The Big Bang Theory

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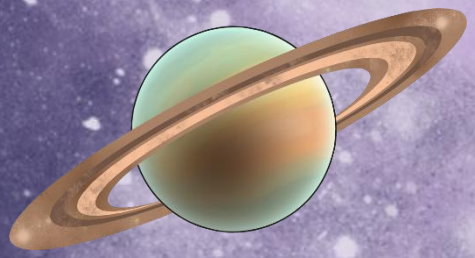
How Did the Universe Begin?

What is the Universe?

The Universe is defined as...

"...everything we can touch, feel, sense, measure or detect. It includes living things, planets, stars, galaxies, dust clouds, light, and even time. Before the birth of the Universe, time, space and matter did not exist."

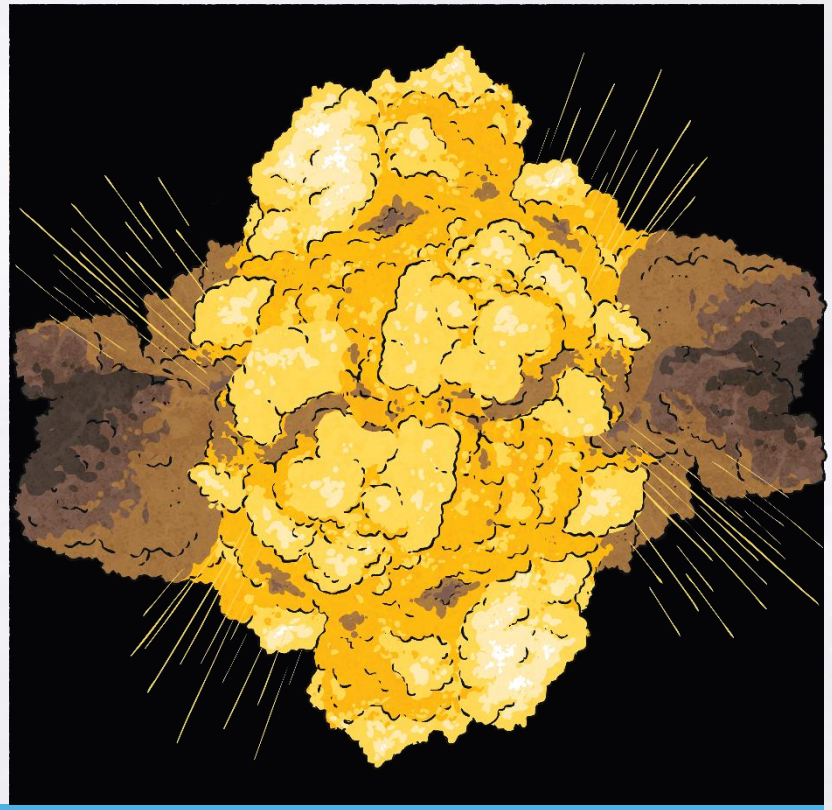


Most scientists and astronomers believe that the universe began with a big bang (a hot explosion).

The Big Bang

Before the Big Bang, the universe was inside a bubble that was smaller than a pinhead.

When the universe exploded (Big Bang), nearly 14 billion years ago, it created time, space and galaxies.



Galaxy: A galaxy is a made up of billions of dust, gas and stars gathered together. Each galaxy is held together by gravity.

