Sun

The Solar System consists of the Sun and its planetary system of eight planets, their moons, and other non-stellar objects. Until 2006 when the International Astronomical Union changed the standards for a planet, there were actually 9 planets in orbit. The solar system was formed 4.6 billion years ago from the collapse of a giant molecular cloud and most of the system's mass is contained in the sun. CREATIVE AUDIO The Sun thought it had a cold, so it checked its temperature with a Mercury thermometer. As the Mercury burst into space, the sun realized it was only burning up from the alluring sight of Venus, the goddess of love. Venus is a flirt, and loves the attention, so she tossed some molten Mercury over her shoulder to catch the eye of those on Earth. But Earth is basically in the backyard of Mars, and this upset the roman god of war. Jupiter knew that manly Mars had simply misread the cues of womanly Venus, so he held back his red faced neighbor. This story of affection began with the Sun, and ends with it as well, as Jupiter displays his affection for the Sun with his S.U.N t-shirt. The S stands for Saturn, the U for Uranus, and the N stands for Neptune. While Pluto is dwarfed in size compared to any true planet, not one of them can resist throwing an ice ball for the little fella to fetch.

PLAY PICMONIC

Mercury

Thermometer filled with Mercury

Thermometer bursting balls of mercury Mercury is the innermost planet in the Solar System. It is also the smallest, and its orbit is the most eccentric (that is, the least perfectly circular) of the eight planets. It orbits the Sun once in about 88 Earth days, completing three rotations about its axis for every two orbits. The planet is named after the Roman god Mercury, the messenger to the gods.

Venus

Venus goddess of love

Venus the godess of love Venus is the second planet from the Sun, orbiting it every 225 days. The planet is named after the Roman goddess of love and beauty. After the Moon, it is the brightest natural object in the night sky, reaching its maximum brightness shortly before sunrise or shortly after sunset, for which reason it has been referred to by ancient cultures as the Morning Star or Evening Star.

Earth

The Earth

Earth is the third planet from the Sun, and the largest of the Solar System's four terrestrial planets. It is sometimes referred to as the world, the Blue Planet, or by its Latin name, Terra. Earth formed approximately 4.54 billion years ago, and life appeared on its surface within one billion years.

Mars

Mars god of war

The Roman God of War Mars is smaller than Earth and Venus, and it's atmosphere is mostly carbon dioxide. Its surface, peppered with vast volcanoes such as Olympus Mons and rift valleys such as Valles Marineris, shows geological activity that may have persisted until as recently as 2 million years ago. Its red color comes from iron oxide (rust) in its soil. Mars has two tiny natural satellites (Deimos and Phobos) thought to be captured asteroids.

Jupiter

Jupiter god of the sky

Jupiter man Jupiter is 2.5 times the mass of all the other planets put together. It is composed largely of hydrogen and helium. Jupiter's strong internal heat creates a number of semi-permanent features in its atmosphere, such as cloud bands and the Great Red Spot. Jupiter has 67 known satellites. The four largest, Ganymede, Callisto, Io, and Europa, show similarities to the terrestrial planets, such as volcanism and internal heating. Ganymede, the largest satellite in the Solar System, is larger than Mercury.

Saturn

S for Saturn

S on the shirt Saturn, distinguished by its extensive ring system, has several similarities to Jupiter, such as its atmospheric composition and magnetosphere. Although Saturn has 60% of Jupiter's volume, it is less than a third as massive, making it the least dense planet in the Solar System. The rings of Saturn are made up of small ice and rock particles. Saturn has 62 confirmed satellites; two of which, Titan and Enceladus, show signs of geological activity, though they are largely made of ice. Titan, the second-largest moon in the Solar System, is larger than Mercury and the only satellite in the Solar System with a substantial atmosphere.

Uranus

U for Uranus

U on the shirt Uranus is the lightest of the outer planets. Uniquely among the planets, it orbits the Sun on its side; its axial tilt is over ninety degrees to the ecliptic. It has a much colder core than the other gas giants, and radiates very little heat into space. Uranus has 27 known satellites, the largest ones being Titania, Oberon, Umbriel, Ariel and Miranda.

Neptune

N for Neptune

N on the shirt Neptune, though slightly smaller than Uranus, is more massive and therefore more dense. It radiates more internal heat, but not as much as Jupiter or Saturn. Neptune has 13 known satellites. The largest, Triton, is geologically active, with geysers of liquid nitrogen. Triton is the only large satellite with a retrograde orbit. Neptune is accompanied in its orbit by a number of minor planets, termed Neptune trojans, that are in 1:1 resonance with it.

Pluto

Pluto the dog

Pluto with Pluto in his mouth The dwarf planet Pluto is the largest known object in the Kuiper belt. When discovered in 1930, it was considered to be the ninth planet; this changed in 2006 with the adoption of a formal definition of planet. Pluto has a relatively eccentric orbit inclined 17 degrees to the ecliptic plane and ranging from 29.7 AU from the Sun at perihelion (within the orbit of Neptune) to 49.5 AU at aphelion. Charon, Pluto's largest moon, is sometimes described as part of a binary system with Pluto, as the two bodies orbit a barycentre of gravity above their surfaces (i.e., they appear to "orbit each other"). Beyond Charon, four much smaller moons, P5, Nix, P4, and Hydra are known to orbit within the system. Pluto has a 3:2 resonance with Neptune, meaning that Pluto orbits twice round the Sun for every three Neptunian orbits. Kuiper belt objects whose orbits share this resonance are called plutinos.