



AN EXPLORATION OF



OUR SOLAR SYSTEM

BY YEAR 5 STUDENTS
AT VICTORIA DOCK PRIMARY SCHOOL

PART OF THE
MALET LAMBERT TRANSITION PROGRAMME



WHAT'S IN THIS MAGAZINE?

Hello and welcome to 'Our Solar System' magazine – produced by us (year 5 students from Victoria Dock Primary School)!

We have covered a whole range of topics and with a bit of help from Engaging Education, put together this magazine for your reading pleasure. These topics include:

The Planets Page 03

Space Exploration Page 08

We hope you enjoy reading our articles and are now even more excited about our solar system!

-PART 1-

THE PLANETS





EARTH

BY JOSH CAFFERY AND SHAKEEL PATEL

Earth is unlike any other planet in the solar system in a number of different ways. Earth is the only planet in the solar system that has life and liquid water. The Earth has a surface temperature of between -88 degrees and 58 degrees. If you were to walk around the equator of the world you would travel 7928 miles!

Earth is the third planet from the sun and it is about 38 million kilometres away from the closest planet Venus. Venus is very similar to Earth in size. The Earth has lots of objects in orbit such as: 1 Moon, 1070 satellites and 21000 pieces of debris.

Earth has an ozone layer, this layer and the Earth's magnetic field block the most life-threatening parts of the Sun's radiation, so life is able to flourish on land as well as in water.

MARS

BY ELLIE HAIRSINE AND SANZIANA VETIS



Mars is also known as the red planet. It is 227,900,000km from the sun and it is the fourth furthest away from the sun. Mars is a terrestrial planet that has a thin atmosphere composed mainly of carbon dioxide. Mars has two moons and is 4.5 billion years old. Mars is similar to Earth as it has seasons and it may have had water. Mars is red because of the mineral called iron oxide that is very common on the planet's surface. A typical year on Mars is one Earth year and 320 days long, this is nearly twice as long as a year on Earth! There have been many missions to Mars by robots to find out more about the planet, the two rovers that are currently there are trying to find evidence of ancient life and water.



SATURN

BY BERIN KARAKAS AND CHLOE MACKINDER



Saturn is the sixth planet in the solar system and is the second largest. If you were to set off from Earth to go to Saturn it would take 6 years and 9 months to get there. Saturn is mostly made up of hydrogen and helium and the surface temperature is minus 139 degrees. Saturn is the lightest planet in the solar system and is a yellowish brown in colour. Saturn has nine rings around the planet; the rings are made up of dust, rocks and ice. There are 62 moons in orbit, 53 of them are officially named. Saturn is the most distant of the five planets easily visible to the naked eye, the other four being Mercury, Venus, Mars and Jupiter (Uranus is occasionally visible to the naked eye in very dark skies). Saturn appears to the naked eye in the night sky as a bright, yellowish point of light. Twice every Saturnian year or roughly every 15 Earth years, the rings briefly disappear from view because of the way the rings are angled and because they are so thin. Such a "disappearance" will next occur in 2025.



THE



PLANET VENUS

BY CHARLIE TURNER AND MAX CHADWICK

Venus is the second closest planet to the sun but it is still 66 million miles away from it. Venus is also the hottest planet in the solar system with a temperature of 462 degrees. All the planets in the solar system have a moon apart from Mercury and Venus. As everyone knows it takes Earth 365 days to orbit the sun but Venus takes 225 Earth days. Venus is the second brightest object in the night sky and only the Moon is brighter, it is so bright it can be seen during the daytime on a clear day. Venus is covered by clouds of acid, which means that you can't see the surface from space and it also rains acid!



PLANET EARTH



BY CASSEY-MAY SIMMONS AND ELLIE WHITE

Earth is the only planet that is known to have an atmosphere containing 21 percent oxygen. Earth is also the only planet that has water on its surface; this means that earth can have life on it. Earth takes 365 days or a year to travel around the Sun and the closest planets to Earth are Mars and Venus. Earth is around 4.5 billion years old and the population of Earth is around 7 billion! Did you know that the Earth is gradually slowing down and in 140 million years a day will be 25 hours long! Earth is also the only planet to not be named after a god as all the other planets are named after Roman gods or goddesses. Finally, Earth is the planet with the greatest density.



