



Solar System Award

All the centre of our Solar System is the Sun. It's gravity holds 8 planets in its orbit as well as other space objects. The Solar System is 4.6 billion years old.

1 **Get his/her FIRST certificate!!!**



The Sun Award

The Sun is about 14 billion km wide. 100 times bigger than the Earth. It is made made from hydrogen gas that burns to 5500°C.

2 **Get his/her SECOND certificate!!!**



Mercury Award

Moons	0
Diameter	3,000 miles
Distance from Sun	35 million miles
Time to Orbit Sun	88 days

Closest planet to the Sun and so can be very hot. It is said of the way through. Named after the messenger god of the Romans.

3 **Get his/her THIRD certificate!!!**



Venus Award

Moons	0
Diameter	7,500 miles
Distance from Sun	67 million miles
Time to Orbit Sun	225 days

Named after Roman goddess of love. It is mostly sulfur, but has liquid carbon dioxide. It is also very very hot as it has greenhouse to trap the heat.

4 **Get his/her FOURTH certificate!!!**



Earth Award

Moons	1
Diameter	8,000 miles
Distance from Sun	93 million miles
Time to Orbit Sun	365.3 days

Our planet has just the right temperature, air atmosphere and weather to support life of life.

5 **Get his/her FIFTH certificate!!!**



The Moon Award

Moons	-
Diameter	2,850 miles
Distance from Earth	240,000 miles
Time to Orbit Earth	28 days

Our moon is now almost certainly cold all the way through. The craters on the surface are caused by meteorites and comets that have hit the surface. The dark areas are old molten rock (lava).

6 **Get his/her SIXTH certificate!!!**



Mars Award

Moons	2
Diameter	4,200 miles
Distance from Sun	142 million miles
Time to Orbit Sun	687 days

Named after the Roman god of war and Mars. Mars probably once had water and is the nearest planet that we might one day live on. However, it has little atmosphere and is very cold.

7 **Get his/her SEVENTH certificate!!!**



Asteroid Belt Award

There are hundreds of thousands of asteroids between Mars and Jupiter. Asteroids are mostly metal or rock. They are not big enough to be planets or have enough gravity to become planets. Ceres is the largest known asteroid and is counted as a dwarf planet.

8 **Get his/her EIGHTH certificate!!!**



Jupiter Award

Moons	63+
Diameter	80,000 miles
Distance from Sun	485 million miles
Time to Orbit Sun	4330 days

The largest planet in the Solar System. It's surface is mostly gas but has a large water-hydrogen liquid ocean. It's famous red spot is a storm lasting for over 300 years.

9 **Get his/her NINTH certificate!!!**



Saturn Award

Moons	34
Diameter	75,000 miles
Distance from Sun	890 million miles
Time to Orbit Sun	95,000 days

Saturn is the second largest planet. It is mostly methane gas at the surface, but turns into a chemical liquid near. It's famous rings are made from dust, rock and ice.

10 **Get his/her TENTH certificate!!!**

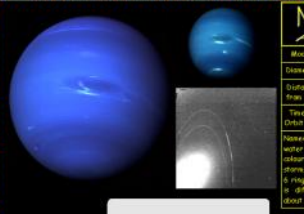


Uranus Award

Moons	27
Diameter	31,800 miles
Distance from Sun	1,800 million miles
Time to Orbit Sun	31,000 days

Thought to have once been hit by a large object, making it spin on its side. It has a rocky core, and may have icy water on the surface. The white dots in the infrared photo are clouds.

11 **Get his/her ELEVENTH certificate!!!**



Neptune Award

Moons	13+
Diameter	31,000 miles
Distance from Sun	2,800 million miles
Time to Orbit Sun	60,000 days

Named after the god of water because of its blue color. Neptune has blue storms like lightning and has rings. As it is far away, it is difficult to see much about it.

12 **Get his/her TWELFTH certificate!!!**



Pluto Award

Moons	1
Diameter	1,480 miles
Distance from Sun	3,660 million miles
Time to Orbit Sun	90,500 days

Of Pluto's 3 moons, Charon is the largest and closest. The name of Pluto, some people consider Pluto too small to be a full planet, so sometimes call it a dwarf planet.

13 **Get his/her THIRTEENTH certificate!!!**



Meteorite Award

Meteorites are pieces of space rock that reach the atmosphere. Mostly they burn up as they go through air at high speed (20,000 mph). Those that survive called shooting stars. Some make it to the ground and we study them to learn more about space. Many meteorites show a large meteorite hitting Earth may have started the end for the dinosaurs.

14 **Get his/her FOURTEENTH certificate!!!**



Comet Award

Comets come from the edge of the Solar System. They are made mostly of ice and dust. When they come closer to the sun the ice melts and it is possible to see a tail feature. A famous comet is Halley. It is about 75 miles in diameter, and lasts about a metre of ice and dust when it comes near the sun. The next time it will be near Earth will be 2061.

15 **Get his/her FIFTEENTH certificate!!!**



Stars Award

Stars are basically either gas. Most of the stars we can see are much larger than our Sun. Some stars can be up to 100 times bigger than our Sun. The largest are called super giants. The smallest are called red dwarfs. There are 100 times more stars than our Sun. Their colours are different depending on their temperature. The ones we see the hottest, but do not last very long.

16 **Get his/her SIXTEENTH certificate!!!**



Galaxy Award

Galaxies are collections of stars. They can form in different shapes and can have anything from 100 million to 400 billion stars of their own. The shapes are spiral, elliptical or irregular. Our own galaxy is called the Milky Way. This is part of a group of 30 galaxies.

17 **Get his/her SEVENTEENTH certificate!!!**



Black Hole Award

Black holes are caused by stars which have run out of gas. After burning of their fuel, they begin to shrink, and then and there. Their gravity gets stronger as this happens, and it can pull in anything around it. If something gets pulled in, it is impossible to get out.

18 **Get his/her EIGHTEENTH certificate!!!**



Hubble Award

The Hubble Telescope orbits in the Earth's orbit about 300 miles above the surface. It does not have to look through clouds or the atmosphere so it can take fantastic pictures of space. It is powered by the sun and moves at 5 miles per second. It was launched in 1990, and it did not work in 2000. It has taken many fantastic pictures, and scientists have taken many reliable other planets and many more space objects.

19 **Get his/her NINETEENTH certificate!!!**



Big Bang Award

The Big Bang is a theory that explains how the universe began. Scientists think that it started 14 billion years ago from nothing. When the explosion happened, the universe began to get bigger and bigger. It is still growing now. Some particles crashed into each other creating gas and eventually stars. From the stars come more explosions and then planets. Nobody is sure what happened before the explosion or how it will end.

20 **Get his/her TWENTIETH certificate!!!**