Year group: 5 Term: Autumn 2

Topic: Star Gazers – What is in our Solar System?

Kernow Cluster Topic Overview Sheet

Objectives





Opportunities for outdoor learning:

- Art & Design
- Star Gazing and Moon Observing

Key vocabulary:

Earth, Sun, Moon, planets, star, solar system, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, dwarf planet, movement, rotate, orbit, axis, celestial body, spherical, sphere, day, night, light, heat, eclipse, satellite, universe, solar, astronomer, heliocentric, geocentric, gravity, gravitational force, shadow clock & sundial.



Opportunities for trips / visitors:

• Space Odyssey – planetarium dome (In School visit)

PSHE/British values objectives: PSHE

- Wellbeing yoga/breathing exercises.
- Expression through dance/music/art.

Digital literacy:

 Design, write and debug programs that accomplish specific goals.

Whole class texts:

• Cosmic – Frank Cottrell Boyce

History objectives: Know and understand significant aspects of the history of the wider world.

Learning about..

• Explore and report on Galileo's impact upon history as a physicist and mathematician.

PE objectives: Tag Rugby & Gymnastics

- Use marking, tackling and /or interception to improve defence.
- Combine and perform increasingly complex gymnastic actions, shapes and balances.

Maths objectives: Statistics/Multiplication & Division/Perimeter & Area

Interpret charts, comparison, sum and difference, introduce line graphs, read and interpret line graphs, draw line graphs, use line graphs to solve problems, read and interpret tables, two-way tables, timetables. Multiples, factors, common factors, prime, square and cube numbers, multiply and divide by 10, 100 & 1,000, multiples of 10, 100 and 1,000. Measure perimeter, on a grid, rectangles, rectilinear shapes, calculate perimeter, area of rectangles, are of compound and irregular shapes.

English objectives:

- identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own.
- in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action.
- in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed
- generate and use increasingly adventurous words and phrases to compose poetry.

Geography objectives:

use a range of aerial images of the Earth to identify geographical features, such as countries, continents, volcanoes, rivers and impact craters.

Music objectives: appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians.

 Listen to popular songs about space and analyse their lyrics to discover the stories that are being told.

Science objectives: Earth & Space

- Report and present findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
- Identify scientific evidence that has been used to support or refute ideas or arguments.

Languages objectives: N/A this half-term.

Art objectives: improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials.

- Use printing blocks to create a lunar chart.
- Explore and create expression in portraiture.

Computing objectives:

 Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

RE objectives: Judaism/Hinduism/Advent

- Learn about how their Jewish sisters and brothers live and what they believe.
- Understanding and preparing to receive God's gift of love and friendship in Jesus.

DT objectives: select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

- Design and create a spacecraft.
- Use stitching techniques and layering to create a moonscape textile sample.

Year group: 5 Term: Autumn 2

Topic: Star Gazers

Kernow Cluster Topic Overview Sheet Skills





Links to previous topics:

- Observe changes across the four seasons (Y1 Seasonal Changes).
- Observe and describe weather associated with the seasons and how day length varies (Y1 - Seasonal Changes).

Links to future topics:

- Gravity force, weight = mass x gravitational field strength (g), on Earth g=10 N/kg, different on other planets and stars; gravity forces between Earth and Moon, and between Earth and Sun (qualitative
- Our Sun as a star, other stars in our galaxy, other galaxies. (KS3)
- The seasons and the Earth's tilt, day length at different times of year, in different hemispheres. (KS3)
- The light year as a unit of astronomical distance. (KS3)

PSHE:

- Recognise challenging behaviours and the negative effects these can have on relationships.
- Demonstrate speaking and listening skills.
- Demonstrate respectful interactions with others.

Maths skills:

- Complete, read and interpret information in tables including timetables Solve comparison, sum and difference problems using information
- presented in a line graph. Identify multiples and factors including finding all factor pairs of a number and common factors of two numbers.
- Multiply and divide whole numbers and those involving decimals by 10,
- Find the area of various sized squares and rectangles by

PE skills: Tag Rugby & Gymnastics

- Make tactical decisions while showing awareness of others.
- Understand and implement a range of tactics.
- Mark opponents and support players in defence.
- Make longer more complex sequences including changes of direction, level and speed.

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Opportunities for home learning / cultural capital:

- Understanding our solar system
- Independent research/homework over the half-term break

Set homework:

- Spellings
- Daily reading
- Handwriting

English skills:

- Understand and use poetry for effect
- Take part in discussions about books, building on my own and others'
- Develop stamina and write for a range of purposes.
- Proof-read writing to check for errors in spelling, grammar and
- Use heading, sub-heading and introductory sentences
- Use other sources of simple information to inform my writing,

Geography skills:

History skills:

• Use maps atlases, gloves and digital/computer mapping to locate countries and describe features studies.

• Compare and contrast a range of information

about a significant historical person.

Music skills:

- Sing with awareness of dynamics, phrasing and pitch
- Compare, contrast and combine a range of musical
- Use musical ideas and structures to compose a score.

Science skills:

- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
- Describe the Sun, Earth and Moon as approximately spherical
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

Languages skills: N/A in this half-term.

Art skills: Investigating & Exploring/Painting & Drawing

- Make drawings in a sketchbook and record observations of a range of artefacts and images studied annotating work and commenting on distinctive features.
- Show an understanding of how artists, designers and craft workers, from different cultures and historical periods, develop, express and represent
- Use a wide range of painting techniques to create different effects.

Computing skills:

- are responsible, competent, confident and creative users of information and communication technology.
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

RE skills:

- Develop religious vocabulary to describe and show understanding of sources, practices, beliefs, ideas, feelings and experiences.
- Describe some similarities and differences both within and between religions.
- Describe the impacts of religion on people's lives.

DT skills: Design, create and construct 3D models

- Join and combine materials and components in permanent and temporary
- Give reasons, supported by factual evidence for the success of aspects of a
- Select and use tools and equipment to measure, mark out and shape materials and components accurately.