***Solar System***

***The Solar system is made up of the sun and all of the smaller objects that move around it. Apart from the Sun , the largest members off the Solar system are the eight major planets - Mercury, Venus, Earth and Mars, Jupiterm Saturn, Uranus, and Neptune. Besides, the Solar System its also full of moons, asteroids, comets, minor planets, and many other exciting objects.***

***Sun***

***The Sun its a star found at the center off the Solar System. It makes up around 99.86% of the Solar System’s mass. With a mass of two million-trillion-trillion kilograms, it weighs as much as 330,000 Earths. The Sun produces light and heat by a process known as thermonuclear fusion reaction. Without the sun there would be no daylight, and our planet would simply be a dark, frozen world, with no oceans of liquid water and no life.***

***Mercury***

***Mercury is a small planet which orbits closer to the sun than any other planet in our solar system. Its orbit of the Sun lasts for only 88 days. The planet was called after the messenger if the Roman Gods. The messenger Mercury, or Hermes as the Greeks knew him, is usually shown as having wings on his helmet or on his sandals. Mercury has no atmosphere which means there is no wind or weather to speak of. Likewise, there is no air on the surface but it could be trapped underneath.***

***Venus***

***Venus is one of the brightest planet in the Solar System, just after the moon and can be seen even in daylight if you know where to look. Venus is named after the Roman Goddess of love. Venus is the planet which is closest to the Earth and is a little smaller than the Earth. Venus is unlivable planet because of its dense and toxic atmosphere and being the hottest planet in our system.***

***Earth***

***Our Earth is the third closet planet to the Sun in Solar System. The distance from the Sun to the Earth is over 150 million km. Its distance from the sun means it is neither too hot, nor too cold to support oceans, and liquid water, which is the key ingredient for life on this planet. Till now, the Earth is the only known planet currently that supports life.***

***Moon***

***Moon is the only natural satellite of our Earth in the Solar System. It orbits round the Earth and its distance to the Earth is 384,400 kilometers. The Moon is not a light source, it does not make its own light. The moon reflects light from the Sun. We can see the Moon because light from the Sun bounces off it back to the Earth. We know it rotates round the Earth and as it does this we see different parts of the sunlit half. These are known as the phases of the Moon, or lunar phases.***

***Mars***

***Mars is often called the “Red Planet” because it appears in the sky as an orange-red star. The color caused the accent Greeks and Romans to name it after their God of war. Mars is one of the easiest planets to study from Earth. It is fairly close and, since it its further from the sun than us, it is easy to view in the night sky. The Mariner 4 spacecraft was the first to bring us close up pictures of Mars in 1965. Since then several space probes have visited Mars. Phobos and******Deimos are the two moons of Mars.***

***Jupiter***

***Jupiter is the giant of the Solar System, with a mass more than total mass of other 7 planets in Solar System and is called after accent Roman sky-god, Jupiter, known to the Geeks as Zeus. Not like our Earth, Jupiter is the gas planet. Huge storms and raging winds create the swirled colors of Jupiter’s atmosphere. The Red Spot, a gigantic storm, has been visible for at least 300 years. Jupiter is orbited by the largest family of satellites (69 at the latest count)***

***Saturn***

***Saturn is a giant planet. It is the 2nd largest in the Solar System. Saturn itself is named, like all the planets, after a Roman God - father of Jupiter. Saturn is most well-known for its rings. The rings are not solid but rather are made up of particles of ice, dust and rocks. Saturn has 53 official moons and 9 provisional (unofficial) moons. The most well-known of Saturn’s moons is probably Titan, which is even bigger than Mercury.***

***Uranus***

***Uranus was first seen in 1781 during a survey of the sky using telescope. It’s named after a Roman God - Grandfather of Zeus. The planet is so far from the Sun that its gas is frozen and it’s often referred to as an “ice giant” planet. Like Jupiter, Uranus also has rings but fainter. Uranus has a total of 27 moons, most of whom are named after characters in Shakespeare’s Midsummer Night’s Dream.***

