are today.

The wonderful web of life

Animals began to appear on the planet in a big way about 530 million years ago, All crawling, burrowing or swimming creatures that lived in the sea.

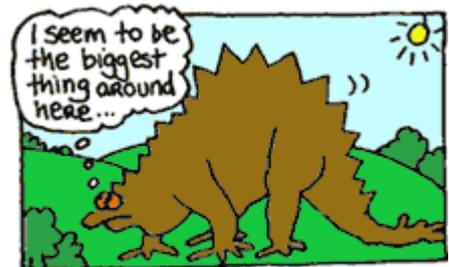


530 million years ago most creatures lived in the sea....



A little after this, plants began to grow on the land instead of just in the sea... and were quickly followed by **animals** which wanted to **eat them**.

Then came the dinosaurs...
...and I'm sure you know all about those!



Then the dinosaurs came.... and went.....

Later came penguins, polar bears and, at the very last-minute (just 100,000 years ago), **people**.

And right from the start, humans began damaging other life and the planet



Then penguins and polar bears

by **using fire carelessly** and **over-hunting**.

Modern people are just beginning to understand a little about the web of life and the vital importance of biodiversity. They are beginning to realise that they have damaged it badly and, most importantly, that they depend upon it too. People are animals too, like penguins and porcupines.

Big bangs and mega-deaths

Have you heard about mass extinctions? Probably not...

...but because of people doing so much damage to the planet and to the web of



life, lots of animals and plants are dying out completely. That's what extinction is. And once a creature is extinct, that's it. There are no second chances. It's gone for ever.

But there's nothing new about mass

extinctions. Ninety nine percent of all the different types of life - called **species** - which have ever lived, are now extinct. What is completely new is that this is the first extinction caused by people and their wasteful and polluting ways.



All the other extinctions in Earth's long history seem to have been caused by violent natural events. The best known of these was the final extinction of the dinosaurs about 66 million years ago.

Less well-known but much worse was a mysterious mega-extinction that happened about 250 million years ago. This was so bad that it destroyed around 96% (96 out of every hundred) of all species of life on the planet.

Understanding mass extinction shows that the global life system is delicate. If it's messed up, it could mean the complete collapse of the life-support systems we all depend upon.



The important lesson to learn from mass extinctions is that they hit complex life hardest. It's things like **bacteria** and **rats** and **cockroaches** that survive -- not people or penguins. You have been warned!