

S IS FOR SOLAR SYSTEM

This is the oldest song in the show. I wrote it in about 2007, ten years before I started performing this show, for my band Spalien Acecraft. Here are some facts about each of the places I visit in the song, eight planets and two not-planets:

THE SUN: At the surface, the Sun is 5500° warm, but in the very centre it is more like 15,000,000° warm (the inside of your body, meanwhile, is only 37°). You could fit about a million planet Earths inside the Sun. The Sun is eight light minutes away from us, which means that it takes the light from the Sun eight minutes to get to us.

MERCURY: On Mercury, a year is shorter than a day. Mercury has no moons, no rings, no seasons, almost no atmosphere, and almost no magnetic field. In ancient times, people thought that Mercury was actually two different stars – one that came in the evening, another in the morning.

VENUS: Venus is almost the same size as the Earth, and is the hottest planet in the solar system, round 462°. About eight human-built spacecraft have successfully landed on Venus – most of them from the Soviet Union – but no human people.

EARTH: Earth is so far the only place in the Universe that we know has life. It's not a completely round ball - it's a bit flat at the top and bottom (this shape is known as an 'oblate spheroid'), and it wobbles a bit when it spins, which gives us our seasons. The Earth has only one moon, which was probably formed when a planet called Theia, which no longer exists, crashed into the Earth about four and a half billion years ago, and a big chunk broke off

MARS: You could jump three times higher on Mars than on Earth. Mars has the tallest mountain in the solar system – Olympus Mons. There are currently at least two missions being planned to send people to Mars.

JUPITER: Jupiter is the biggest planet in the solar system, and is more than twice as massive as all the other planets put together. It has a Great Red Spot, which is actually a giant storm that has been raging for 350 years. It has sixty-seven known moons, of which Ganymede is the largest, and Europa is the most likely to have life.

SATURN: Saturn is surrounded by a series of rings, which are made up of millions of tiny pieces of rock. Only four spacecraft from Earth have visited Saturn – three just flew by, and one went into orbit. No spacecraft could ever 'land' on Saturn, because it doesn't have a surface, but one spacecraft has landed on its largest moon Titan – the only moon in the solar system known to have an atmosphere.

URANUS: Uranus is a bluey-green colour because it's made of frozen ammonia and methane. Uranus is the only planet that orbits the Sun lying on its side. Most of the moons of Uranus are named after characters in the play *A Midsummer Night's Dream* by William Shakespeare.

NEPTUNE: Astronomers guessed that Neptune ought to exist when they noticed that Uranus wobbled slightly as it went round the Sun. It was first spotted with a telescope in 1846. Neptune is thirty times further from the Sun than the Earth is. Neptune's biggest moon, Triton, is the only moon in the Solar System that spins in the opposite direction to its planet.

PLUTO: Only one spacecraft has flown anywhere near Pluto – New Horizons in 2015. Pluto is named after the Greek God of the Underworld, and this name was suggested in 1930 by an 11-year-old schoolgirl in Oxford called Venetia Burney. Pluto used to be called the ninth planet, but then so many other "planets" were found further out than Pluto that they had to change their minds about what the word "planet" meant, and Pluto didn't count. So there are only eight planets in the Solar System.