

# Connections in Supersonic Space!

## Knowledge Organiser

### Key Definitions








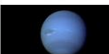
Term	Definition
1 Star	A burning mass of gas that makes heat and light energy (E.g. the sun).
2 Planet	An astronomical object that orbits a star and does not emit its own light. It can be terrestrial (dense and rocky) or Jovian (gas giant).
3 Gravity	The force that attracts an object towards a larger object.
4 Solar System	A star with objects (such as planets) revolving around it.
5 Light-year	The distance light travels in a year (≈9.46 trillion km).
6 Galaxy	An extremely large group of stars and planets that extends over many billions of light-years, held together by gravity (E.g. Milky Way and Andromeda).
7 Universe	All of space and everything in it (including stars, planets and galaxies).
8 Satellite	An object either natural (E.g. a moon) or man-made, that orbits around a planet.
9 Orbit	A curved path of a planet, satellite or spacecraft around an object such as the sun due to the attraction of gravity.
10 Vacuum	A space with no air.
11 Asteroid	Irregularly shaped rock that orbits the sun, mostly occurring in the asteroid belt.
12 Meteor	A mass of rock that burns after entering the Earth's atmosphere (meteorite when the rock has cooled on Earth)
13 Comet	A mass of ice and dust that has a long, luminous tail of gas.
14 NASA	The National Aeronautics and Space Administration – a US agency responsible for the exploration and study of space.
15 Astronomy	The branch of science that deals with space and the physical universe as a whole.

### Key Person



Katherine Johnson (1918-2020)

### Order of the Planets

- Mercury 
- Venus 
- Earth 
- Mars 
- Jupiter 
- Saturn 
- Uranus 
- Neptune 



### Space Exploration

Humans in space	
1 Laika	The first animal in space was a dog aboard Sputnik 2 in 1957.
2 Yuri Gagarin	First human in space 1961, aboard the Vostok 1.
3 Neil Armstrong	First person on the moon in 1969 aboard Apollo 11.
4 International Space Station (ISS)	Collaboration launched in 1998.

Solar System Missions	
1 Sputnik 1	The first man-made satellite to orbit the Earth, launched by the Soviet Union in 1957.
2 Mars Landers and Rovers	First launched in 1975 with plans to launch again in 2020 as part of the mission to get man on Mars by 2030.
3 Galileo	Launched 1989 exploring Jupiter and its moons.
4 Hubble Telescope	Launched 1990 - captured images of both our own and distant galaxies.
5 Cassini	Launched 1997 - exploring Saturn and its rings.

### Ideas for Home

- Things to try at home to support learning:
- Research some information about a specific planet
  - Plan a space holiday with Virgin Galactic
  - Keep a moon diary
  - Write a prediction about what might be found on Europa
  - Draw a timeline of key Space events
  - Create a sundial to study shadow changes

### Key Facts

- There are 24 hours in a day
- There are 365 ¼ days in a year
- The moon takes 28 days to orbit the Earth
- Earth rotates on an axis and is on a 23.5° tilt

### Moon Phases

