

PRESENTS

OUR PLANET

Earth orbits the Sun as the third planet. It is the densest and fifth largest planet. Its name derives from the Latin Terra, a Roman goddess. It is the only known planet with life, home to millions of species, including humans.

13.8 Billion years
Big Bang occurs



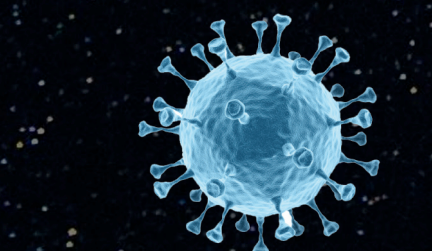
4.6 Billion years
The Sun forms and is surrounded by dust.

4.54 Billion years
Gravity accumulates rocks and dust, forming a hot, toxic early Earth.



4.5 Billion years
A collision with another planet results in the formation of the Moon.

3.9 Billion years
For over 20 million years, water-rich meteorites hit Earth and the oceans are formed.



3.8 Billion years
First unicellular bacteria appear.

3.5 Billion years
Bacteria colonies living on the ocean surface transform carbon and water into glucose and oxygen through photosynthesis.



1.5 Billion years
Tectonic plates begin forming islands and continents. The great continent known as Pangea is formed over 400 million years.

750 Million years
"Snowball Earth", the longest and coldest glacial era known occurs.



66-65 Million years
Mammals survive extinction by protecting themselves in caves and surviving on little resources.

66 Million years
An asteroid hits Earth and causes the 5th mass extinction. Dinosaurs disappear.



180 Million years
Continents and oceans take current form.



200 Million years
The 4th mass extinction occurs and half of living species disappear. The rise of dinosaurs begins.

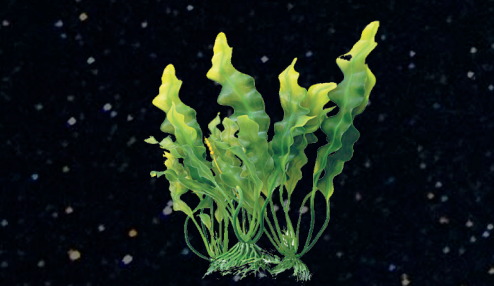
225 Million years
The first dinosaurs, prosauropods and mammals appear.

248 Million years
The 3rd mass extinction occurs and 96% of species on Earth disappear.

359 Million years
The 2nd mass extinction is caused by changes in Earth's climate, eliminating 75% of life on the planet.



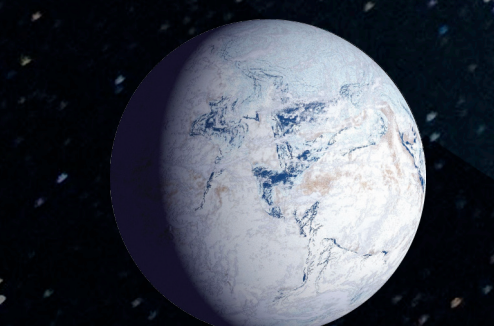
360 Million years
The Tiktaalik uses its fins to move on land and the first reptiles and tetrapods emerge.



