

Year 5 Autumn 1 Space Roamers overview



Big Idea: Is there anybody else out there?

In this journey, children will develop the skills and knowledge to design a robot fit for planet exploration.

HOOK: "Is there anybody else out there?" A day of exploring how big questions lead to scientific discoveries.

OUTCOME: Nasa pitch - Is your robot mission worthy?

Applied Literacy:

Summarising and retrieving information from a range of non-fiction.

Naming speech—children write a speech explaining

Applied Mathematics:

Measure— accurate measuring of length for relative distance in the Solar System 3D shape—unpicking a robot to its 3D components in readiness to design CAD

Pupil Premium Curriculum Enhancement:

Pre-teaching within the Astrodome.

Science: · Key Concept - Physics

Earth and space

-be able to design the Sun, Earth and Moon as spherical bodies and the movement of the moon relative to the Earth.

-to describe the movement of the Earth, and other planets, relative to the Sun in the solar system.

-Explore the idea that the Earth's rotation explains day and night and will investigate the apparent movement of the sun across the sky.

Design Technology: Key concept - CAD.

-using TinkerCAD, children will develop their computing skills and create a final design of a roamer for a particular planet. They will learn that CAD allows them to work in 3D and see designs in different rotations.

Computing: Key concept - Information Technology

- use computer aided design to create a 3D design initially designed on paper

Music: Respond to Holst: The Planets

-to create music which reflects given intentions.

-to use notations to record and create my music.

SMSC and Personal Skill:

-To be curious - ask questions about space and the universe.

- To aspire - to hold myself to high expectations and meet my own specifications

Community links/ Enterprise/ Experiences:

Astrodome

Present and pitch design to peers.

What I already know...

How to create a range of designs that meet a **design brief** and **specifications**.
(Y3 and Y4)

How to draw a **final design** from 3 different **angles**. (Y3 torch design)

To include a **zoom** element to show detail in a **final design**. (Y4 Rags to Riches - clothing)

Key Vocabulary:

CAD

3D

Rotation

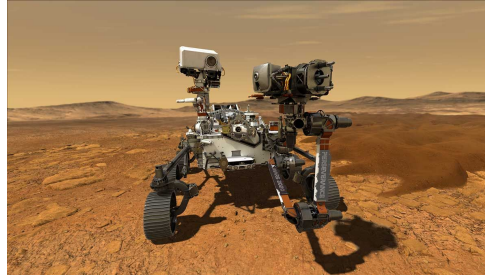
Specification

purpose

Space Roamers

Big Idea:

Is there anybody else out there?



Explore the **technology** and scientific **designs** that were undertaken to create the Mars Rover - Curiosity. Develop your own *design engineer* skills and **design** your own robot to **explore** a planet in our solar system.

I will learn...

-how to use **research** in science and existing **technology** to create a **specification**.

-how to use **CAD** (**Computer-Aided Design**) to create a **3D** final design.

-to **evaluate** designs to ensure they are **fit for purpose**.

Our Personal Skill:

