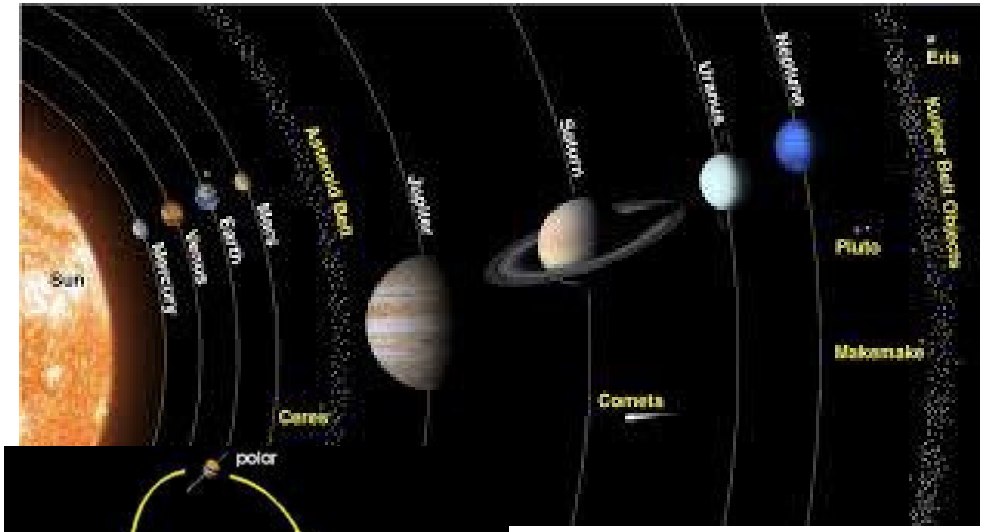
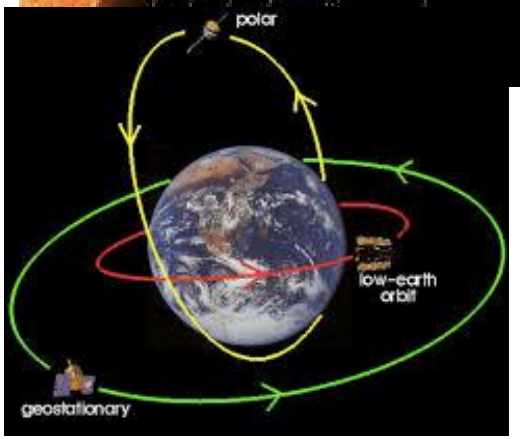
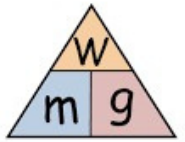
1	The geocentric model of the solar system proposed by Ptolemy(an ancient Greek astronomer) putsEarth at the centre of the solar system.
2	Theheliocentric model of the solar system puts the sun at the centre of the solar system and was first suggested by Copernicus (a Polish astronomer)
3	The heliocentric model of the solar system is also supported by Jupiter's moons orbiting the planet Jupiter,discovered by Gallileo(an Italian astronomer).
4	Theplanets that make up our Solar system are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
5	Mercury is the planet closest to the sun in our Solar system.
6	Neptune is the planet furthest from the sun in our Solar system.
7	Our Solar systemalso contains dwarf planets, asteroids and comets.
8	Today telescopesin orbit around the Earth give much clearer images than telescopes on the ground because they are outside of the Earth's atmosphere.
9	Different types of telescope are used to detect different types of electromagnetic waves.
10	Your weight is theforce of gravity acting on you, W = m x g, where g is the gravitational field strength on the surface of a body or object such as Earth.
11	The planets moonsand other bodiesin our solar system havedifferent gravitational field strength.
12	A satelliteis an object that orbits another. Satellites can be natural (like the moon) or artificial (like the international space station).
13	Artificialsatellites have different uses depending on their orbits.
14	Highlyelliptical orbiting satellites are used for communication in parts of the Earth near the poles.





