



Image: ESA

EARTH FACT FILE

The Earth is the **third planet** from the Sun. It is the only place within the Solar System, that we know of, that can **sustain life**, although most scientists agree that to assume it is the only place in the Universe that life exists would be presumptuous.

One of the reasons that life exists here is that the Earth is **just the right distance from the Sun** and **just the right size** to be able to maintain an atmosphere of reasonable thickness and has **liquid water on the surface**.

The Earth, its ecosystems and the impact we have on them is a complicated subject that we are trying hard to understand. Satellite technology has helped immensely with this. Satellite imagery provides us with a **comprehensive view of the Earth** that did not begin to exist until we began launching satellites in the late 1950's.

Until that point we had to rely on observations taken by people stationed at different points around the Earth. The time taken to collate this information made it a lengthy process. Today these ground observations are still used, but only to provide detailed local information and 'ground truthing' for satellites - they are used to **calibrate the instruments** on the satellites.

Did you know that...?

2007 is **International Heliophysical Year**, the 50 year anniversary of International Geophysical Year, which was designed to build up a better understanding of the Earth's ecosystems.

International Heliophysical Year will give us a **better understanding of the relationship between the Earth and the Sun**.

EARTH STATISTICS

Distance of Earth from the Sun:	149,600,000 km (average)
Length of Year:	365.256 days
Length of Day:	23hrs 56mins 4.2secs
Diameter:	12,756 km
Diameter compared to Sun:	1/109 or 0.0092x
Moons:	1

Knowing our planet:

2007 celebrates '**50 Years in Space**'. On 4 October 1957, the Soviet Union launched the **Earth's first artificial satellite, Sputnik**.

The launch of Sputnik is seen as the start of 'the Space Race' between the Americans and the Soviet Union, each trying to beat each other to the next great milestone.

The tiny satellite, with a mass of less than 84kg, orbited the Earth for only three months. However, it marked the

start of the battle for supremacy in the **conquest of space**.

Today, space is very much a **collaborative exercise**, with countries working together on joint scientific projects to spread the cost and achieve goals together. The **European Space Agency (ESA)** is a great example of this. It represents 17 member states, including the UK, working together to explore and understand our Solar System and beyond.