VENUS

BY HONEY STEPHENS AND ARMITA KALANTARM



Venus is a planet in our solar system that takes 242 Earth days to rotate once on its axis. The planet orbits once around the sun every 225 Earth days compared to Earth's 365.

Venus is the hottest world in the solar system even though it's not the closest to the sun. The surface of Venus is extremely dry because of the scorching heat, any water would boil away in seconds.

In mythology, Venus is the roman goddess of love.

Venus and Earth are like twin planets because they are a similar size. If you were standing on Venus you would weigh exactly the same as you do on Earth. Venus is covered in a layer of highly reflective clouds which mean you can't see the planet's surface from space!



NEPTUNE

BY PAIGE SCHULTZ AND AUSTY KORSKAITE



Neptune is the eighth and furthest planet from the Sun at around 4.8 billion kilometres away. Because of its great distance from the Sun, Neptune's outer atmosphere is one of the coldest places in the solar system, with temperatures at its cloud tops approaching -218 degrees. Temperatures at the planet's centre are approximately 5,000 degrees. Neptune takes around 165 years to orbit the sun! The atmosphere of Neptune is made up of methane, this is what gives Neptune its dark blue colour. Neptune is like Saturn as it has rings around the planet; the rings are mostly made up of ice and rocks. Neptune has 14 moons that orbit the planet, one of the moons around Neptune is thought to have been a dwarf planet.

PLUTO

BY ALISHA O'NEILL AND AANCHAL KALWARI



Pluto used to be a planet but it was downgraded on November 19th 2010. Although Pluto isn't a planet, it is called a dwarf planet and it has five moons. Pluto was first discovered in 1930 by an eleven year old girl who lived in Oxford. Pluto is 3.67 billion miles from the sun and it is mainly made up of rocks and ice. Pluto was the Roman god of the underworld. On July 14th 2015, Pluto is due to be visited by spacecraft for the first time. The New Horizons probe will perform a flyby during which it will attempt to take detailed measurements and images of Pluto and its moons.



URANUS

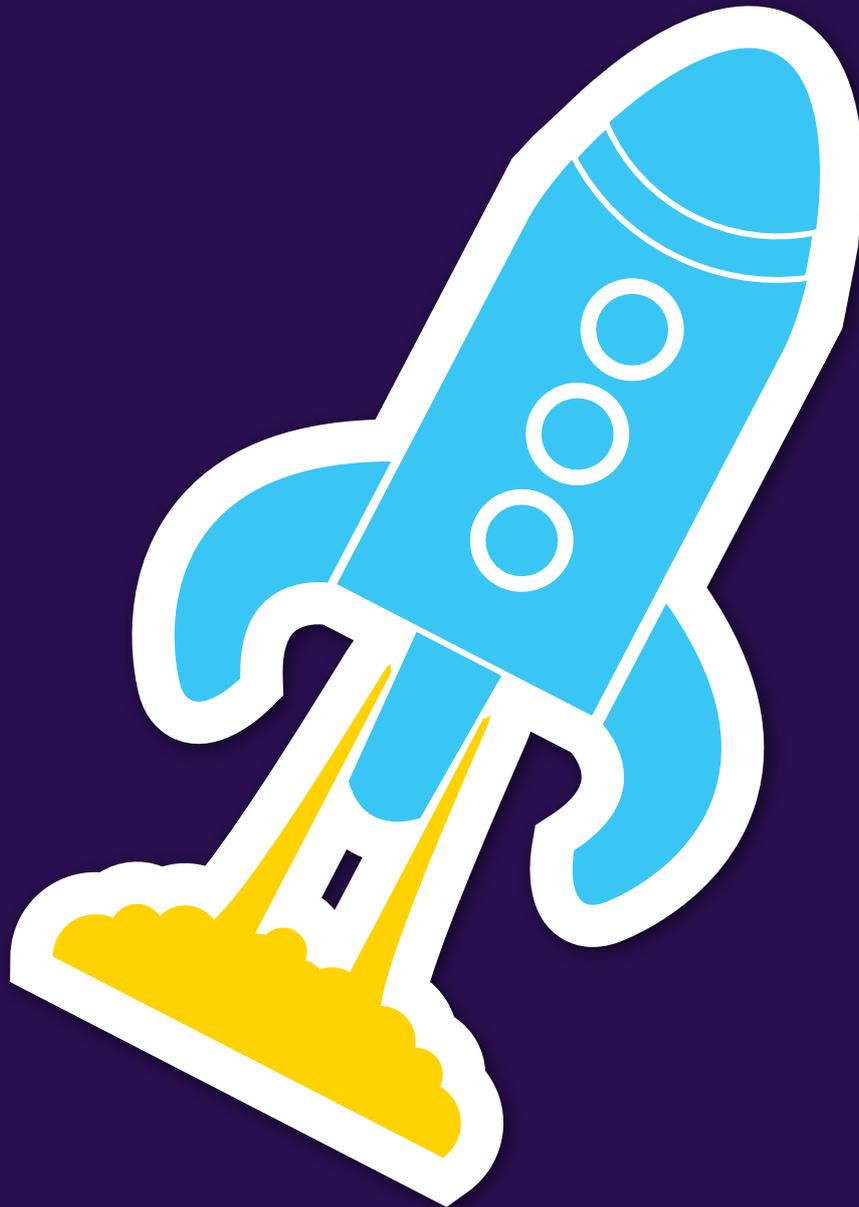
BY SIMRAN HUSSAIN AND MADELEINE ZINNER



Uranus is the seventh planet from the Sun in the solar system. Uranus was first seen by William Herschel in 1781 and the colour of the planet is a range of different blues. Uranus has 27 different Moons that orbit the planet and is around 4.5 billion years old! The five major Moons of Uranus are: Titania, Oberon, Ariel, Miranda and Umbriel. Most of the centre of Uranus is frozen and the planet is mainly made up of hydrogen and helium. This makes Uranus a gas planet like Jupiter, Saturn and Neptune. Uranus orbits the Sun on its side and it takes 84 years to orbit the Sun once!

-PART 2-

SPACE EXPLORATION



SPACE STATIONS AND SHUTTLES



BY JAMES HOLDROYD AND ADRIJA ZVIRBLYTE

A space shuttle costs millions to build, it costs so much because it has to be able to be launched into space, carry out its mission then return safely. While in orbit, a space shuttle travels around Earth at a speed of about 17,500 miles per hour. At this speed, the crew can see a sunrise or sunset every 45 minutes! A space shuttle isn't just a mode of transport, its a laboratory too. There have been 22 Spacelab missions, or missions where science, astronomy, and physics have been studied inside a special module carried on the space shuttle. There have been 133 successful launches and landings of a space shuttle and only 2 failures, these were the space shuttles Challenger and Columbia.

A space station is a spacecraft capable of supporting a crew, which is designed to remain in space for a long period of time and for other spacecraft to dock. A space station is different from other spacecraft as it has no landing systems. Instead, other vehicles transport people and cargo to and from the station. As of March 2014 there will be two space stations in orbit: the International Space Station, which is permanently manned, and China's Tiangong 1, which is unmanned most of the time. Previous stations include the Almaz and Salyut series, Skylab and Mir.





HOW TO BE AN ASTRONAUT

BY ELLIOT IRVING AND JACOB MOORE

If you want to be an astronaut you have to initially make the cut. This means you have to be a citizen of a country with a space agency capable of sending humans to space. Even if your country does have a space agency, you may have to work on the ground rather than be in space.

In Europe there is the ESA (European Space Agency) who work with other agencies to send astronauts into space. Currently, the ESA is made up of twenty countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom.

You also have to be the right age; the ESA recruits astronauts when they are between 27 and 37 years old. NASA has no age restrictions but past astronauts have been between 26 and 46 years old.

You also have to be the right height, the ESA accepts people who are between 5 foot and 6 foot 2. NASA looks for people who are between 5 foot 2 and 6 foot 3.

To be an astronaut you also have to be physically fit, speak English and Russian, be academically smart by going to university and to help your chances you should join the military.

BY CHARLIE BEADLE AND CHE GOULBOURNE



If you really want to be an astronaut then you should read this article.

Firstly you need to attend university and study engineering, medicine or one of the sciences. You must also be healthy, since astronaut training and space flight can be very tiring and tough. Most astronauts are aged between 26 and 46 years old and are between 5 foot and 6 foot 2 tall.

On a space craft, astronauts live and work in a very small space. This means you must be able to get along with people as you will be sharing the space with a few other astronauts for a long time. Everyone that goes onto the International Space Station must be able to speak English and also Russian.

THE INTERNATIONAL SPACE STATION

BY FINLEY HOLMES AND VANGGELIS KALIAFETIS



Here are some great facts about the International Space Station:

It took an astounding 136 space flights to build it the space station.

It flies at 4.791 miles per second. That's fast enough to go to the Moon and back in about a day.

It weighs almost 1 million pounds including visiting spacecraft.

It has 8 miles of wire just to connect the electrical power system.

It has a complete surface area the size of a football field.

It has more livable space than a 6-bedroom house.

It has two bathrooms, a gymnasium and a 360-degree bay window.

It's been the spaceport for 89 Russian Soyuz spacecraft, 37 Space Shuttle missions, three SpaceX Dragons, four Japanese HTV cargo spacecraft, and four European ATV cargo spacecraft.

The US solar array surface area on the is 38,400 square feet, which is large enough to cover 8 basketball courts

According to NASA, "there are 52 computers controlling the International Space Station."

The ISS crews have eaten about 25,000 meals since 2000. That's a staggering "seven tons of supplies per three astronauts for six months." That's 32,558 Big Macs.

211 people from 15 countries have visited the ISS so far.



SPACE STATIONS



BY ABDULLAH HUSSAIN AND PRANAR DURAKARLE

To build a space station it costs around £103,639,500. Space stations are made from reinforced carbon, titanium and aluminium. Space stations are also made up of fibre glass and carbon fibre. The Buran spacecraft is a Russian shuttle that completed one unmanned flight in 1988 and it remains the only Soviet space shuttle which was launched into space. The flown Buran spacecraft was destroyed in 2002 at the Baikonur Cosmodrome, when the hangar in which it was stored collapsed.

It takes 10 minutes for a space shuttle to go from the ground into space. If you want to build a space shuttle you have to be an engineer and it can take over a year to build. Space shuttles can be used several times.

MOON LANDING



BY TAMIN ALDAFFA AND HASIM BENGAFER

On July 20th 1969, Neil Armstrong, Buzz Aldrin and Michael Collins went to the Moon. Neil Armstrong and Buzz Aldrin were the first people to stand on the Moon, half a billion people all around the world watched Neil Armstrong take the first steps on the Moon. Buzz Aldrin left a gold olive branch on the Moon as a traditional symbol of peace, also left on the moon was a message disk that had statements of goodwill by the leaders of 73 countries around the world.

The Russian's also tried to put a man on the Moon but their attempts were unsuccessful.



APOLLO 11



BY MATTHEW TAYLOR AND CHARLIE SHAW

Apollo 11 was the first spaceflight that landed the first humans on the Moon. The first people on the Moon were Americans called Neil Armstrong and Buzz Aldrin. They landed on the Moon on July 20, 1969. Armstrong became the first to step onto the Moon's surface on July 21. Armstrong spent the most time on the Moon as he was on the surface for about two and a half hours. When the astronauts were on the Moon they collected 47.5 pounds (21.5 kg) of lunar material to take back to Earth. A third member of the mission, Michael Collins, piloted the spacecraft around the moon until Armstrong and Aldrin returned to it just under a day later for the trip back to Earth.

The Moon landing was broadcast on live TV to a world-wide audience, Armstrong stepped onto the Moon's surface and described the event as "one small step for man, one giant leap for mankind."

On July 24th the astronauts landed in the Pacific Ocean and the recover ship USS Hornet picked them up. On August 13th the astronauts were part of a parade in New York, Chicago and Los Angeles.









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St. Catherine's Centre, Doncaster Road, Wakefield, West Yorkshire, WF1 5HL