Year 5- Autumn Term 1- Could you walk in Neil Armstrong's footsteps? 3 things I would like to find out: How long does it take Earth to What is gravity and why is it Comparative and fair testing: Can we use our knowledge of important to life on Earth? air resistance to increase the length of time a paper spinner orbit the sun? stays in the air? What is friction and what Do other planets in our solar system orbit the sun like Earth? effect does it have on **Identifying, classifying and grouping:** Can we group stars, planets, satellites and asteroids? objects? Why does the moon not orbit the sun like Earth does? Do all materials create the **Pattern seeking:** How are cars, aeroplanes and boats same amount of friction? streamlined to increase the speed at which they travel? Why does the moon look different at different times of the month? What is air resistance and **Research with secondary sources:** What do you need to be an astronaut? What are some features of the different what effect does it have on What are the different phases of objects? planets; what are their similarities and differences? the moon? How does a rocket escape **Observing over time:** What differences in the moon over the What causes day and night on Earth's atmosphere? course of a month? Can we use a sun dial to tell the time Earth? using shadows created by the sun over the course of a day? Who were the first people to travel to the moon and was What are some artefacts and pieces of evidence left behind from their mission a success? the first moon landing? Who is Katherine G Johnson and why is she so important to Can these artefacts and pieces of evidence help us to conclude whether the first moon landing did in fact take place? space exploration? What was the space race and who 'won'? **Geography: Computing: Art and Design: Design Technology:** Where in the world do rockets launch Design and make a pulley Use the internet to gather Create abstract space/ and land? driven motorised moon information about a planet and rocket pictures based on buggy. present our research on the art of Peter Thorpe. What are the physical features of PowerPoint (Google Slides.) rocket launching and landing sites? NGST **Recording data Asking Questions** Observing **Making Predictions Setting up Tests Evaluating Communicating Results**

















Year 5- Autumn Term 1– Could you walk in Neil Armstrong's footsteps?

KEY VOCABULARY

	solar system and the third planet from the sun.
Sun	The star in the middle of our solar system.
Planet	A large body in outer space that circles

around the sun or another star. Moon The Earth's natural satellite.

Earth

Satellite

Solar System

Atmosphere

Orbit

Axis

A small object (sometimes a machine) that moves around a larger object in space.

Our planet. The fifth largest planet in the

Our sun, its eight planets and their moons, and all other bodies that travel around the sun.

The layer of gas that surrounds the Earth.

Geocentric	Having the Earth as the centre.
Geocentric	Having the Earth as the centre

Heliocentric Having the sun as the centre.

The curved path in which a planet, satellite, or spacecraft moves in a circle around another body.

A real or imaginary line through the centre
of an object, around which the object turns.

Rotation The action of turning on or around an axis.

Notation	The action of turning on of around an axis.
Gravity	A force which pulls object towards the

Earth. Friction The force of objects rubbing together.

Air Resistance The force of air slowing down a moving object.

Water The force of water slowing down a moving Resistance object.











Katherine Johnson



Katherine Johnson was a mathematician who worked for NASA for more than 30 years. She helped to calculate the flightpath to send Apollo 11 safely to the moon and back again and therefore played a vital role in putting the first astronaut into orbit. Katherine had to overcome gender and racial discrimination since women and black people were rarely given equal opportunities during her career. Her amazing work was relatively unknown until a film was made in 2016 highlighting the invaluable work of 'hidden figures' in history. Katherine died in 2020 at the age of 101. NASA dedicated the Katherine G. Johnson Computational Research Facility to commemorate the hard work she did to help take them to the stars.