

Pioneers - Spring 1 - Journey into The Solar System

Key Text	Key Questions	Key Design Inspiration	Key Sustainable Development Goal
Cosmic by Frank Cottrell Boyce	Can you describe the structure of the Solar System? Can you compare historical and modern models of the Solar System and explain how these have changed and developed over time? Can you design and create a space buggy that could collect rock samples or rescue an astronaut from Mars? Can you simplify, find equivalences, order and calculate using fractions? Can you create writing which is descriptive and builds tension? Can you use your knowledge of the French language to go shopping in a French supermarket?	Hars Rover	8 DECENT WORK AND ECONOMIC GROWTH

Hearts, Hands, Heads - Loving, Learning, Living				
Loving - Hearts	Learning - Heads	Living - Hands		
To appreciate the scale of our Solar System - to appreciate its complexities and diversity and that we are part of a wider world, solar system and universe. To appreciate scientific discovery. To gain an understanding of the complexity of the work undertaken by scientists and engineers on projects such as the Mars Rover or James Hubble Space Telescope, and to be inspired to pursue STEM careers	To learn how our solar System is structured and how our understanding of thos structures has changed and developed as our scientific understanding has improved. To be able to compare historical and modern models of the Solar System and explain how these have changed and developed over time. Design and create a space buggy that could collect rock samples or rescue an astronaut from Mars. Know how to simplify, find equivalences, order and calculate using fractions. Be able to create narrative writing which is descriptive and builds tension. Be able to use knowledge of the French language to go shopping in a French supermarket?	Explore scientific models and experience scaled modelling to experience the size and spread of our Solar System. Compare modern day and historical models of thinking relating to the Solar System Build and design Vex-go code bases and create relevant programming to control them Create art work which uses shading to convey spherical objects in space Solve problems and calculations using fractional knowledge Take part in role plays which emulate shopping in a French supermarket		

Time to Shine opportunities

Double Page Spread to: demonstrate your knowledge of the Solar System and how our understanding of it has changed and developed over time.

Writing	Reading	Maths	
Composition		Fractions	
Use imaginative descriptions. Organise writing appropriately.	Understand texts	Recognising fractions. Equivalence. Solving Problems.	
Links to prior knowledge:	Links to prior knowledge: Reading inference training, Autumn 2.	Links to prior knowledge:	
Threshold Concepts: Use the techniques that authors use to create characters, settings and plots. Create vivid images by using alliteration, similes, metaphors and personification. Interweave descriptions of characters, settings and atmosphere with dialogue.	Threshold Concepts: Ask questions to improve understanding. Draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence. Predict what might happen from details stated and implied. Discuss and evaluate how authors use language, including figurative language, considering the impact on the reader. Identify and discuss themes and conventions in and across a wide range of writing.	Threshold Concepts: Compare and order fractions. Recognise mixed numbers and improper fractions and convert between them. Add and subtract fractions, using equivalent fractions. Multiply proper fractions and mixed numbers by whole numbers. Multiply simple pairs of proper fractions. Solve problems which require knowing percentage and decimal equivalents of, 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. Divide proper fractions by whole numbers (Y6)	
Contexts for learning: Writing narratives using Cosmic by Frank Cottrell Boyce as inspiration. Writing explanations to explain the structure of the Solar System and the differences between a geocentric model and a heliocentric model	Contexts for learning: Reading and response using Cosmic By Frank Cottrell Boyce. Character analysis, using inference to make predictions. Debate and discussion about the main themes of the book: growing up, responsibility and family. See writing context for narrative writing link.	Contexts for learning: Varied fraction fluency and problem solving activities.	
Key Vocabulary: narrative, character, setting, plot, alliteration, metaphor, simile, personification, relative clause, tenses - present, past, future, perfect, imperfect	Key Vocabulary: scientific and technical space terms as identified throughout reading. Figurative language examples as identified throughout reading.	Key Vocabulary: fraction, numerator, denominator, divisor, factor, multiple, common factor, common multiple, equivalent, simplify, improper fraction, mixed number, unit fraction, non-unit fraction,	
Geography	Science	RE	
Communicate Conservation/h	Physics	Understand beliefs and teachings. Understand practices and lifestyles. Understand values	
Communicate Geographically	Understand the Earth's movement in space		
Links to prior knowledge: Four figure grid references, ocean currents and biomes mapping (Y6 2021-22), chocolate growth, export, consumption mapping (Y5&6 Autumn 1)	Links to prior knowledge: Y3/4 - Describe the movement of the Earth relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth.	Links to prior knowledge: Y6 basic knowledge of Hajj. Y3/4 - making connections between beliefs and actions in other religious traditions studied previously.	
Threshold Concepts: Use the eight points of a compass, four-figure grid references, symbols and a key (that uses standard Ordnance Survey symbols) to communicate knowledge of the United Kingdom and the world. Understand map features, lines of latitude and longitude and time zones.	Threshold Concepts: 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.	Threshold Concepts: Explain how religious beliefs shape the lives of individuals and communities. Explain the practices and lifestyles involved in belonging to a faith community. Explain some of the different ways that individuals show their beliefs. Express their own values and remain respectful of those with different values.	
Contexts for learning: Using maps and their features to discover about locations and their time zone	Contexts for learning: Developing scientific understanding of our Solar System by modelling and using scaling to produce representations of our Solar System. Research the planets. Understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus	Contexts for learning: Exploration of the enquiry question: what is it like to be a Muslim in Britain today? Identifying and explaining key Muslim beliefs and describing ways in which Muslim sources of authority guide Muslim living, giving examples to show how Muslims put their beliefs into action in different ways. Reflecting on and articulating what it is like to be a Muslim in Britain today.	
Key Vocabulary: compass, north, south, east, west, latitude, longitude, key, legend, compass rose, grid reference, time zone, bearing, grid square	Key Vocabulary: Solar System, Sun, Mercury, Venus, Mars, Earth, Jupiter, Saturn, Uranus, Neptune, geocentric, heliocentric, rotate, orbit, axis, astronomer, Ptolemy, Alhazen, Copernicus, spherical, celestial body, satellite, circumnavigate, universe	Key Vocabulary: Muslim, Allah, Tawhid, Prophet Muhammad, Sunnah, Hadith Arabic, Qur'an, Shahadah, Salah, Sawm, Zakah, Hajj, Eid, mosque / masjid	

