

LITTLE POSTER OF

PLANETS

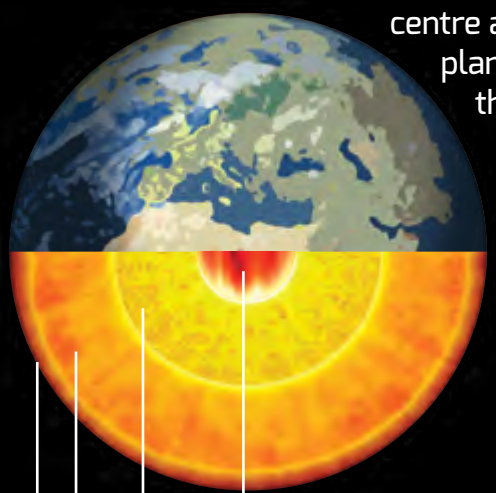
UKRI

Science and Technology Facilities Council

Before people knew what a planet was, they saw them moving through the night sky like 'wandering stars', so they called them 'planets' from the Greek word for 'wanderer'.

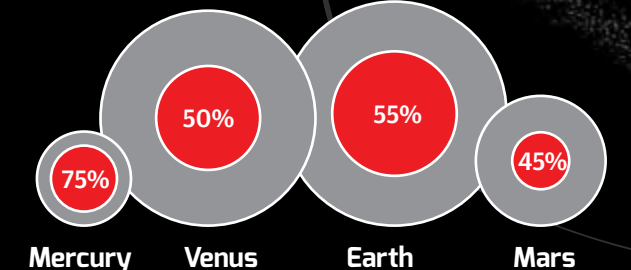
INSIDE A ROCKY PLANET

The rocky planets are made up of rock and metals. Because metal is denser than rock, it sank toward the centre as the young planets cooled. It is this metallic core that give the Earth its magnetic field.



- Inner core: A ball of solid iron
- Outer core: A ball of liquid iron, nickel and sulphur
- The mantle: A mixture of solid, semi-molten and molten rock
- The crust: The planet's solid surface

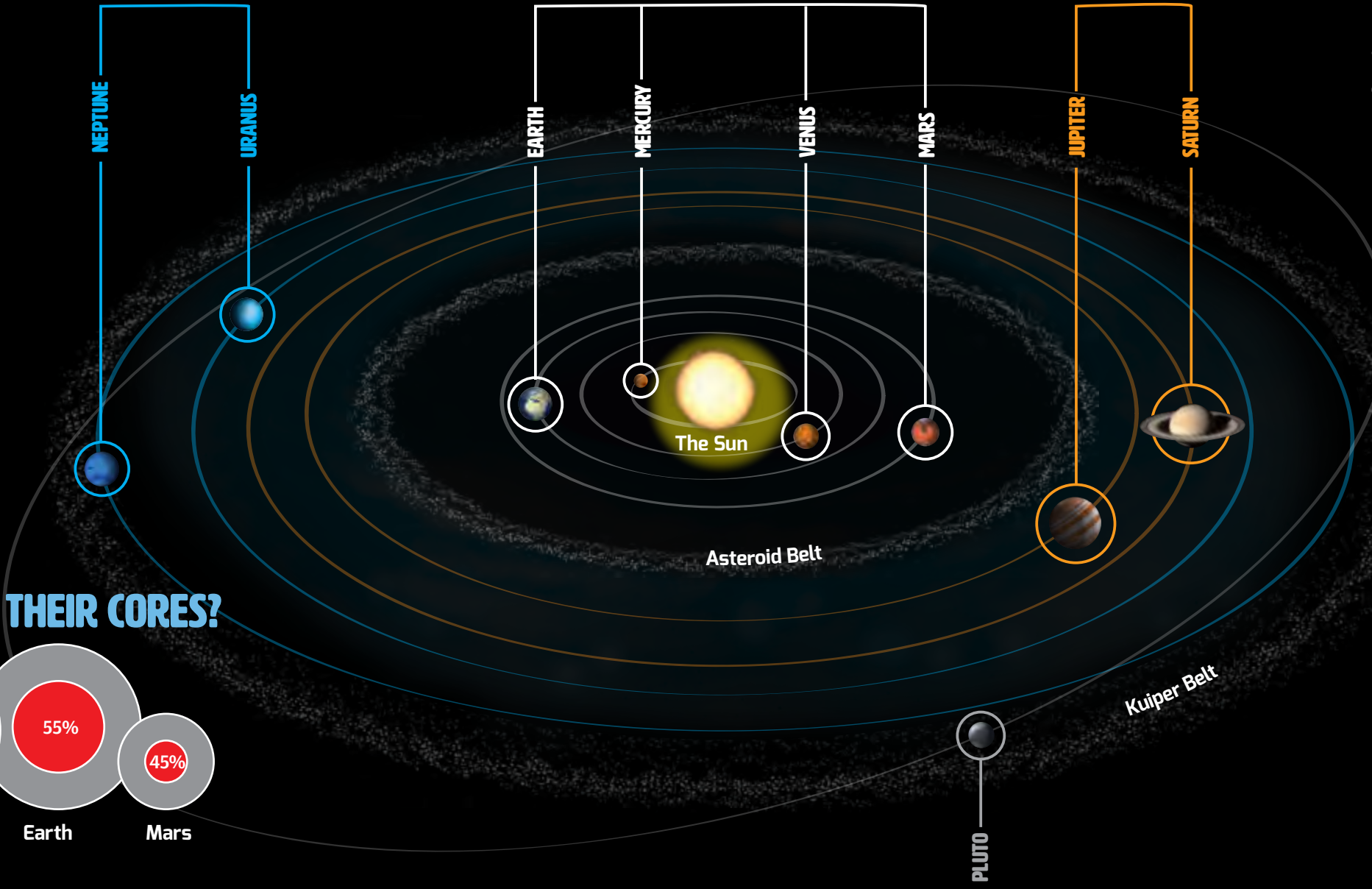
HOW BIG ARE THEIR CORES?



