





Curriculum | Medium Term Plan – Spring 2024 – Year five



Challenge Pack:	Space: Infinity	Challenge outcome:	How can we help people experience space virtually? Children will create a planetarium/exhibition to allow other children to gain a virtual experience and insight about the solar system.	NC Year: Length of term:	(5 & 5 weeks)
Summary:	This Challenge begins by delving into the pioneers of space exploration and locating key test sites across North America and Russia. The focus then shifts onto forces; children will be immersed into a two-week science project, investigating the forces which are present and can act upon objects. Following this, children will be given the opportunity to link their forces knowledge to design and test their very own rockets. After half term, the children will learn all about Space, discovering the planets, moons and stars before finally putting all of this knowledge into context by creating a planetarium exhibition.				
Key texts:	Fiction: See You in The Cosmos Cosmic by Frank Cottrell Laika the Astronaut Non-Fiction: How to Be a Space Explorer by LP Kids The Extraordinary Life of Neil Armstrong by Martin Howard Moonshot	Trips and visits:	Leicester Space Centre	Inspire parent sessions:	5SC 11/10/23 5JS 04/10/23 5RG 27/09/23
		Science Units	Forces Earth and Space	PE: Music:	Personal, social, cognitive, creative, Applying Physical, Health and Fitness Guitars
 Physical Oracy (Voice, Body Language) For body language to become increasingly natural. To project their voice to a large audience	 Linguistic Oracy (Vocabulary, language, rhetorical techniques) To use an increasingly sophisticated range of sentence stems with accuracy.	 Cognitive Oracy (Content, Structure, clarifying and summarizing, self-regulation and Reasoning) To be able to draw upon knowledge of the world to support their own point of view and explore different perspectives. To identify when a discussion is going off topic and to be able to bring it back on track	 Social & Emotional Oracy (Working with others, Listening and responding, Confidence in speaking, Audience Awareness) Listening actively for extended periods of time. To speak with flair and passion.		

	Maths:	English:	Phonics: VIPERS text:	NICER:	Discrete/Special events:
08.01.24 (1)	<p>Area of learning: Multiplication</p> <p>Knowledge of skills: Multiplying 2,3- and 4-digit numbers by a single digit number</p> <p>Skills Children use their knowledge of exchanging ten ones for one ten in addition and apply this to multiplication, including exchanging multiple groups of tens. They use place value counters to support their understanding. Include applying multiplication skills using the area model.</p> <p>Mental maths focus Doubling and halving</p>	<p>Purpose: Writing to entertain</p> <p>Text type: Character description- Create an alien character description to entertain the reader (forming the basis of building up to a narrative)</p> <p>Text:</p> <p>Knowledge and skills:</p> <ul style="list-style-type: none"> - Identify and use expanded noun phrases to create an image in the readers mind - Use figurative language to create an image and feelings in relation to the character and setting. - Use a wide range of punctuation accurately and consistently <p>Vocabulary: Space, cosmos, lifeforms, earth, planets, , Space station, moon, atmosphere, orbit, moon, atmosphere, orbit, Planet, satellite, sphere, solar system, eclipse, universe, moon</p>	<p>A series of Unfortunate Events</p> <p>(Links to character and setting description)</p> <p>Vipers</p> <ul style="list-style-type: none"> -Vocabulary -Close Reading -Comprehension -Reading for pleasure/ Reading Plus -Reading games/ Reading Plus 	<p>What is space infinity (Challenge Pack)?</p> <p>Understanding of what we will be learning about and why – what is our outcome?</p> <p>Lesson 1: Explore challenge pack: TASC Wheel/ Complete ‘Explore the Challenge’ page.</p> <p>Outcome</p> <p>Killer Questions</p> <p>How have previous space pioneers contributed to current space missions?</p> <p>G3.1a-As Geographers WALT: identify the space pioneers and where they originated from</p> <p>Outcome- Children will plot space pioneers on a map</p> <p>(Give children carefully provided information packs containing the declarative knowledge on space pioneers)</p>	<p>Monday Staff Training</p>

