

Sheet 9A **CORRECTIONS FROM WORKSHEETS 9A-9L****MERCURY**

Mercury is the nearest planet to the Sun and it moves around it incredibly quickly – once every 88 days or, which is the same as four complete journeys around the Sun every year. If people moved to Mercury, they would be four times older than their Earth age! It moves so quickly that it can only be seen from Earth six times a year.

Mercury is the smallest of all the planets. It has a very thin atmosphere and weather doesn't exist at all on this planet. Because of this, Mercury is not able to hold on to any heat from the Sun, so at night the planet is very cold. Opposite to this, Mercury is really hot during the day, when temperatures are four or five times greater than the hottest places on Earth.

With a lot of craters on its surface, Mercury's rocky surface looks a lot like the Moon. The craters were caused by asteroid impacts and most of these craters were made billions years ago, shortly after the Solar System formed.

VENUS

Venus is the closest planet to Earth and the third smallest in the Solar System. It is almost the same size and it is made up of the same type of metals and rocks as Earth; for these reasons, Venus is often said to be the Earth's "twin sister". Venus is the second planet from the Sun and was given its name by the Romans in allusion to their goddess of love, because of its brightness and beauty.

Venus' atmosphere is thick and heavy, so we cannot see its desert-like surface with telescopes. Apart from that, its atmosphere is burning hot and poisonous. The pressure of its atmosphere is enormous –equal to 1000m below sea level!

The yellow clouds in the sky are full of a harmful acid. That means that if we were on Venus and it rained, it would burn our skin. What's more, there are no rivers, seas, or oceans on the surface of Venus. Venus also spins in the opposite direction to Earth and the other planets.

EARTH

Our home planet is the largest of the four inner planets. Along with its satellite, the Moon, it moves around the Sun once a year. Its atmosphere contains oxygen and carbon dioxide gases. The surface is made up of a rocky thin layer or crust, floating on melted rocks below. This liquid beneath the surface is called magma. The Earth's surface includes the continents and the ocean floor.

What makes Earth unique is the fact that life exists on it, since no other planet in our Solar System has life. As an example, the Sun may be an ordinary kind of star, but the third planet out from the Sun (Earth) is unique. The Earth is neither so hot that water boils nor so cold that it freezes.

As the moves around the Sun, different parts of the Earth get more or less light and warmth from the Sun, making the different seasons. But the Earth also spins on its own axis, which in fact it is an imaginary line through the planet from pole to pole.

Sheet 9B**MARS**

Mars is smaller and colder than Earth. Being the fourth planet from the Sun, Mars is known as the Red Planet because of its red-brown colour.

Its surface is covered with dusty plains, hills, tall mountains and deep canyons. It has just a thin atmosphere in which we would not be able to breathe. However, of all the planets in the Solar System, Mars is the most similar to Earth.

Mars takes nearly two years to orbit the Sun (687 Earth days). What's more, a day on Mars is just a little longer than our own day, also having its own seasons. Mars has two tiny moons called Deimos and Phobos.

The highest mountain on Mars is called Olympus Mons and is three times higher than Mount Everest. Since in August 1996 NASA claimed it had discovered traces of fossil bacteria in a meteorite from Mars, it is believed that primitive life may have existed on the planet a long time ago.

JUPITER

Jupiter is the Solar System's biggest planet. In fact, it is so big that more than 1,300 Earths would fit inside it. Like the other gas giants, its outer layers are made of gases, with a small rocky core at the centre. It seems incredible, but Jupiter's powerful gravity has dragged many passing objects towards it, becoming some of them becoming the planet's moons.

Jupiter spins on its axis once every ten hours. It spins faster than any other planet, so fast that the clouds in its atmosphere are huge swirling storms with strong winds of up to 500 km/h. One of Jupiter's storms is larger than Earth! It is called the Great Red Spot and may have been around Jupiter's atmosphere for over 350 years.

Jupiter has more than 60 moons. The two largest, Ganymede and Callisto, are bigger than the planet Mercury. Scientists believe that under its icy surface there may be an ocean of warm, salty water in which primitive sea life has developed.

SATURN

The second-largest planet in the Solar System, Saturn, is famous for its beautiful bright rings. Still known as the Ringed Planet, because its rings are the biggest, brightest and best, Saturn's rings look solid from a distance. But these are made of millions of bits of ice and rock whirling around the planet. It must be said that Saturn is the least dense of all the planets, made up basically of hydrogen and helium gas.

Saturn spins around so fast that we find very high winds, which can be even faster than the strongest hurricanes on Earth! Despite the fact that Saturn's atmosphere has a few violent clouds, it is much calmer than stormy Jupiter. Saturn takes nearly 29 Earth years to orbit the Sun and the length of a day is over 10 Earth hours.

Around 60 large moons orbit Saturn. One of them, Titan, is a true giant. Bigger than the planet Mercury, Titan is the only satellite in the Solar System that has its own atmosphere. With an icy landscape plenty of hills and volcanoes, it may also have rivers and lakes made up of methane.

Sheet 9C**URANUS**

After Jupiter and Saturn, this gas giant is the third-largest planet in our Solar System. Uranus was the first planet discovered through a telescope and, despite it not being as big as Jupiter and Saturn, it is still our times wider than Earth. Uranus is the seventh planet from the Sun and it takes 84 years to complete one orbit and 17 hours to complete a day. It is a bright blue-green planet and has a smooth-looking surface (like Jupiter and Saturn, Uranus has no solid surface).

Unlike the other planets, Uranus spins on its side, that's to say, at right-angles to the Sun. Scientists think this occur because of a space collision that could have almost destroyed it. They think that a giant asteroid may have crashed into Uranus and knocked it sideways.

Uranus's atmosphere is composed mainly of hydrogen and helium, with methane and traces of water and ammonia. The planet has at least 21 moons (icy satellites), the biggest of which is Titania. It also has 11 rings, which are hardly perceptible.

NEPTUNE

Neptune, the smallest of the gas giants, can only be seen from Earth using a telescope or powerful binoculars. In fact, it is the most distant planet in our Solar System. Neptune orbits the Sun once every 165 years. In other words: its orbit is 30 times further from the Sun than Earth's.

An example of this: on 29 May 2011 Neptune will have made just one circuit around the Sun since its discovery in 1846.

Like Uranus, it is an extremely cold planet. But a lot of activity takes place there. Heat from within Neptune's core creates fast winds and colossal storms. The storms look like dark spots on the planets' surface and the winds are considered to be the strongest in the Solar System.

Neptune's blue colour is caused by the methane in its atmosphere, a molecule that absorbs red light. This gas giant is orbited by eight moons and five thin complete rings and one partial ring. Neptune's biggest moon, Triton, is a frozen icy world, with active icy volcanoes that expel nitrogen gas.