ICE GIANT PLANETS

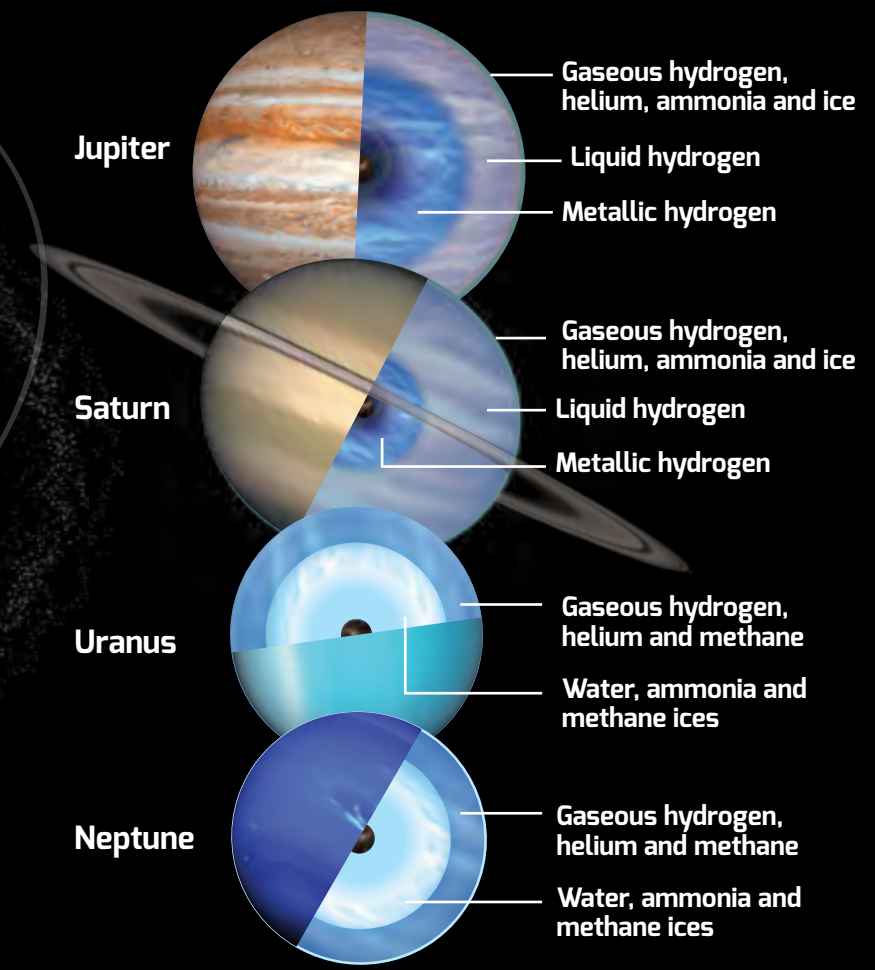
ROCKY PLANETS

GAS GIANT PLANETS

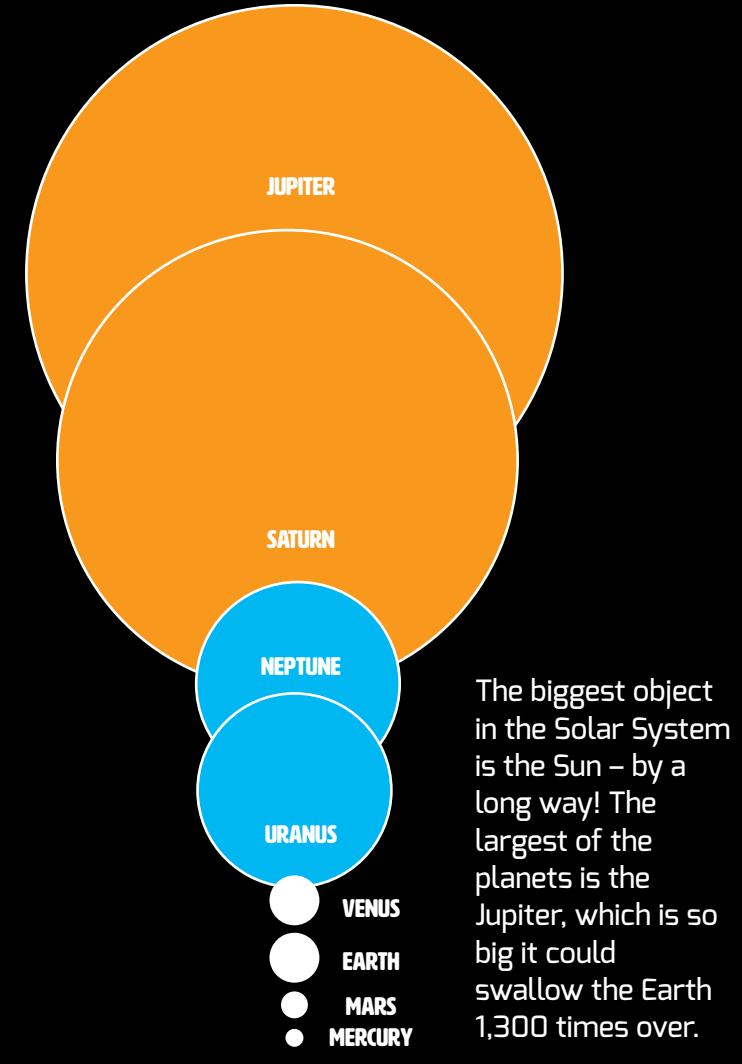


INSIDE THE GAS GIANTS

The gas giants are more atmosphere than planet. They have small rocky, or metallic, cores wrapped in thick layers of gas.



HOW THEY MEASURE UP



HOW FAR APART ARE THE PLANETS?



MERCURY

4,870km

0 moons

Tiny Mercury is the closest planet to the Sun. A year on Mercury (the amount of time it takes to orbit the Sun) only lasts 88 days but, because it turns very slowly on its axis, a day on Mercury lasts 59 days (that's Earth days of course)! Because Mercury is so close to the Sun, its surface is very hot – reaching 400°C on its sunlit side.

VENUS

12,100km

0 moons

Venus is almost the same size as Earth, but it is very different. It is covered in clouds of water vapour and sulphuric acid. Venus is the hottest planet in the Solar System. Its thick atmosphere is 96.5% carbon dioxide, which traps lots of the heat from the Sun – meaning temperatures reach 460°C.

EARTH

12,700km

1 moon

Earth is the planet we call home. About 70% of the Earth's surface is covered in water and it is the only planet in the Solar System that can support complex life like plants, animals and you. The Earth takes 365.25 days to orbit the Sun and 24 hours to spin on its axis. It's axis is tilted, which is what gives us our seasons.

MARS

6,790km

2 moons

Mars is red because its surface is covered in iron oxide, which you might know as rust. Today, it has a very thin atmosphere and very little water on its surface, but it once had oceans of liquid water and may once have supported life. Mars is home to the largest volcano in the Solar System, Olympus Mons.

