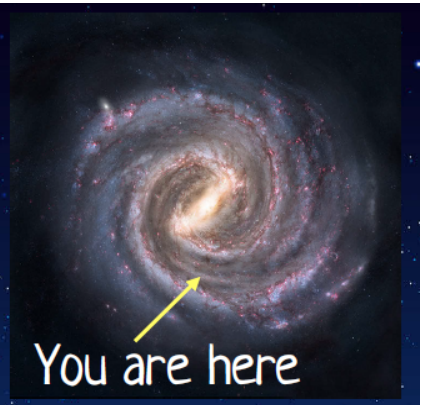
9.2.21

Can I explore the different planets?

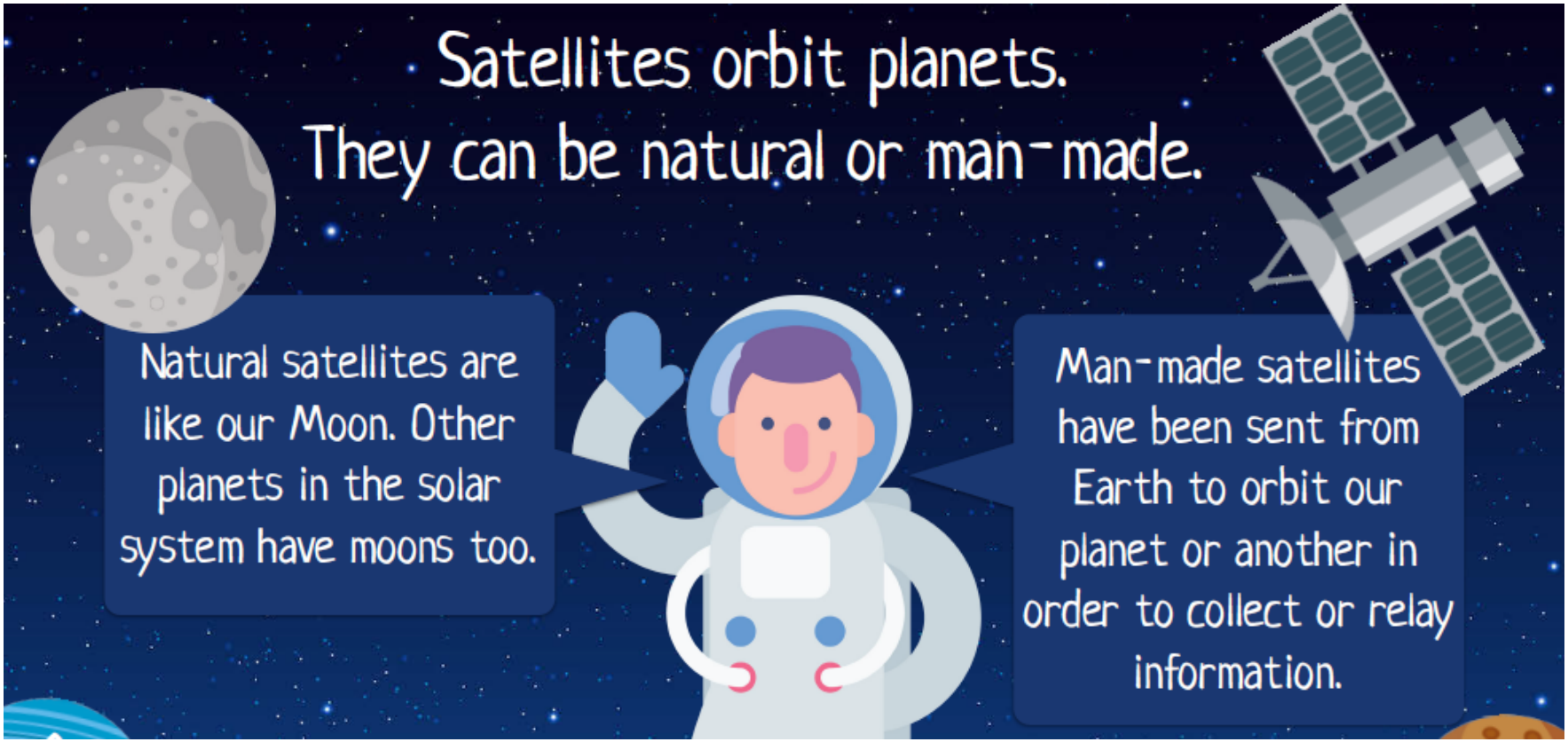

What do you already know about our solar system?
How many planets are there?
What's the difference between a solar system and a galaxy?
Which is the biggest/ smallest planet?
Other than planets, what else is in the solar system?
What order are the planets in?

