

# Planet Earth Fact Sheet



*Nasa's Photo of Earth from Space*

Earth is the third planet from the sun and is the only planet that was not named after Greek Mythology. Earth is my favorite planet in the solar system because it supports life well, actually it's the only planet to have confirmed life! Either way there is a special place in our hearts for this planet because it's our home.

## **The Center of the Universe...**

It wasn't until the sixteenth century that we actually came to terms with the fact that the Sun is the center of the universe and not the Earth. The Polish astronomer Copernicus, Nicolaus (1473-1543) was well known for advancing this theory after it was savagely rejected when Aristarcus of Samos in the 3rd century BC first introduced the concept.

Up until Copernicus helped us to accept that the sun was the center of the universe, it was widely known and accepted for the last 1000 years that the heavenly bodies revolved around Earth. This theory was tied very tightly with the church and anyone who tried to say differently was persecuted.

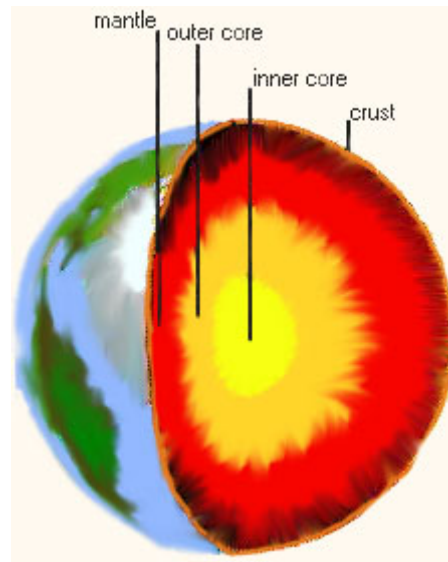


The Earth unlike the rest of the planets can be studied easily without space shuttles and satellites. Even though we live on this planet - it wasn't until the twentieth century that we had maps of its entire surface! These pictures from space not only help us to fully understand it's terrain they're also helping with predicting dangerous weather including hurricanes!

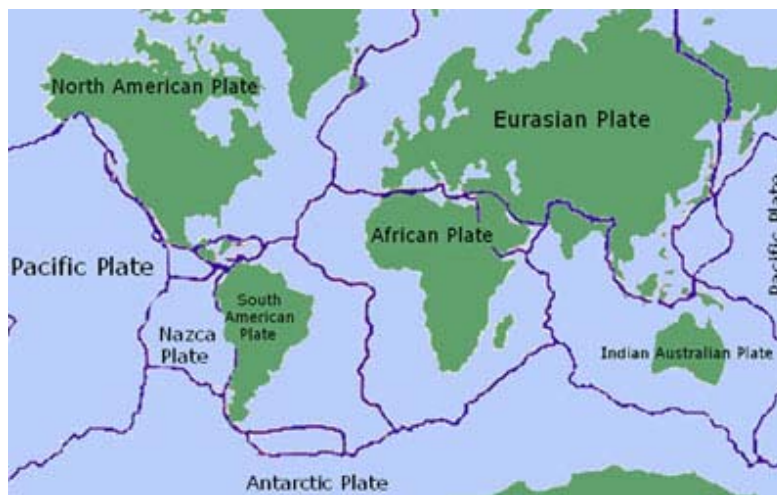
## What Makes Earth...

The Earth has four main layers:

- The Crust
- The Mantle
- Outer Core
- Inner Core



The Crust is solid and its thickness varies. This means that the crust is thinner under the oceans and thicker under the continents. The Mantle layers are said to be semi-fluid or resembling a kind of plastic. The Inner Core is under so much pressure that it's said to be solid. The Core is probably made up entirely of iron, although many scientists believe that there are some lighter elements present. The heat from the Inner Core is so extreme that the Outer Core is not solid but molten and made up of 90% iron and 10% sulfur. We have to stop and take a moment to understand that our knowledge of the Earth's interior is mostly theoretical. No one has actually been to the center of the Earth to confirm if it's made up of iron or chocolate pudding.



## The Forever Shifting Planet...

One thing that is unique to the planet Earth is the fact that our continents move and that we have tectonic plates. This basically means that the crust of the earth is separated into sections called tectonic plates. These continuously move and spread apart. When the tectonic plates spread apart they move away from each other and magma from under the crust comes up to create new crust. Sometimes when the plates move they are colliding together and one gets pushed under the other and is destroyed by the mantle layer of the planet. There are also many great earthquakes at the site of these colliding plates. Today there are eight major plates:

- **Antarctic Plate** – This has Antarctica and the "Southern Ocean" located on it.
- **African Plate** – This has Africa, eastern South Atlantic and western Indian Ocean located on it.
- **Indian-Australian Plate** – This has India, Australia, New Zealand and most of Indian Ocean located on it.
- **Pacific Plate** - This has most of the Pacific Ocean (and the southern coast of California) located on it.
- **North American Plate** - This has North America, western North Atlantic and Greenland located on it.
- **South American Plate** - This has South America and western South Atlantic located on it.
- **Eurasian Plate** - This has eastern North Atlantic, Europe and Asia except for India located on it.
- **Nazca Plate** - This has eastern Pacific Ocean adjacent to South America located on it.

Check out our cool [Tectonic Plates Crossword Puzzle](#), it's great for review!

### **Our Atmosphere...**

The Earth's atmosphere is mostly made up of is 77% nitrogen, 21% oxygen. The tiny amount of carbon dioxide that is in the atmosphere is extremely important to the Earth's surface temperature because of it's role in the greenhouse effect. The greenhouse effect raises the average surface temperature about 35 degrees C and without it the oceans would freeze and life as we know it would be impossible.

### **Fun Earth Quick Facts:**

- 71 Percent of the Earth's surface is covered with **water**.
- Earth is the only planet on which water can exist in liquid form on the surface.
- The interaction of the Earth and the Moon slows the Earth's rotation by about 2 milliseconds per century. Current research indicates that about 900 million years ago there were 481 18-hour days in a year.
- The oldest fossils of living organisms are less than 3.9 billion years old.
- The Earth is 4.5 to 4.6 billion years old.
- The Earth is the densest major body in the solar system.
- The Earth's current population is 6,603,851,077!
- The world's termites outweigh the world's humans 10 to 1
- A one-day weather forecast requires about 10 billion math calculations
- You share your birthday with 9 million others in the world