Explore The Solar System: 360 Degree Interactive Tour!

Crash Course: Astronomy
https://youtube.com/watch?v=0ytyMKa8aps
https://nerdfighteria.info/v/0ytyMKa8aps

Welcome to our Solar System. Below you will find our sun. Our star is 2 octillion tons of hot hydrogen gas emitting 400 septillion joules of energy every second. The hottest part of the sun is its 15 million°C core, where it's been fusing hydrogen into helium for the past 4.6 billions years. Despite that, it's only considered a middle aged star! Now let's check out the closest planet to our sun, Mercury. Orbiting the sun in just 88 days, Mercury also has the most elliptical orbit of any planet. It spins very slowly, once every 2/3 of its orbital period. Despite its surface reaching a blistering 430°C, it still has water ice in permanently shadowed craters near its poles, where the temperatures stay below -170° C. The next planet in our solar system is Venus. It's the planet with the hottest surface temperature; at 460°C it's hot enough to melt lead. Its air is almost entirely composed of carbon dioxide, with a thick layer of sulfuric clouds. Its rotational axis is flipped upside-down, which means that the planet spins backwards. The third and best understood planet is Earth. Our home planet has a dense metal core, a thick viscous rock mantle, and a thin crust. It's unique in the solar system for having humans and permanent liquid water on its surface. Other planets may get the former soon. At 3470 km in diameter, our Moon has the largest moon-to-planet ratio. It's thought to have formed when a small planet impacted Earth at a grazing angle billions of years ago. It's heavily cratered, and has huge flood plains on it called maria. Next up in our system is Mars. Its iconic red color comes from its rusty rocks and dust. In the past Mars was once very wet, with oceans, a thick atmosphere, and a warmer climate. But its lack of a magnetic field meant no protection from the solar wind, which eroded its atmosphere away. Between Mars and Jupiter is a large asteroid belt. It's a ring shaped region containing rubble leftover from the formation of the planets. Past the asteroid belt we find our systems Jovian planets, starting with Jupiter. A gas giant, it's the largest planet in our solar system. It has a dynamic atmosphere, including belts, zones, and a gigantic red spot created by a persistent hurricane. The Great Red Spot is a persistent anticyclonic storm. The spot is large enough to contain three Earth-sized planets. It's still unclear what exactly gives the spot its red color. The next planet in our system is Saturn. It's a gas giant with a broad set of rings. It has a hexagonal cloud pattern on its north pole. It's the least dense of all the planets, even less dense than water! Made up of ice particles, Saturn's rings are 250,000 km across, but only 10 meters thick! Gaps in the rings are created the gravitational tugging of the moons orbiting Saturn. Uranus is an ice giant with a small rocky core and a thick mantle of ammonia, water, and methane. It also has thirteen distinct rings. Uranus has a huge tilt -- 98°, with respect to its orbit. A massive glancing collision long ago is one hypothesis to explain the extreme tilt. Technically considered the last planet in our solar system, Neptune is an ice giant, with a similar composition to Uranus. It's the most dense of the outer planets and the only planet found by mathematical prediction rather than by empirical observation. At the outer edges of our solar system we find the Kuiper Belt, filled with smaller rocky and icy bodies. Pluto is in this region. It was originally discovered in 1930 and categorized as a planet, but it was recategorized as a minor planet in 2006. And there you go -- a crash course on our solar system. Even though we've explored a lot of it, there's still a huge amount left to discover. And that's the beauty of science: there's always more to learn. Thank you so much for watching! This video was created by the folks at Thought Café who have their own channel with awesome animated videos. Make sure to check them out and subscribe, links below in the doobly-doo!