A galaxy is a group of millions or billions of stars, together with gas and dust, held together by gravitational attraction.
The galaxy we are in is called the Milky Way.



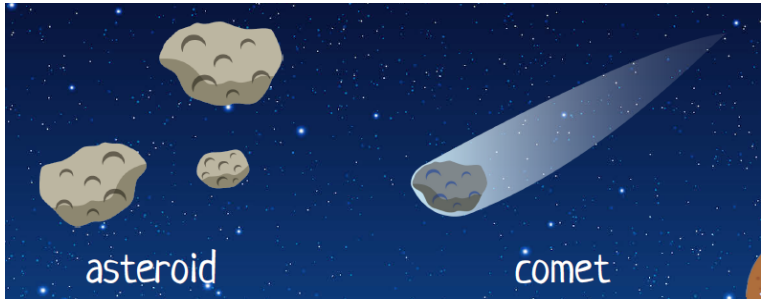
A solar system is a set of planets and other objects which orbit a star.


The star in our solar system is one of an estimated billions of stars in our galaxy alone!
Orbiting our star in our solar system there are four main groups of objects.
Think, pair, share... What is the difference between these objects?
Satellites
Planets
Comets and asteroids
Dwarf planets
Next

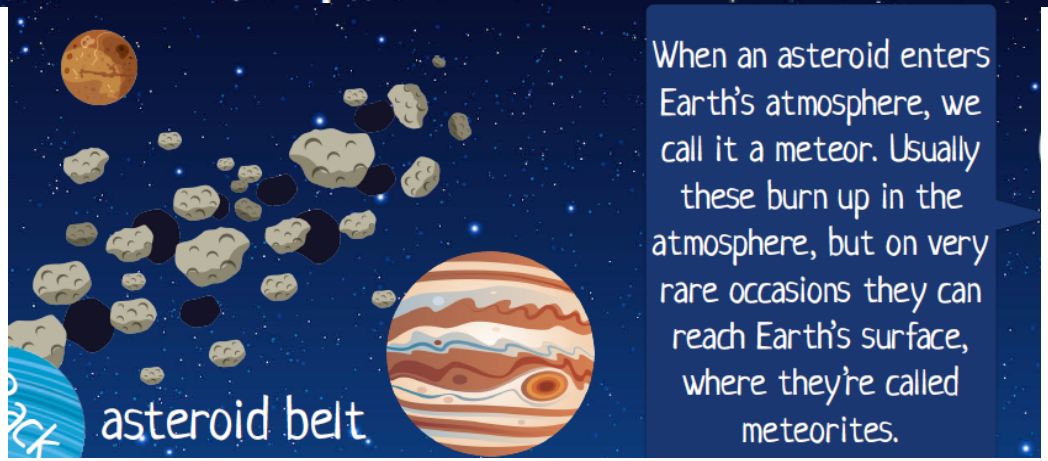

Satellites orbit planets.
They can be natural or man-made.
Natural satellites are like our Moon. Other planets in the solar system have moons too.
Man-made satellites have been sent from Earth to orbit our planet or another in order to collect or relay information.

