

## TIMELINE (OF EVERYTHING)

### BANG!!!

13.8-4.6 billion years ago

The Universe unfolds, expanding from a single point in space from dark and gloom, including our own Milky Way.

Page 4



### OUR HOME IN SPACE

4.6 billion years ago

The Sun and the planets, including our own Earth, are formed and the Solar System takes shape.

Page 6

### THE EARLY EARTH

4.5-4 billion years ago

Early Earth evolves from a hot, rocky, uninhabitable planet into something capable of supporting life.

Page 8



### LAND INVASION

500-250 million years ago

Life moves out of the water and takes its first steps on dry land.

Page 12



### RISE OF THE MAMMALS

60-6 million years ago

Following the extinction of the dinosaurs, plant and animal life recovers and mammals begin their takeover.

Page 16



### LIFE BEGINS

4 billion-500 million years ago

From the very first simple cells to the arrival of fish, early evolution leads to life on Earth.

Page 10



### THE DINOSAUR AGE

250-60 million years ago

Giants reign on the only land on earth but also rule the skies and seas.

Page 14

### THE FIRST HUMANS

6 million-12 thousand years ago

Our human ancestors evolve alongside other apes, spreading around the globe and establishing new ways of living.

Page 18



### CITIES, CIVILIZATIONS AND EMPIRES

4,000 BCE-500 CE

Early societies become more sophisticated, with world-changing inventions and the outbreak of powerful global empires.

Page 22



### INDUSTRIAL REVOLUTION

1700-1840s

British industrialization sparks worldwide, changing the way people live forever.

Page 26



### THE MODERN AGE

1940-the present day

Technological innovations shape both the world we live in and the future that we face.

Page 30



### SETTLING DOWN

12-6 thousand years ago

People put down roots, building early settlements and beginning to farm crops and breed animals.

Page 20



### SCIENCE, ART AND DISCOVERY

500-1600s

An age of exploration and invention, when adventurers travel the art and science flourishes around the world.

Page 24



### TECHNOLOGY

1840s-1940s

Newly revolutionized industry gives rise to a century of innovation, from renewed flight to telecommunications and computing.

Page 28



## THE EARLY EARTH

The Earth didn't start out as the lush blue and green planet we know today. For the first 500 million years of its existence, it had no plants, animals or other creatures. It was a barren, lifeless world. This period is called the Hadean (meaning Hell-like) era.

Like the other planets, the Earth began as matter flying around the newly formed Sun. The matter clumped and stuck together, and the bigger the clump grew, the more powerful its gravity became, sucking in more and more material and pulling the new planet into a sphere.

The young Earth was very hot. Inside it, heavy molten iron sank down into the very centre to become the core. Lighter rocky material formed the outer layer (or mantle). On the outside, rock began to cool into a solid crust. But then, just as the Earth had begun to take shape, a cataclysmic event changed the future of our planet...



**Earth's core**  
The iron in the hot liquid core sank to the middle, surrounded by a mantle, and finally a thin, solid crust.

### Crash!!!

A small planet called Theia, about the size of Mars, smashed into Earth 4.5 billion years ago. The energy of the impact melted and combined the two planets. A massive amount of rock flew off into space, eventually coming together to form Earth's Moon, which orbits at a distance of about 384,400 km.

### What was it like on early Earth?

Early Earth was no place for life to exist. It was hot, up to 300°C (600°F). The early atmosphere didn't block any of the Sun's powerful rays, and it contained hardly any oxygen, which animals need to breathe. Earth was also a dangerous place, with frequent eruptions. Thick the asteroids and comets that were flying around the early Solar System.

4.5 – 4 BILLION YEARS AGO

### Watery world

Today, water covers just over 70% of the Earth's surface. Where did all this water come from? Firstly, about 4.3 to 4 billion years ago, volcanoes poured out gases that included water vapour, and second, Earth was bombarded with many water-rich asteroids and comets. At first, Earth was so hot that the water stayed in gas, but, as the planet cooled, water began to condense into liquid, forming the first oceans.

### Crust and plates

4.4 billion years ago the Earth's crust was still the way it is today, with continents, mountains and sea. It was a thin layer of rock of only a few miles thick, and it was constantly breaking through it. Over millions of years the crust cooled and thickened. Hot molten rock, or magma, moved underneath it, helping to form the first tectonic plates – sections of crust that constantly shifted and reformed. These early plates were smaller than the huge tectonic plates the Earth has today.







# CITIES, CIVILIZATIONS AND EMPIRES

From about 6,000 years ago, early societies in some parts of the world became more advanced and complex. They built the first cities, and began to have kings and queens, armies and the first writing systems.

The earliest cities were probably in Sumer in ancient Mesopotamia (modern-day Iraq and Kuwait), one of the areas where farming began. Sumer's cities included Uruk, Ur and Eridu. At the heart of these cities were large buildings such as temples and palaces, which were surrounded by smaller homes, then farmland.

The oldest known city is the walled city of Jericho.

Trade routes with other cities began to form.

A road network and other ways were used to get to the city.

The layout of the city was based on a grid.

## History starts here!

Of course, Earth already had a long history. But, strictly speaking, history means records that are written down – and for that, you need writing. Writing began in Sumer about 5,500 years ago (in 3,500 BC), but was also invented separately in other places. The earliest writing systems used small symbols and pictures to stand for words.



**Sun**

Early Sumerians used this symbol to represent the sun.



**Water**

Early Sumerians used this symbol to represent water.



**Rain**

Early Sumerians used this symbol to represent rain.

## World-changing inventions

This was an age of all kinds of important inventions, and many of them are still around today.



The earliest wheel was made in about 3,500 BC, and was used for pottery wheels and chariots.



People probably first used the basic plow to turn over soil in their fields. In about 3,000 BC, farmers began using the wooden plow to turn over soil.



The first coin was brought from Persia, made of silver, to which is now Turkey, in about 600 BC.



The first paper appeared in China, and was made from bark of a tree and was used for writing.

4,000 BCE – 500 CE

## Power and control

Cities and their leaders often controlled large surrounding areas, and a big city needed a powerful ruler, so the first kings and queens who ruled from the cities. About 4,300 years ago (in 2,000 BC), King Sargon of Akkad became one of the first leaders to keep a full-time military. The world's first empires were built, including other cities, which became the Akkadian empire. Akkads grew fastest around the world, growing, shrinking or being taken over or destroyed often.



### Ancient Egypt

At its peak, the Egyptian Empire, there is Egypt, Egypt became a mighty power because of her great cities, and its people were talented in building, writing and mathematics too.



### The Minoans

The Minoans were the first to build a city with a palace in the center. They were skilled sailors and were thought to have built the first city of Crete.



### Shang Dynasty

The Shang was the first Chinese dynasty. They were the first to use a written language, and they were skilled in writing.

### The Olmecs

The Olmecs were the first to use a written language. They were the first to use a written language, and they were skilled in writing.



### Ancient Rome

The Romans were the first to build a city with a palace in the center. They were skilled in building, writing and mathematics too.