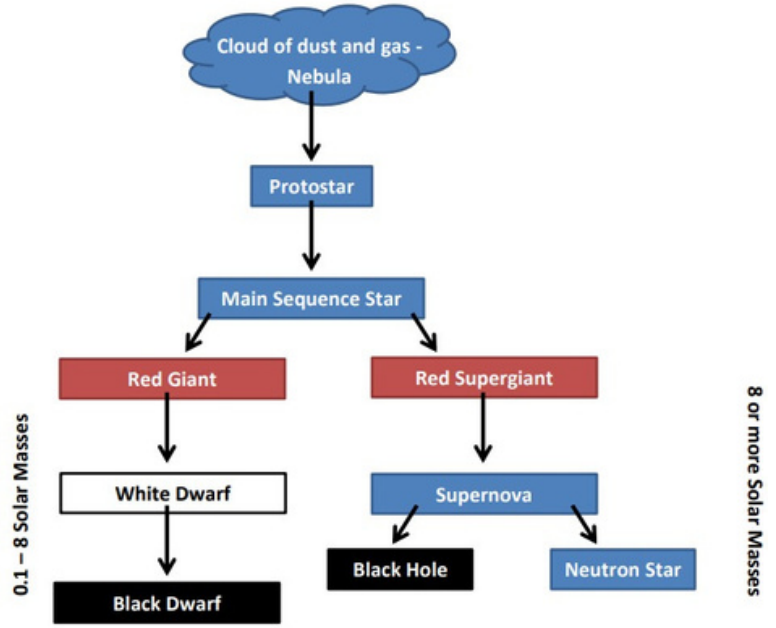
$$W = m \times g$$

Weight (N) = Mass (kg) x Gravitational field strength (N / kg)



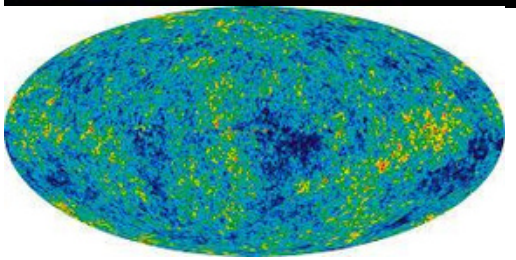
15	Ageostationary orbit means that the satellite remains over the same point on the Earth.
16	Geostationary satellites are used for broadcastingand move at 3070 m/s
17	Satellitesin low Earth orbits need to move at much greater velocity to overcome the increased pull of the Earth's gravitational field. These satellites move at around 7500 m/s
18	A satellite in polar orbit will eventually pass over all partsof the Earth.

1	Stars begin life as a nebula. This is a cloud of dust and gas(75% hydrogen).
2	Inthe nebula it becomes more hot and dense as it's gravitational pull increases and it attracts more mass. It then becomes a protostar.
3	When the temperature and pressure in the centre of the protostarbecome high enough they force hydrogen nuclei together to form helium. This is known as a fusion reaction.
4	When the outwardpressure from the hot gas is balanced by the inward pull of gravity the star is now a main sequence star and is stable.
5	Stars spendmost of their life in the main sequence stage. Nuclear fusion is constantly taking place.
6	Thenext stage of a stars life depends on the mass of the star.
7	A star that is a similar size to our sunwill then become a red giant and eventually a white dwarf.
8	In a red giantthe core of the star is not hot enough to withstand gravity and it collapses, this causes the outer layers to expand.
9	Thered giant eventually throws off a shell of gas and the rest of the star is pulled together and collapses to form a white dwarf.
10	No fusionreaction happen in a white dwarf.
11	A white dwarf gradually cools to become a black dwarf.
12	Stars that are more massive than our sun follow a different path after their main sequence.
13	After their main sequence, moremassive stars become red supergiants.
14	After hered supergiant stage the star collapses and then explodes in a supernova where the outer layers of the supergiant are cast off and expand outwards.
15	What happensafter the supernova also depends on the mass of the star.



16	Onlythe most massive stars then go on to become ablack hole where the gravitational pull is so strong that not even light can escape.
17	Those supernovathat are not massive enough to become a black hole form a small, very dense star called a neutron star.

1	The Dopplereffect is a change in the pitch of a sound wave due to the source of the sound moving.
2	As the sound travels towards you the wavesare compressed which produces a shorter wavelength.
3	Shorter wavelength = higher frequency and with sound a higher frequency produces a higher pitch noise.
4	As the sound travels awayfrom you the waves are stretched which produces a longer wavelength.
5	Longer wavelength = lower frequency and with sound alower frequency produces a lower pitch noise.
6	The same effect happens to visible light from distantgalaxies. This effect is called red-shift.
7	Ifthe light is moving towards us the waves are compressed and we see a shift in the visible light to the blue end of the spectrum.
8	If the light is moving awayfrom us the waves are stretched and we see a shift in the visible light to the red end of the spectrum.
9	Redshiftcan be seen on absorption spectra where black lines represent the shift in visible light.
10	Thefurther away a galaxy is, the greater its red-shift and so the faster it is moving away from us.
11	Red shift provides evidence that the universe is expanding and supports boththe Big Bang theory and the Steady State theory
12	The Big Bang theory states that universestarted out as a tiny point of concentrated energy 13.8 billion years ago, that it expanded from this point and that it is still expanding.
13	Steady State theory states that the universe has always existed and is expanded and that new matter is continuously created as it expandsso density remains the same.



14	CMBRstands for cosmic microwave background radiation. You may sometimes see it shortened to just CMB.
15	CMBR isthe remaining radiation released in the Big Bang.
16	CMBRprovides evidence for the Big Bang theory only and cannot be explained by Steady State theory.
17	Because thereis more evidence supporting the Big Bang theory, this is accepted as our current theory of hoe the universe began.