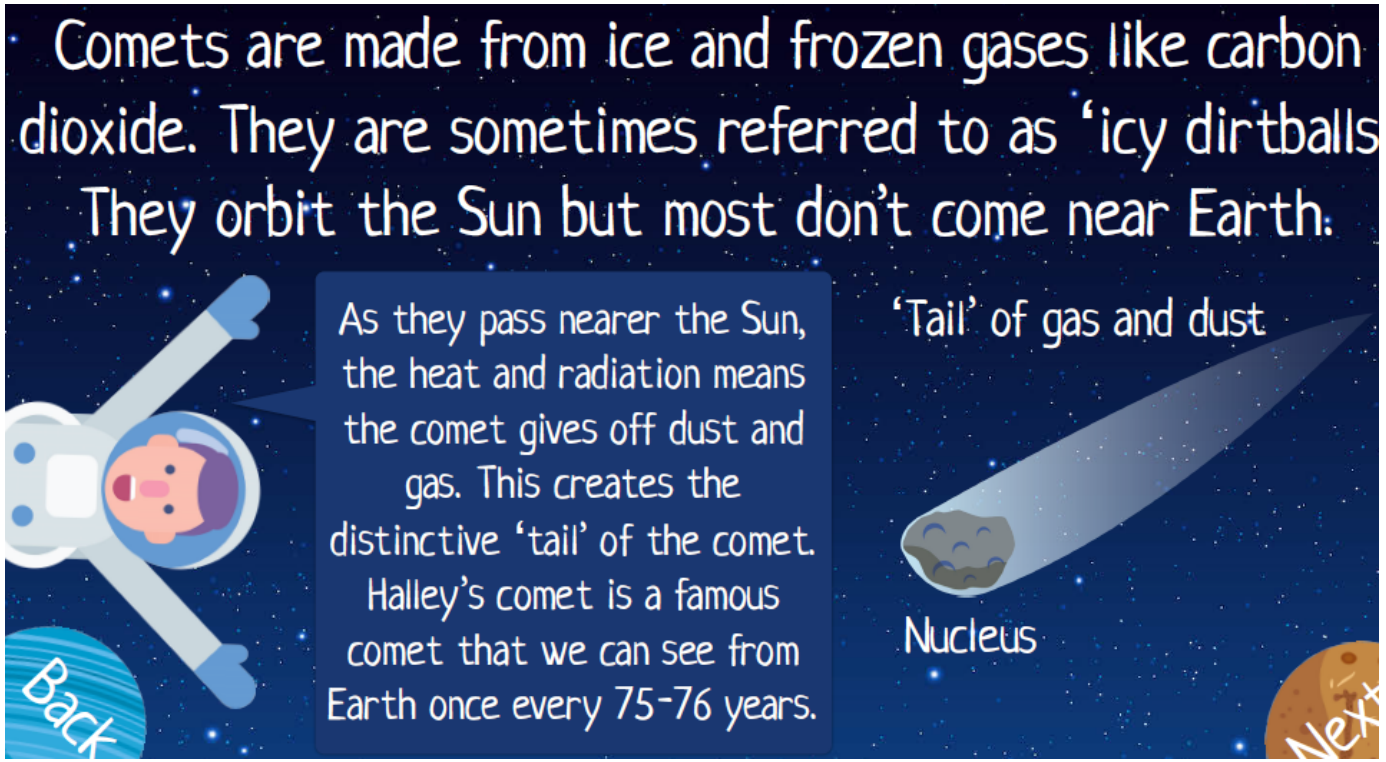

Dwarf planets are similar to planets but they haven't conformed to one or more of the rules to make a planet.
Ceres is the nearest of three dwarf planets (Ceres, Pluto and Eris) in our solar system.
Pluto used to be considered a planet, but it doesn't meet the third rule. It is not large enough to have cleared other large objects nearby. It was demoted to a dwarf planet in 2006.