***Neptune***

***Neptune is the farthest known planet in the solar system. It was discovered in 1846. Because of its ocean blue color, it was named after the Roman God of the sea. Neptune is one of the four “gas giants”. Like Jupiter, Saturn and Uranus, it’s composed only of gas. So far, 14 moons of the planet have been discovered and named.***

***Blackhole***

***At the center of most galaxies is one of the most strangest and deadliest things in the universe: a black hole. Most blackholes, regardless of their size, are born when a giant star runs out of energy. A blackhole’s gravity is so strong that it pulls in anything that gets too close. It can even swallow entire stars. Nothing can move fast enough to escape a blackhole’s gravity. This includes light, the fastest thing in the universe. Thể is no Blackhole close to our Solar System that can harm us.***

***Solar Eclipse and Lunar Eclipse***

***An Eclipse occurs when one object in space blocks an observer from seeing another object in space. From Earth there are two main type of eclipses: Solar eclipses and Lunar eclipses. A Solar eclipse occurs when the Moon passes in front of the Sun causing a shadow to fall on certain portion of the Earth.***

***A lunar eclipse occurs when the Moon passes through the Earth’s shadow, so when we look at the Sun we see only a black circle. Lunar eclipse is very safe to look at directly. However, we should warn you here to never look directly at a solar eclipse. Even though it appears darker, the harmful ray of the Sun can still damage your eyes.***

***Formation of the universe***

***The Big Bang was a massive heat explosion that started the universe nearly 14 billio years ago. This amazing explosion that started everything has had scientists scratching their heads for thousands of years. All scientists believe that at the time of the Big Bang, space, energy and all of the building blocks of life came into existence. The Big Bang is still continuing to this day, which causes to expand the universe every minute.***

***Meteorite***

***Meteorite is a small rock or particle of debris in our solar system. They range in size from dust to around 10 metres in diameter. A meteoroid that burns up as it passes through the Earth’s atmosphere is known as a meteor.***

***Space Station***

***A space station is a structure built in space for astronauts to live in and to make experiments for science. Space station can provide enough for astronauts to live and work in a long period. A famous example of a space station is the International Space Station - ISS***

***Booster and Shuttle***

***Space shuttle is a type of space ship designed almost like a jet. Space Shuttles were used to carry astronauts and cargo into space. It was a unique spacecraft because it could be used again and again. Now all the shuttles have retired they may be replaced by the Orion (Spacecraft). But the government has not yet funded this spacecraft.***

***A booster is either the first stage of a*** [***multistage***](https://en.wikipedia.org/wiki/Multistage_rocket) [***launch vehicle***](https://en.wikipedia.org/wiki/Launch_vehicle)***, or else a shorter-burning rocket used in parallel with longer-burning*** [***sustainer rockets***](https://en.wikipedia.org/wiki/Sustainer_engine) ***to augment the*** [***space vehicle***](https://en.wikipedia.org/wiki/Space_vehicle)***'s takeoff thrust and payload capability.***

***Satellite***

***As you know, the Moon orbits round the Earth so that it’s called satellite. However, it’s natural satellite.***

***Artificial satellites are devices that humans launch into space. They can orbit around the Earth to photograph terrains, weather forecasts, locate or transmit information and can also be sent to other planets to record valuable information for scientists.***

***Satellites vary in size. Some cube satellites are as small as 10 cm, weigh less than 1kg while some giant one can be roughly the size of the truck and weigh around 6 tons.***

***Today, about 1,500 such artificial satellites are flying around the Earth and many other satellites are exploring other planets in the solar system.***

***Alienware***

***We all want to know if there are aliens. Scientists around the world have used a variety of ways to search for life beyond earth, such as transmitting radio signals into space, sending information through space ships that are traveling away from the solar system. Unfortunately, war have never found signs of life outside of the Earth, it is very likely that one day we will have information of life out there in the universe.***

***Building solar system***

***Memory challenge***