SPACE- The Final Frontier

Maths

-National Curriculum strands covered using the Oak Academy Scheme

- Number place value,—addition, subtraction,
- Multiplication, division
- Fractions, percentages, decimals
- Ratio and proportion
- Algebra
- Measurements
- Geometry- shape, position, properties
- Statistics and data
- Mental maths and arithmetic skills

Maths will be taught through the topic of Space linking the strands to as many areas as

History

- We will be studying the history of the discovery of our Solar System from the Big Bang theory—through space travel -to the space projects in place today.
- A Local History study of Space travel, Space discovery, the great Astronomers and the Space Race
- Place growing knowledge into different contexts, understand the connections between local, regional, national and international history; cultural, economic, military, political, religious and social history;

PHSE and Safeguarding

keeping ourselves safe, respect of others, money matters

Geography

- Identifying places on the earth from satellite images taken from space.
- Studying maps to recognise key features man made and natural
- Studying the economical, social and political affects of the Space travel
- Investigating weather systems and climate change and zone from space
- Space Race nations -ESA identification. Longitude/latitude, hemispheres, tropics, times zones. Continents and environmental regions, capital cities. Local Geography. Volcanoes, earthquakes

ICT

- **Internet**- Investigating search engines and sites available for research of ISS space stations
- **Creating Powerpoint** presentations about the planets, solar systems, galaxies.

Using Google Earth and Google Earth pro- as a tool for space and Earth exploration

Multi Media- make a Sci-fi film

To Collect- Use specific search engines, internet safe searches, To Communicate- create a PowerPoint on Voyager 1 and 2 in space

Buxworth Values

Compassionate, trustworthy, respectful, good friend, thankful, resilient, aspirational, entrepreneurial, environmental,

English

- **Fiction- narrative**- Flashbacks, stories about space travel and space exploration- Recount diary entries of visits to space.

-**Non-Fiction**- Instructional writing- how to make a space suit or a Mars Buggy, Explanation- Of the Hubble telescope or Jodrell's telescopes, Non Chronological Reports- about the planets, Journalistic writing- Newspaper reports about The moon landings- Persuasive writing Space exploration, should we? Balanced arguments- Did we land on the moon? Recounts a day in the life of an Astronaut

Poetry- Based on Emily Dickinson

Science

- **Earth and Space**

- The children will be taught about Earth and Space.
- They will be introduced to a model of the Sun and Earth that enables them to explain day and night. They will learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). They should understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones).

Reading

- **Class Novel/ shared text**- Jamie Drake equation (Christopher Edge)
War of the Worlds (HG Wells)

To read fluently, following the text, to infer and deduce meanings from the text, to acquire a wide vocabulary and knowledge of new words.

Art and Design

- Children will be undertaking observational art of the moon and Lunar landscapes.

- We will also be looking at a range of techniques and mediums to produce galaxy and nebula space art.

P.E.

- **P.A.S** sports—for outdoor games- football- tag rugby- netball- high fives

- **Gymnastics- Circuit training-** Space Astronaut fitness and motivation based on the NASA Astronaut fitness programme. Programme Mission X

D and T

- **Design and make a Mars Buggy**- children will be working in small teams to design and make a buggy capable of carrying a cup of water across a rough 'Mars like' surface.

Design and make a Space suit - Children will be designing and making a space suit suitable for space travel and living

FILM Links/ Clips-

Star wars, Star Trek, Dr. Who, Guardians of the Galaxy, Apollo (Multiple) WALL-E, Space buddies, Explorers, Flight of The Navigator, Cosmos, Brian Cox sky at night, Universe ,

Music

- **Listening and appreciation**- Listening to a range of traditional music including Holst's Planet Suite and Space Odyssey soundscapes.
- **Composition**- in small groups children will be composing a space soundscape based on a planet of their choice.

Educational Visit/ Themed Days

Jodrell Bank Visit- children to visit Jodrell Bank in Cheshire as part of their space exploration topic.

The children will be taking part in night sky observation evenings.

Languages

To study a modern foreign language- French -To study language used in space exploration and from the very first Astronomers

Les Planetes - the planets

Moi dans le monde - me and the world

R.E.

- **Derbyshire Scheme**
- What does it mean to be a Hindu in Britain today? (U2.6)

English Objectives

Competent in the arts of speaking and listening, making formal presentations, participating in debate.
Acquire a wide range of vocabulary
Write clearly, accurately and coherently, adapting their language and style in and for a range of contexts, purposes and audiences
Develop the habit of reading widely and often, for both pleasure and information
read easily, fluently and with good understanding
Articulate and justify answers, arguments and opinions
Gain, maintain and monitor the interest of the listener(s)
Preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience
Explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary
Reading all covered
Writing all covered– plan draft evaluate– transcript and compose– SPAG
Spelling all y5 and 5 statutory words
Write legibly, fluently with increasing speed.

Maths Objectives

Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
Solve problems by applying their mathematics to a variety of routine and -routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
Read, spell and pronounce mathematical vocabulary accurately
Number– Number and place value
Number– Additiona and subtraction
Number– Multiplication and Division
Number– Fractions, decimals, percentages
Measurement
Geometry– Property of shape
Geometry– Position and direction
Statistics
Ratio and proportion -Y6
Algebra-Y6
All aspects covered

Science Objectives

Planning different types of scientific enquiries– recognising and controlling variables
Taking accurate measurements using a range of scientific equipment
Recording data and results, using scientific diagrams and labels, tables, graphs etc
Using test results to make predictions
Reporting and presenting findings and results– in oral and written form
Identifying scientific evidence that has been used to support or refute ideas/ arguments

Earth and Space

Pupils should be taught to:
describe the movement of the Earth, and other planets, relative to the Sun in the solar system
describe the movement of the Moon relative to the Earth
describe the Sun, Earth and Moon as approximately spherical bodies
use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

History Objectives

Gain historical perspective by placing growing knowledge into different contexts, understanding the connections between local, regional, national and international history; cultural, economic, military, political, religious and social history; and between short- and long-term timescales.
To know and understand significant aspects of history of the wider world;
A Local History study
Study of Space travel, Space discovery, the great Astronomers

Design + Technology Objectives

Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products
Develop the creative, technical and practical expertise needed to perform everyday tasks confidently
Critique, evaluate and test their ideas and products and the work of others
Design use research and design criteria to inform the design of innovative, functional, appealing products that are fit for purpose,
Make select from and use a wider range of materials and components, including textiles
Evaluate their ideas and investigate a wide range of existing products to improve their work
Understand how key individuals in design have helped shape the world

Computing Objectives

Responsible, competent, confident and creative users of information and communication technology.
Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content / contact.

RE Objectives

Derbyshire scheme
Christianity
Other religions involved with astronomers beliefs and space travel
What it is to be a Hindu in Britain today

Art and Design Objectives

Become proficient in drawing, painting, sculpture and other art, craft and design techniques
To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]
Know about great artists, craft makers and designers, and understand the historical and cultural development of their art forms.
To evaluate and analyse creative works using the language of art, craft and design.

Languages Objectives

Understand and respond to spoken and written language from a variety of authentic sources
Listen attentively to spoken language show understanding by joining in and responding
Read carefully and show understanding of words, phrases and simple writing
Speak in sentences, using familiar vocabulary, phrases and basic language structures

Geography Objectives

Interpret a range of sources of geographical information, including maps,
Develop contextual knowledge of the location of globally significant places
Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities
Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics,
Describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals, water use maps, atlases, globes and digital/ computer mapping
ISS Study using Google Earth and Google Earth Pro

Music Objectives

Perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians
Develop an understanding of the history of music.
Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
Improvise and compose music for a range of purposes using the interrelated dimensions of music

PE Objectives

Develop competence to excel in a broad range of physical activities
Be physically active for sustained periods of time
Compare their performances with previous ones and demonstrate improvement to achieve their personal best.
Play competitive games, modified where appropriate