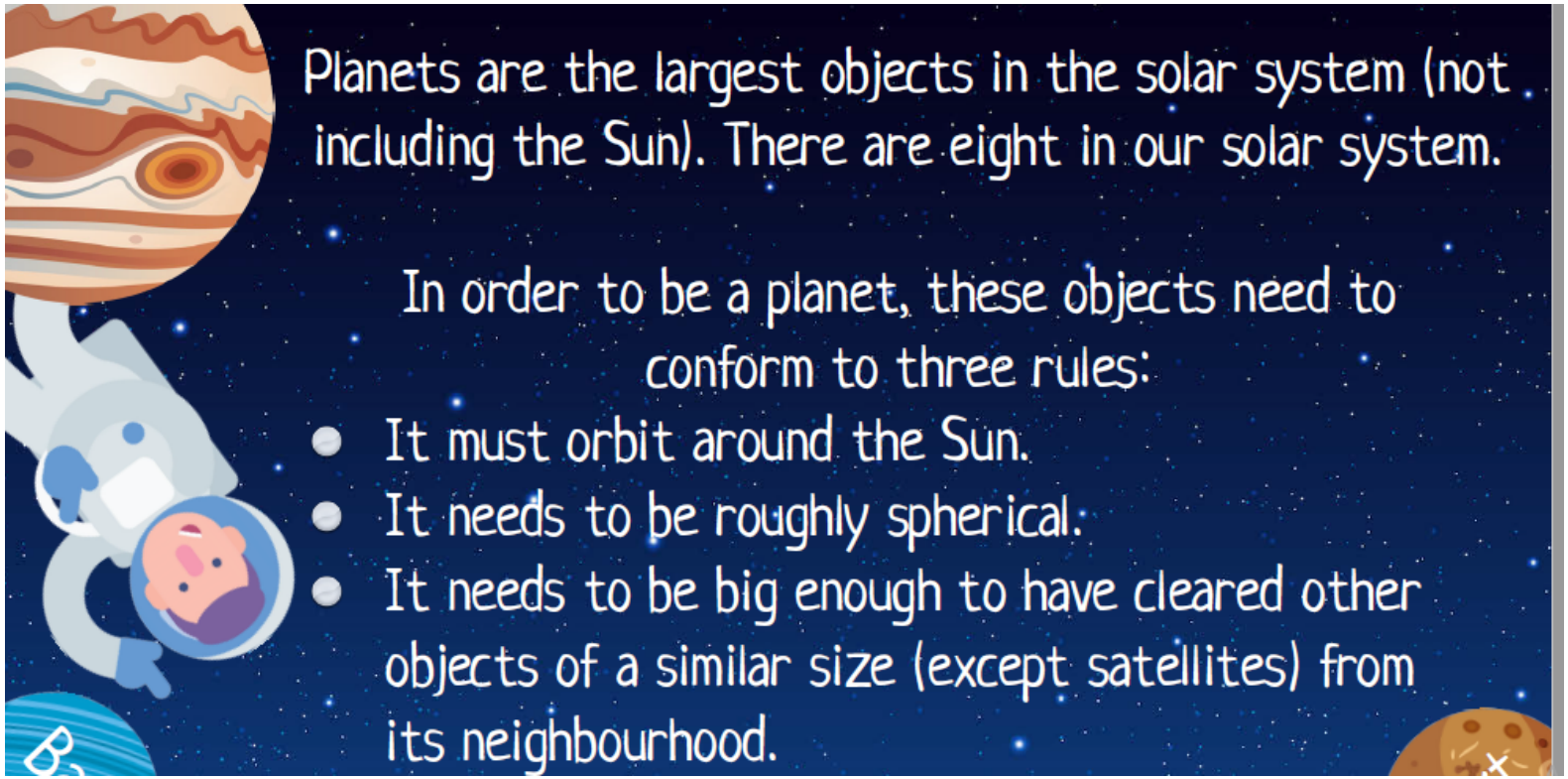
Asteroids and comets are some of the smallest objects in the solar system. They are both irregularly shaped objects which orbit the Sun.