JUPITER

142,900km

95 moons

Jupiter is the biggest planet in the Solar System. Its mass is 300 times that of Earth. In some ways it is more like a star than a planet because it is a giant ball of gas. It doesn't have a rocky surface – just lots of layers of compressed gases. Jupiter is very stormy. Its famous 'Great Red Spot' is a giant storm that has been raging for 350 years.

SATURN

120,500km

83 moons

With a mass 95 times that of the Earth, Saturn is the second largest planet. Saturn's most famous feature is its system of rings, which are made up of ice and dust. Its rings measure 282,000 km in diameter. Although Saturn has 83 moons, it actually has many more smaller moons, called 'moonlets'.

URANUS

51,100km

27 moons

With temperatures reaching as low as -224°C, Uranus is one of the coldest planets. It has two sets of very thin rings made up of ice and dust. At some point in its past, Uranus was knocked on its side by some great disaster. Like Neptune, Uranus contains much more ice than the other gas giants, so both are now called an 'ice giants'.

NEPTUNE

49,500km

14 moons

Neptune is the most distant planet. It is so far away that it takes 165 years to complete one orbit. It was discovered in 1846 after mathematicians told astronomers where to look for it – because it was too far away to be seen by the telescopes of the day. Neptune's atmosphere is very stormy. One storm lasted five years and had winds that reached 1,300 mph!