

Knowledge Organiser

Year 5
Earth and Space

VOCABULARY

Planets- celestial body moving in an elliptical orbit round a star

Celestial- positioned in the sky, or outer space as observed in astronomy.

Spherical- shaped like a sphere.

Solar System- collection of eight planets and their moons in orbit around the sun, together with smaller bodies in the form of asteroids, meteoroids, and comets.

Rotates- move or cause to move in a circle round an axis or centre.

Galaxy- a system of millions or billions of stars, together with gas and dust, held together by gravitational attraction.

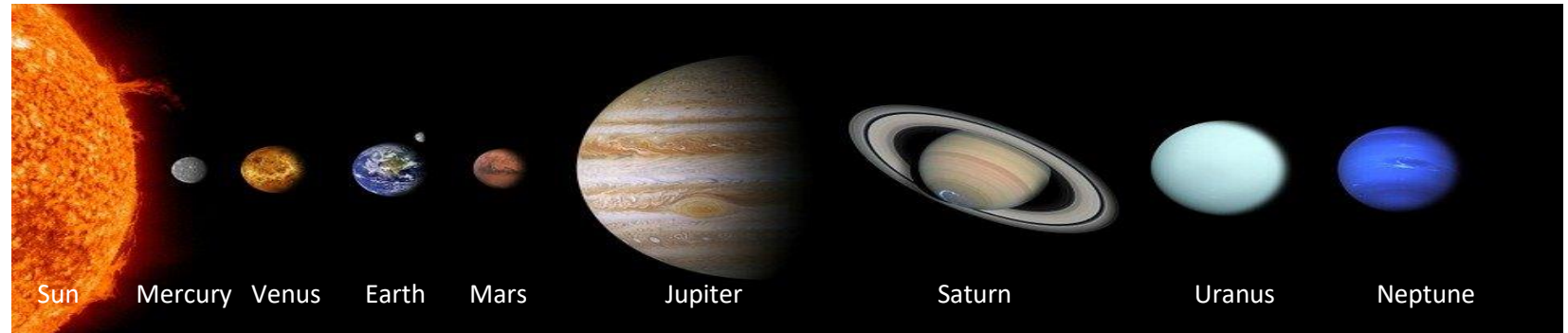
Hemisphere- half of the Earth, usually divided into Northern and Southern.

Orbit- curved path of celestial object or spacecraft round a star, planet or moon.

Lunar- determined by or resembling the moon.

revolve- move in a circle on a central axis.

The Solar System



Sun

Mercury

Venus

Earth

Mars

Jupiter

Saturn

Uranus

Neptune




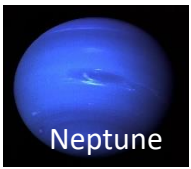


Rocky planets- Mercury, Venus, Earth and Mars

Gas Giants- Jupiter, Saturn, Uranus, Neptune

Pluto is no longer classed as a planet due to its size.

Planet, Star, Moon.

Here are some examples of each.

Planet	Star	Moon
 Earth	 THE SUN	 Moon
 Neptune	 VY Canis Majoris	 Ganymede

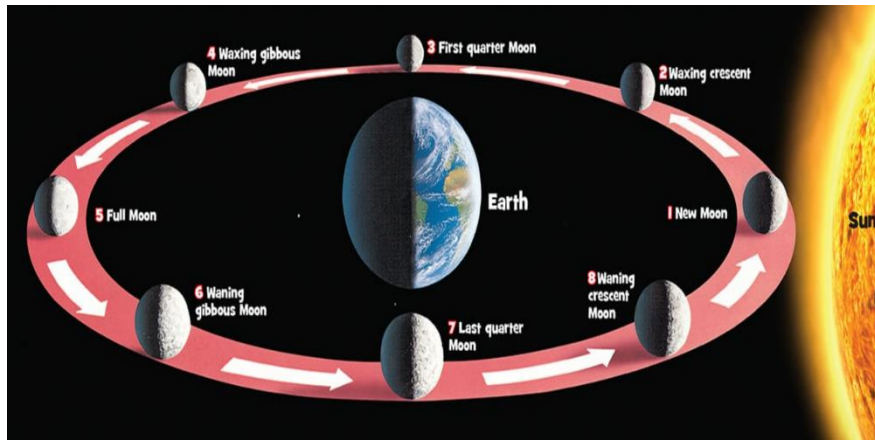
Planet Sizes

- Mercury – 1,516mi (2,440km) radius; about 1/3 the size of Earth
- Venus – 3,760mi (6,052km) radius; only slightly smaller than Earth
- Earth – 3,959mi (6,371km) radius
- Mars – 2,106mi (3,390km) radius; about half the size of Earth
- Jupiter – 43,441mi (69,911km) radius; 11x Earth's size
- Saturn – 36,184mi (58,232km) radius; 9x larger than Earth
- Uranus – 15,759mi (25,362km) radius; 4x Earth's size
- Neptune – 15,299mi (24,622km) radius; only slightly smaller than Uranus



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Moon Phases



New Moon:	
First Quarter:	
Full Moon:	
Third Quarter:	

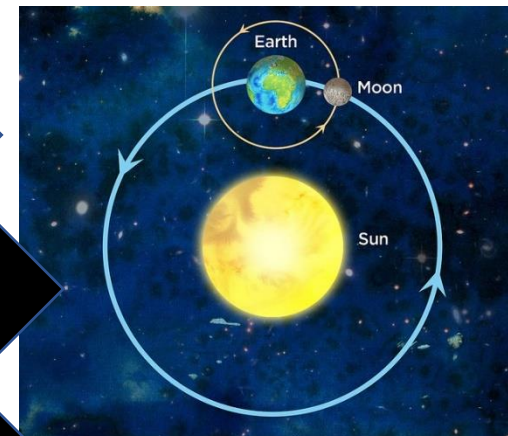
Facts

- One million Earths could fit inside the sun- and the sun is considered an average-size star.
- Comets are leftovers from the creation of our Solar System 4.5 billion years ago- they consist of sand, ice and carbon dioxide.
- There are more stars in the universe than grains of sand on all the beaches on Earth. That's at least a billion trillion.
- The sunset on Mars appears blue.

The Moon has no light of its own. Moonlight is sunlight reflecting off the Moon's surface. As the Moon orbits the Earth the sun lights up whatever side of the Moon is facing it.

The moon takes 27.322 days to orbit the Earth. Some sources quote 27 days and other 28 days.

Day and Night



The Earth rotates around the sun once every 24 hours.

The Moon rotates around the Earth once every 27.3 days (28 days).

Science Capital- Astronauts

Neil
Armstrong
1930-2012



American astronaut- the first person to walk on the moon.

Buzz Aldrin
1930-



Made 3 space walks. Apollo 11 mission. First two people to land on the moon.

Tim Peake
1972



First British ESA astronaut. The second astronaut to bear a flag of the United Kingdom

Helen
Sharman
1963



First British person and first privately funded women in space. First women to visit the Mir Space station in 1991.

Yuri
Gagarin
1961-1968



First human being to travel into space. First man to orbit the planet.