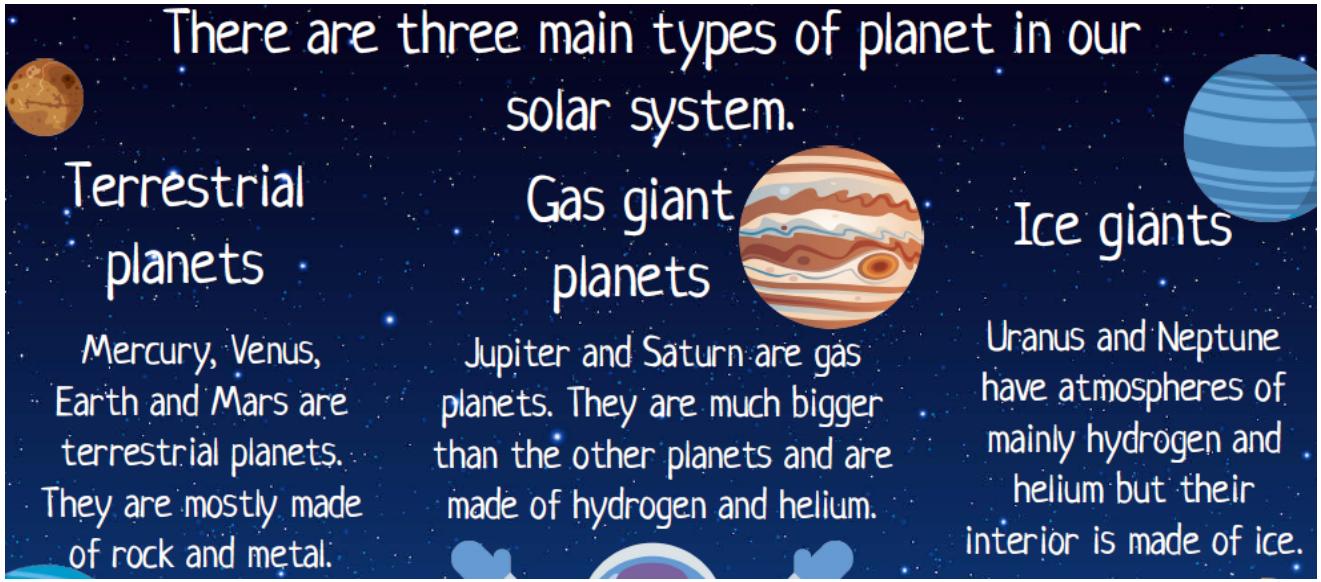


Asteroids are usually made from rocks or metal and are in space. There is a large area filled with asteroids between Mars and Jupiter called the asteroid belt.

