

Pye Bank CE Primary DSAT Knowledge Organiser

YEAR: 3

PHYSICS : How have humans explored space?

SCIENCE

KEY SCIENTIST



Tim Peake

(Born: 7 April 1972)

Born in Chichester, England, on 7 April 1972, Tim was the first British ESA astronaut to visit the International Space Station. He launched on a Soyuz rocket on 15 December 2015 and landed back on Earth on 18 June 2016 after 186 days in space.



Mae Jemison

(Born: October 17, 1956)

Mae Carol Jemison (born October 17, 1956) is an American engineer, physician, and former NASA astronaut. She became the first black woman to travel into space when she served as a mission specialist aboard the Space Shuttle Endeavour. Jemison joined NASA's astronaut corps in 1987 and was selected to serve for the STS-47 mission, during which she orbited the Earth for nearly eight days on September 12th-20th 1992.

KEY VOCABULARY

Asteroids: Rocks floating around in space. Some are the size of a pick-up truck. Others are hundreds of miles across.

Comet: An icy rock that lets off gas and dust, which may form tails when it is flying close to a sun.

Meteoroid: A little chunk of rock in space smaller than a pick-up truck. If it were bigger, it would be an asteroid.

Meteor: The streak of light caused when a meteoroid enters a planet's atmosphere and starts to burn from the heat of friction.

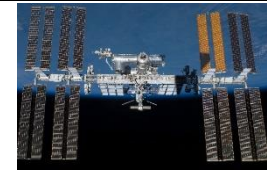
International Space Station (ISS): a large spacecraft in orbit around Earth.

Satellite: An object that orbits another object. A moon is actually a satellite. We also say satellite to refer to spacecraft people build that orbit Earth, other planets, moons, asteroids, or other objects out in space.

STICKY KNOWLEDGE

1. Europe's biggest ISS project is the Columbus science laboratory, where astronauts can carry out scientific experiments in weightless conditions. Many different types of experiments can take place both inside and outside this space laboratory.
2. Rovers help scientists in their quest to understand what different parts of the planet are made of. Mars is made up of lots of different types of rocks, and each rock is made up of a mixture of chemicals. A rover can drive around to different areas, studying the different chemicals in each rock. These chemicals can tell scientists something about the environments that changed that rock over time.

KEY CONCEPT



The International Space Station (ISS)

The ISS launched on November 20th 1998. The ISS is the biggest object ever flown in space. It travels around the Earth at an average speed of 27,700 km/h, completing 16 orbits per day. At night it can easily be seen from Earth, as it flies 320KM above us.

16 countries, including the USA, Russia, Japan, Canada and many ESA member states worked together to build the Station.

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KEY CONCEPT



The Mars Rover

Over the years, NASA has sent four robotic vehicles, called rovers, to Mars and NASA plans to send another soon. In total, the four rovers that have already gone to Mars are: Sojourner, Spirit, Opportunity and Curiosity. The Perseverance rover will be latest rover heading to the Red Planet.

Rovers have wheels and specialize in moving around. They land on the surface of Mars and drive around to different spots. Rovers help scientists in their quest to understand what different parts of the planet are made of. A rover can drive around to different areas, studying the different chemicals in each rock. These chemicals can tell scientists something about the environments that changed that rock over time.