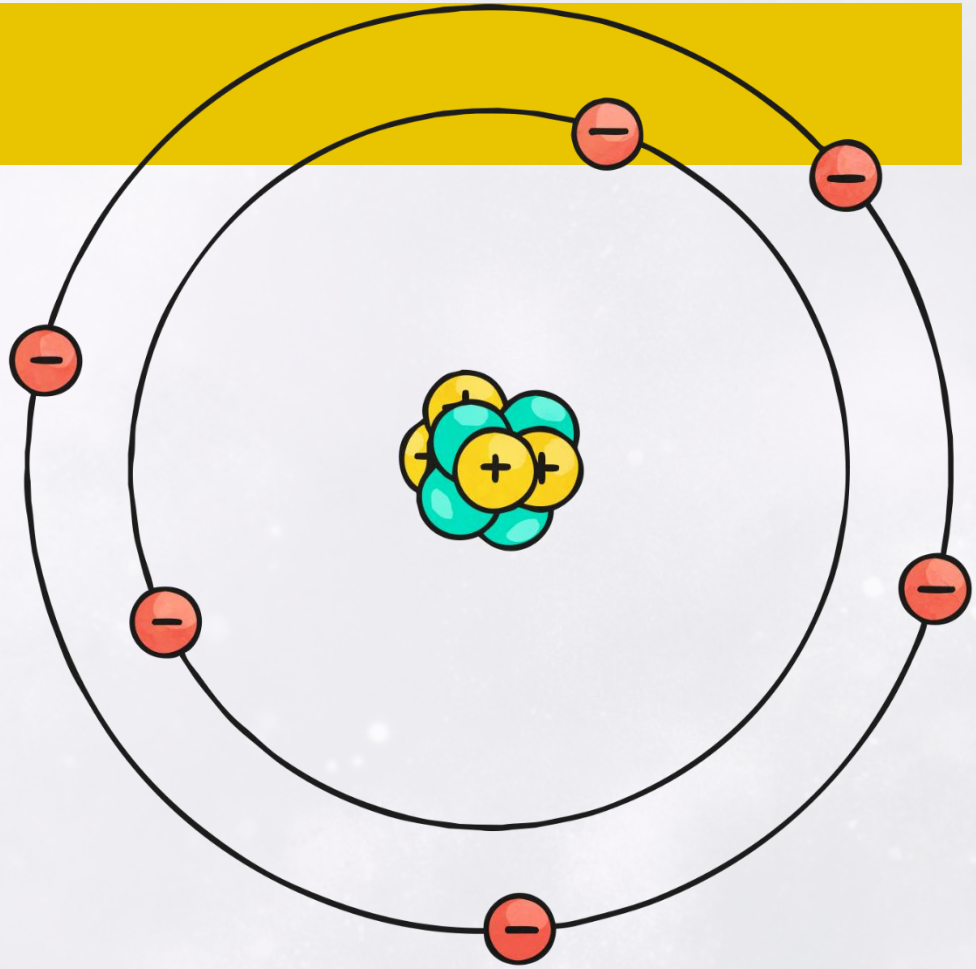
After the Big Bang

Seconds after the Big Bang, particles began to form.

A particle is a tiny amount of matter.

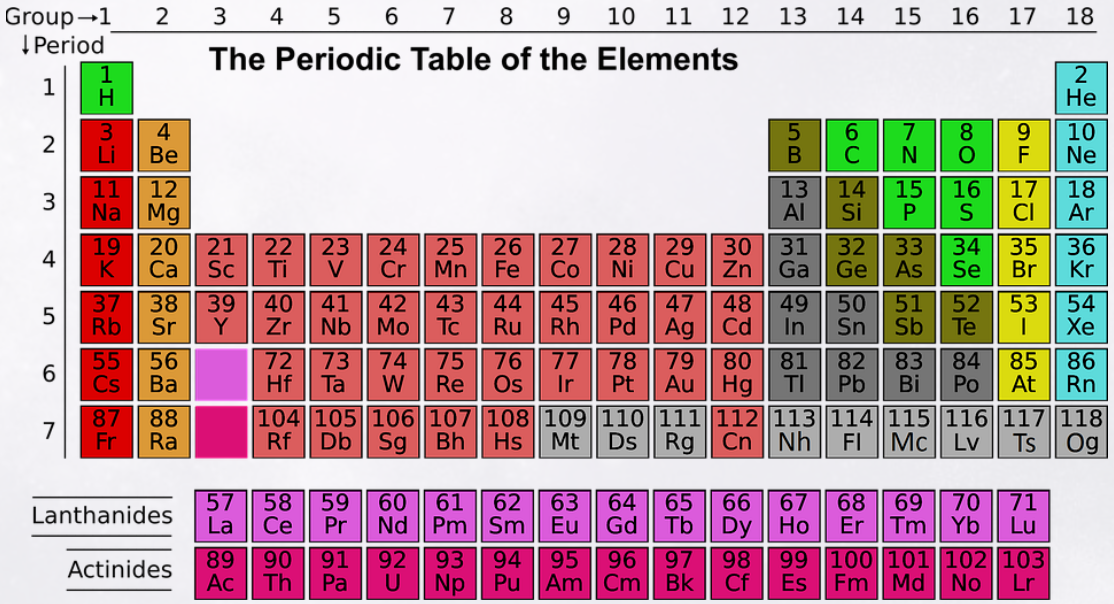
These were called protons and neutrons.