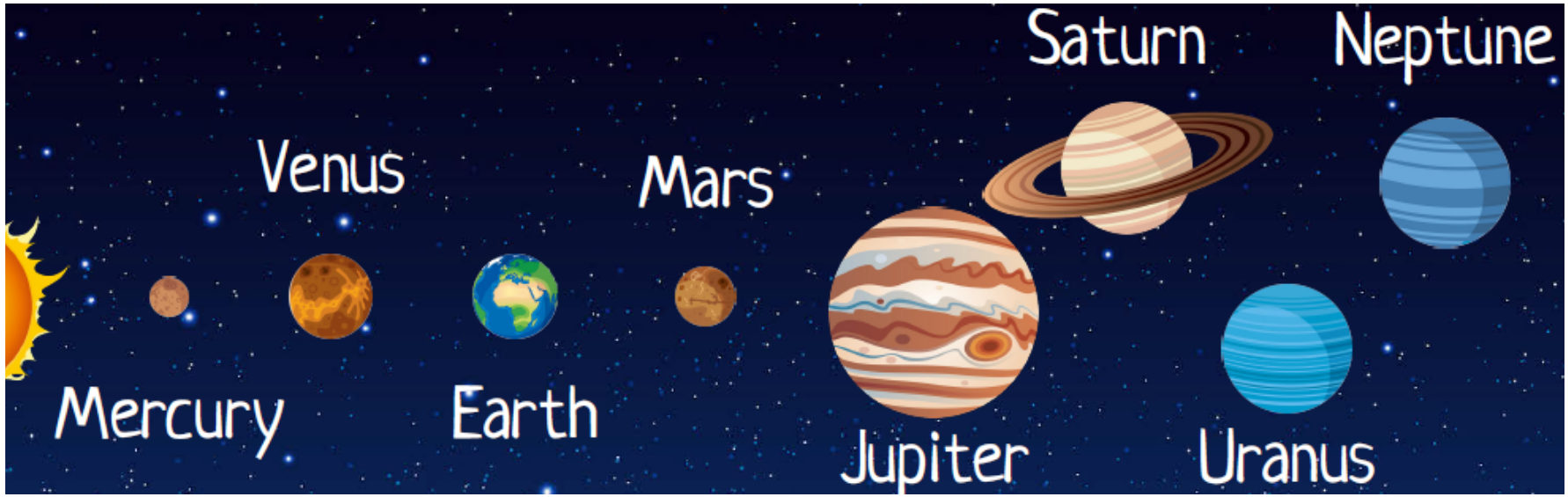


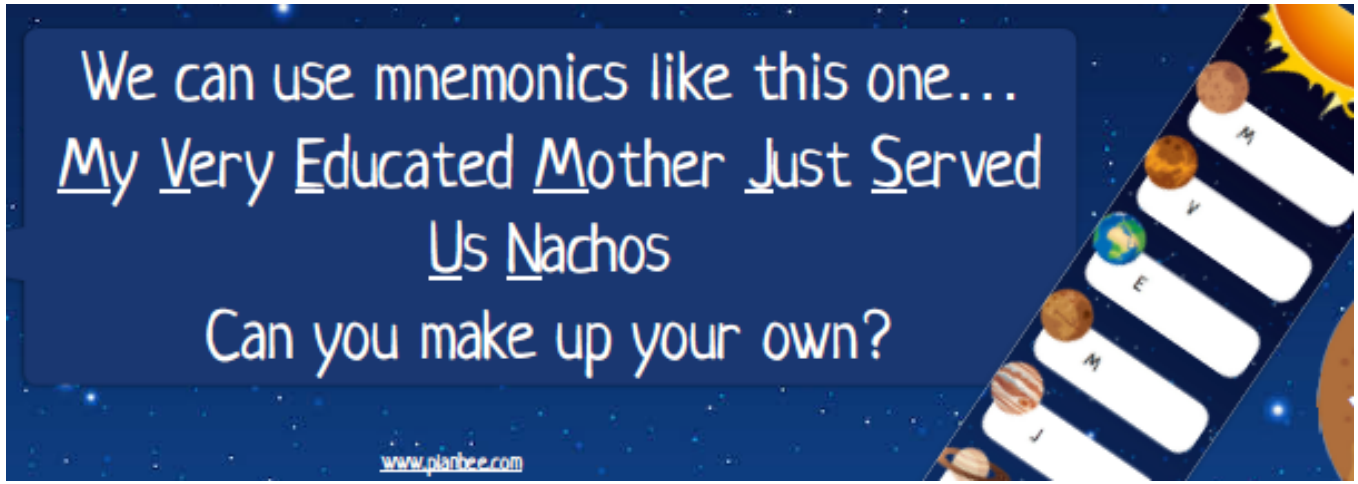

Comets are made from ice and frozen gases like carbon dioxide. They are sometimes referred to as 'icy dirtballs' They orbit the Sun but most don't come near Earth.
As they pass nearer the Sun, the heat and radiation means the comet gives off dust and gas. This creates the distinctive 'tail' of the comet. Halley's comet is a famous comet that we can see from Earth once every 75-76 years.
'Tail' of gas and dust
Nucleus
Back


Planets are the largest objects in the solar system (not including the Sun). There are eight in our solar system.
In order to be a planet, these objects need to conform to three rules:
It must orbit around the Sun.
It needs to be roughly spherical.
It needs to be big enough to have cleared other objects of a similar size (except satellites) from its neighbourhood.


There are three main types of planet in our solar system.
Terrestrial planets
Mercury, Venus, Earth and Mars are terrestrial planets. They are mostly made of rock and metal.
Gas giant planets
Jupiter and Saturn are gas planets. They are much bigger than the other planets and are made of hydrogen and helium.
Ice giants
Uranus and Neptune have atmospheres of mainly hydrogen and helium but their interior is made of ice.


Can you name the planets in order?


Saturn
Neptune
Venus
Mars
Mercury
Earth
Jupiter
Uranus


We can use mnemonics like this one...
My Very Educated Mother Just Served
Us Nachos
Can you make up your own?
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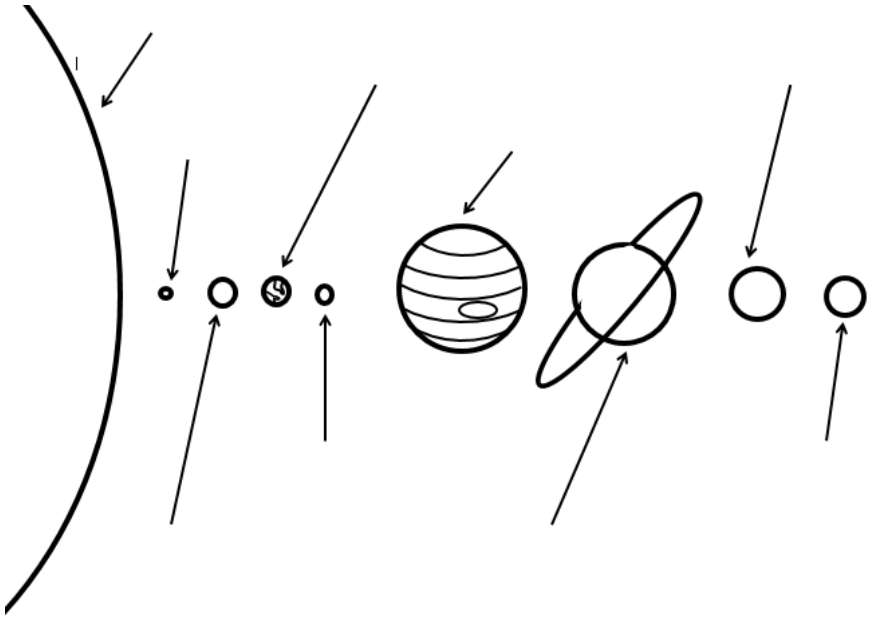

On the sheet can you add information and the names of the planets?

Or you could draw your own.