434 Million years
The first plants derived from green algae appear.

443 Million years
The 1st mass extinction results from the glacial era; 85% of life on Earth's oceans disappear.

540 Million years
Multicellular life expands; plankton abundance increases.



750 Million years
"Snowball Earth", the longest and coldest glacial era known occurs.

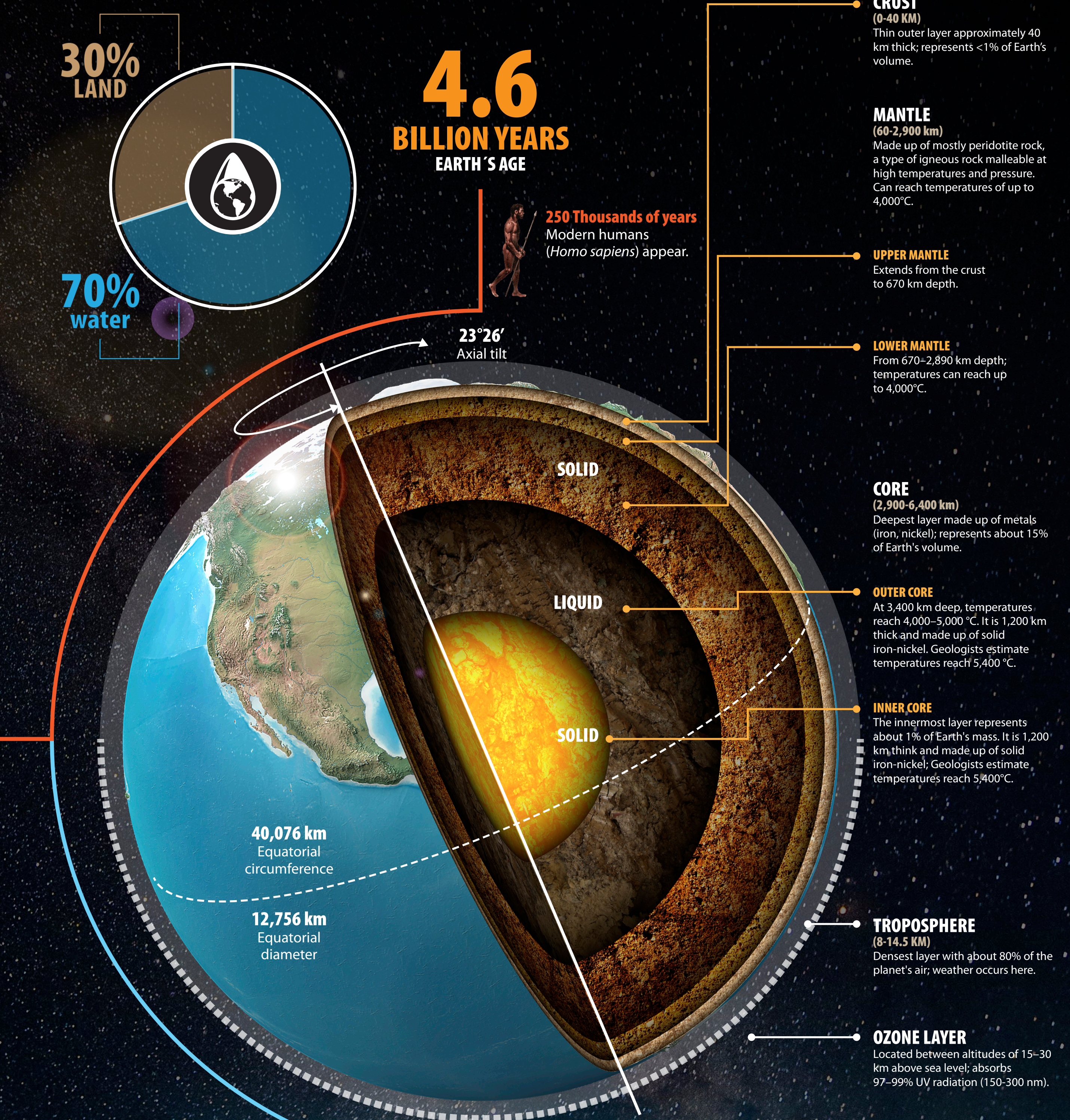
30% LAND

70% water

4.6 BILLION YEARS
EARTH'S AGE

250 Thousands of years
Modern humans (*Homo sapiens*) appear.

23°26' Axial tilt



BIODIVERSITY

1.75 million
estimated number of species on the planet.

950,000 species of insects

270,000 species of plants

19,000 species of fish

9,000 species of birds

4,000 species of mammals

8.03 billion
people on Earth

8,848 meters
Mount Everest, highest point above sea level.

10,994 meters
Challenger Deep, Mariana Trench: deepest point in the ocean.

70.7 °C
Highest temperature registered: Lut Desert, Iran.

-93.2 °C
Lowest temperature registered: Dome Fuji, Antarctica.

150 million km
Average distance to the Sun.

365 days
Time it takes for the Earth to complete one revolution around the sun.

23:56:04
Earth's rotation period.

CRUST (0-40 KM)
Thin outer layer approximately 40 km thick; represents <1% of Earth's volume.

MANTLE (60-2,900 km)
Made up of mostly peridotite rock, a type of igneous rock malleable at high temperatures and pressure. Can reach temperatures of up to 4,000°C.

UPPER MANTLE
Extends from the crust to 670 km depth.

LOWER MANTLE
From 670-2,890 km depth; temperatures can reach up to 4,000°C.

CORE (2,900-6,400 km)
Deepest layer made up of metals (iron, nickel); represents about 15% of Earth's volume.

OUTER CORE
At 3,400 km deep, temperatures reach 4,000-5,000 °C. It is 1,200 km thick and made up of solid iron-nickel. Geologists estimate temperatures reach 5,400 °C.

INNER CORE
The innermost layer represents about 1% of Earth's mass. It is 1,200 km thick and made up of solid iron-nickel; Geologists estimate temperatures reach 5,400°C.

TROPOSPHERE (8-14.5 KM)
Densest layer with about 80% of the planet's air; weather occurs here.

OZONE LAYER
Located between altitudes of 15-30 km above sea level; absorbs 97-99% UV radiation (150-300 nm).

STRATOSPHERE (15-50 KM)
Contains 19% of the atmospheric gases. The temperature is higher than in the troposphere since the ozone layer is absorbing UV radiation.

MESOSPHERE (50-85 KM)
Coldest layer with average temperatures of -90 to -143 °C; meteors burn here before hitting the Earth's surface.

THERMOSPHERE (85-1000 KM)
Auroras occur here; temperatures vary between day and night.

EXOSPHERE (600-10,000 KM)
Upper boundary; mainly hydrogen and oxygen atoms.

OUTER SPACE

SOURCES:
© GeoEnciclopedia. ¿Cuáles son las capas de la Tierra. Actualizado 23 de febrero del 2023. Disponible en: <https://www.geoenciclopedia.com/cuales-son-las-capas-de-la-tierra-556.html>

- National Geographic. Global Biodiversity: Biodiversity refers to the variety of living organisms within a given area. Actualizado 24 de octubre de 2022. Disponible en: <https://education.nationalgeographic.org/resource/global-biodiversity/>