

What's in the Universe?

1. Comets/Asteroids/Meteors

Asteroids are irregularly shaped objects made out of rock and metal.

Comets are similar to asteroids but contain a large amount of ice, causing them to have a tail of dust or gas trailing behind them.

Meteors are small fragments of asteroids or comets, between a dust grain and 1 metre in size.

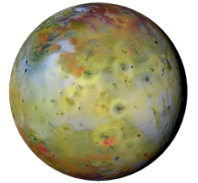


2. Moons

Moons are larger than asteroids, and orbit planets.

Most planets in the solar system have at least one moon.

The moon is what causes the tides on Earth, by pulling on the oceans with gravity.



3. Planets

Planets are bigger than moons, and orbit stars.

Mercury, Venus, Earth, and Mars are called terrestrial planets, meaning they are made of rock and metal.

Jupiter and Saturn are gas giants, made mostly of hydrogen and helium.

Uranus and Neptune are ice giants.

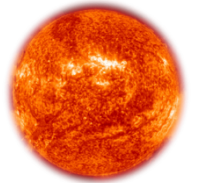


4. Stars

Stars are the centres of their solar systems. The sun is the star in our solar system.

A star is a huge ball of gas (mostly hydrogen), producing enormous amounts of heat.

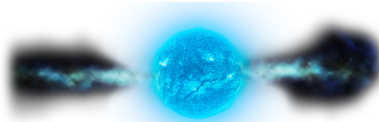
The heat from a star is a result of nuclear fusion, stars are nature's nuclear reactors.



5. Dead Stars

After stars run out of fuel, they become colder and stop glowing as brightly.

White Dwarf Stars and **Neutron Stars** are much smaller than stars like our sun. White dwarves are smaller than the Earth, and neutron stars are even smaller than some cities!



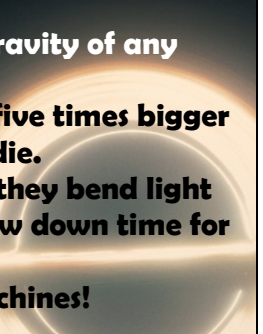
6. Black Holes

Black holes have the strongest gravity of any objects in the Universe.

They're formed when stars over five times bigger than our sun go supernova and die.

Black holes are so massive, that they bend light around them, and drastically slow down time for those nearby.

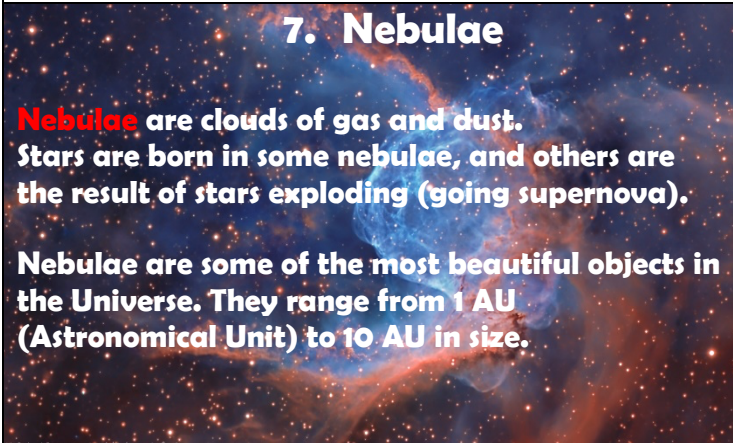
Black holes are natural time machines!



7. Nebulae

Nebulae are clouds of gas and dust. Stars are born in some nebulae, and others are the result of stars exploding (going supernova).

Nebulae are some of the most beautiful objects in the Universe. They range from 1 AU (Astronomical Unit) to 10 AU in size.



8. Galaxies

Galaxies are large collection of stars held together by gravity, most commonly in the shape of a spiral.

Almost all galaxies have a supermassive black hole at their centre.

The centre of our galaxy smells like raspberries! (no, really!)