The protons and neutrons began to join to make simple chemical elements.



300 000 Years Later

Years later, the universe had cooled down after the Big Bang and was cool enough for more chemical elements to form.



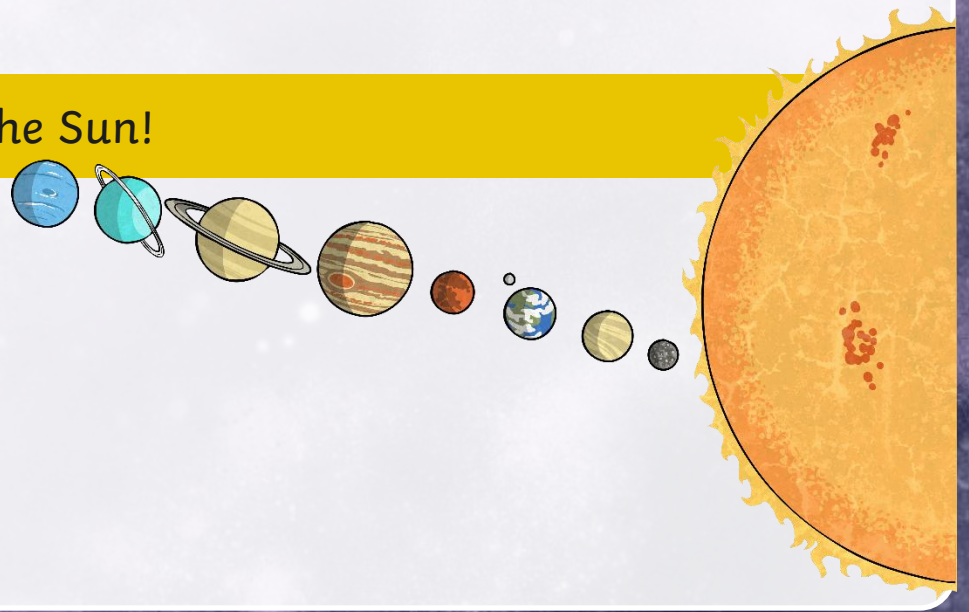
The first stars also began to form.

10 Billion Years Later

Our solar system and the Sun were formed.

The Earth was formed by rocks colliding and merging with one another.
The impact of the rocks colliding created an incredible amount of heat.
Radioactive material was delivered to the Earth as well.
When the outer layer of the Earth cooled, this radioactive heat was trapped inside.