DT	Computing	French
Design, make, evaluate and improve. Take inspiration from design throughout history	Code	Speak confidently.
Links to prior knowledge: Vex-go introduction Autumn 2	Links to prior knowledge: Asking for and receiving key details about themselves or others, e.g. name/age. Counting.	
Threshold Concepts: Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). Make products through stages of prototypes, making continual refinements. Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. Create innovative designs that improve upon existing products. Evaluate the design of products so as to suggest improvements to the user experience.	Threshold Concepts: Set IF conditions for movements. Specify types of rotation giving the number of degrees. Set events to control other events by 'broadcasting' information as a trigger.Use IF THEN ELSE conditions to control events or objects. Use IF THEN ELSE conditions to control events or objects. Use Ists to create a set of variables.	Threshold Concepts: Understand the main points and opinions in spoken passages. Give a short prepared talk that includes opinions. Take part in conversations to seek and give information. Refer to recent experiences or future plans, everyday activities and interests. Vary language and produce extended responses. Be understood with little or no difficulty.
Contexts for learning: Vex-go robotics project - design a space buggy to detect a an astronaut stranded on the Moon	Contexts for learning: 'Let's go shopping' unit - key vocabulary and phrases connected to going shopping in French, gaining an understanding of basic grammar rules, how to use the verb 'faire' (to do).	
Key Vocabulary: IF, THEN conditionals, input, output, conditions		Key Vocabulary: Key French vocabulary linked to 'Let's go shopping' unit.
PSHE	Art	
PSHE	Art Master Techniques	
PSHE Mental wellbeing. Basic first aid.	Art Master Techniques Drawing	
PSHE Mental wellbeing. Basic first aid. Links to prior knowledge: Zones of regulation and internet safety (Autumn 1&2)	Art Master Techniques Drawing Links to prior knowledge: Milestone 2 - using shading to show light and shadow	
PSHE Mental wellbeing. Basic first aid. Links to prior knowledge: Zones of regulation and internet safety (Autumn 1&2) Threshold Concepts: That mental health is just as important as physical health and that both need looking after. How to recognise, respect and express their individuality and personal qualities. About personal identity and what contributes to it, including race, sex, gender, family, faith, culture, hobbies, likes/dislikes. Ways to boost their mood and improve emotional wellbeing. How to deal with common injuries using basic first aid techniques how to respond in an emergency, including when and how to contact different emergency services.	Art Master Techniques Drawing Links to prior knowledge: Milestone 2 - using shading to show light and shadow Threshold Concepts: Use a variety of techniques to add interesting effects (e.g. reflections, shadows, direction of sunlight). Use a choice of techniques to depict movement, perspective, shadows and reflection.	
PSHE Mental wellbeing. Basic first aid. Links to prior knowledge: Zones of regulation and internet safety (Autumn 1&2) Threshold Concepts: That mental health is just as important as physical health and that both need looking after. How to recognise, respect and express their individuality and personal qualities. About personal identity and what contributes to it, including race, sex, gender, family, faith, culture, hobbies, likes/dislikes. Ways to boost their mood and improve emotional wellbeing. How to deal with common injuries using basic first aid techniques how to respond in an emergency, including when and how to contact different emergency services. Contexts for learning:	Art Master Techniques Drawing Links to prior knowledge: Milestone 2 - using shading to show light and shadow Threshold Concepts: Use a variety of techniques to add interesting effects (e.g. reflections, shadows, direction of sunlight). Use a choice of techniques to depict movement, perspective, shadows and reflection. Contexts for learning: depicting celestial objects using drawing techniques	