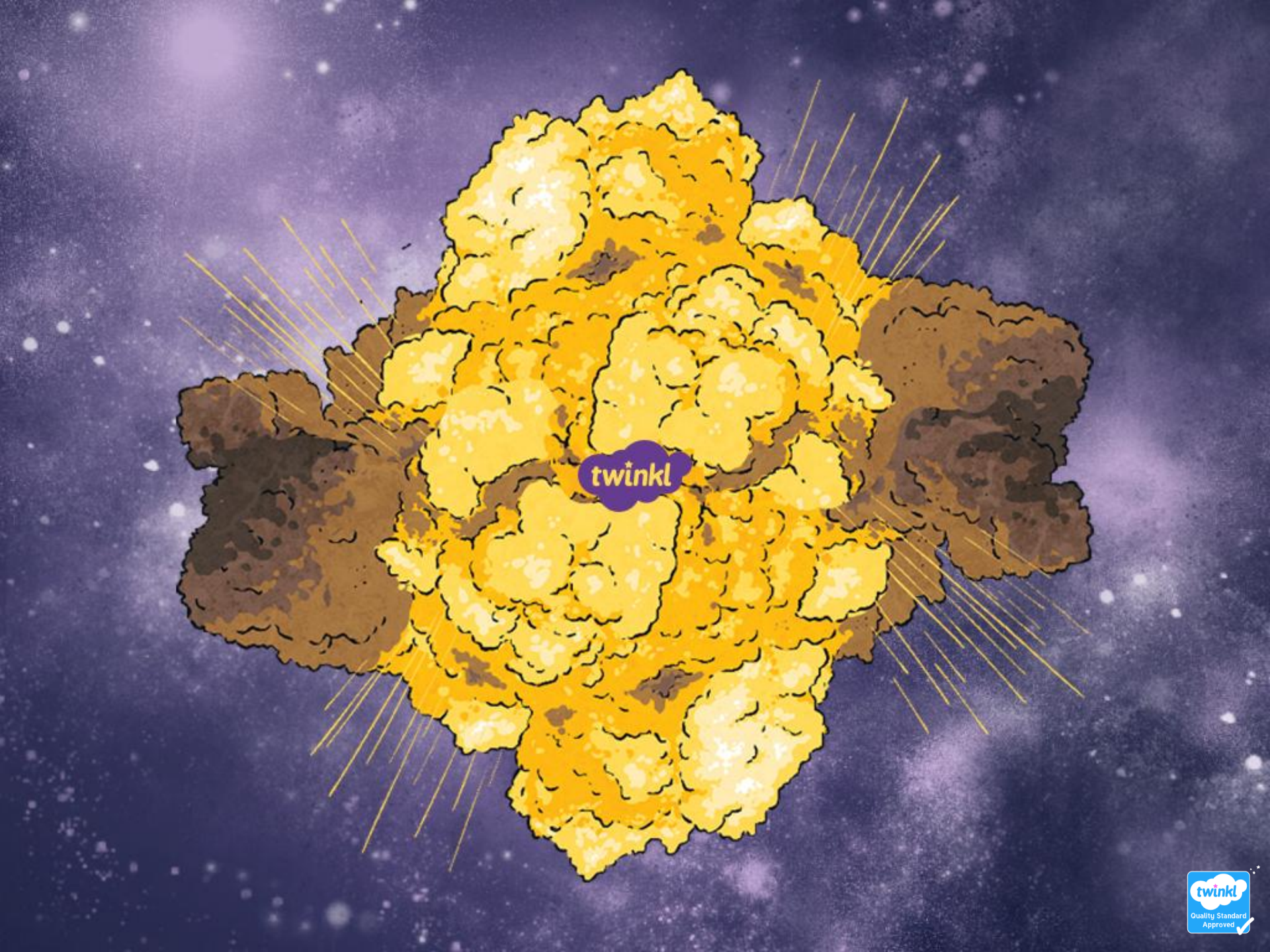
The Earth's core is as warm as the Sun!



Evidence for the Big Bang Theory

The Big Bang Theory is now widely accepted by the scientific community but at one point there was a lack of evidence to back this up.

One big piece of evidence to support the Big Bang theory is that galaxies and stars are now moving further away from us. This supports the idea that the Universe was once trapped inside a tiny bubble.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