Homework	Number bond or timetables practise: 5/6 x tables focusing on all 4 number sentences for each calculation	Spellings: community curiosity ability visibility captivity activity eternity flexibility possibility sensitivity	Rocket Phonics Levelled reader Reading Plus	Flipped homework: Identify continents, seas, cities, international boundaries Think of ways of creating a map to show this.	
15.01.24 (2)	Area of learning: Multiplication and division Knowledge of skills: Multiply 2 digits by 2 then increase to 3 digits by 2 digits up to 4 digits by 2 digits. Divide 2-digit numbers by a 1-digit number Skills Children build on previous steps to represent a three-digit number multiplied by a one-digit number with concrete manipulatives. Children build on previous steps to represent a 4-digit number multiplied by a 1-digit number using concrete manipulatives. Mental maths focus: Mental multiplication calculations	Purpose: Writing to entertain Text type: Setting description- create a description for their Alien character (linked with character description) Text: See you in the cosmos Knowledge and skills: <ul style="list-style-type: none"> - Identify and use expanded noun phrases to create an image in the readers mind - Use figurative language to create an image and feelings in relation to the character and setting. - Use a wide range of punctuation accurately and consistently - Vocabulary: Space, cosmos, lifeforms, earth, planets, , Space station, moon, atmosphere, orbit, moon, atmosphere, orbit, Planet, satellite, sphere, solar system, eclipse, universe, moon	A Series of Unfortunate Events (Links to character and setting description) Vipers -Vocabulary -Close Reading -Comprehension -Reading for pleasure/ Reading Plus -Reading games/ Reading Plus	Where are Russia and North America? Which cities were involved with space missions? (Children to identify using maps the location of Russia and North America including the cities involved with the space race.) Killer Questions Where in the world have space missions taken place? What is the significance of the Prime meridian and Greenwich meantime? G3.1a- As Geographers WALT: locate countries in North America so that we can recognise specific sites for space missions. Outcome- Plot space mission sites on the map of North America Science: Preparing for launch! (Children will be given the opportunities to apply their scientific thinking to carry out a range of experiments involving forces.) Killer Question How do different forces work? Why do astronauts float in space? S3.2e -As Scientists WALT: explore and explain the effects of gravity on objects. Outcome- Class complete a meteorite challenge	Martin Luther King Day Winnie the Pooh day Lunar New Year Chinese New Year
Homework	Number bond or timetables practise: 4/7 x tables focusing on all 4 number sentences for each calculation	Spellings: happiness hardness madness nastiness silliness tidiness childishness willingness carelessness foolishness	Rocket Phonics Levelled reader Reading Plus	Flipped homework: Investigate why objects fall to the ground? What do we know about gravity. At home could you think of a test that will show how different objects are affected by gravity. How can you make it a fair test? How will you record your results?	

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">22.01.24 (3)</p>	<p>Area of learning: Division</p> <p>Knowledge of skills: Division by 1 digit, 2,3 and 4 numbers Divide where the answer involves remainders.</p> <p>Skills Children build on their knowledge of dividing a 2-digit number by a 1-digit number from Year 3 by sharing into equal groups. Children use examples where the tens and the ones are divisible by the divisor, e.g. 96 divided by 3 and 84 divided by 4. They then move on to calculations where they exchange between tens and ones.</p> <p>Mental maths Mental division calculations</p>	<p>Purpose: Writing to entertain Text type: Narrative with a space theme – Using character/setting description to write a short chapter Text:</p> <p>Knowledge and skills:</p> <ul style="list-style-type: none"> - Use a wide range of punctuation accurately and consistently - Recognise and use abstract nouns - Identify and use nouns, pronouns, adjectives and determiners appropriately Identify and use verbs, adverbs, prepositions and conjunctions - <p>Vocabulary: Space, g-force, rocket, comics, lifeforms, earth, planets, , Space station, moon, atmosphere, orbit, moon, atmosphere, orbit, Planet, satellite, sphere, solar system, moon</p>	<p>A series of Unfortunate Events</p>	<p>G3.1a- As Geographers WALT: locate countries in Europe (Russia) so that we can recognise specific sites for space missions. Outcome- Plot space mission sites on the map of North America</p> <p>G3.1a -As Geographers WALT: identify time zones across the globe so that we can identify their significance Outcome- Children colour code countries showing time zones. Children explain differences between time zones involving Russia and North America.</p> <p>S3.2f- -As Scientists WALT: identify the effects of air resistance on moving objects. Outcome- Class complete a parachute experiment</p>	<p>World Handwriting day</p> <p>Burns Night</p> <p>Big Garden Birdwatch</p> <p>Holocaust memorial day</p>
	<p>Homework</p>	<p>Number bond or timetables practise: 8/2 x tables focusing on all 4 number sentences for each calculation</p>	<p>Spellings: membership ownership partnership dictatorship championship craftsmanship fellowship apprenticeship citizenship sponsorship</p>	<p>Rocket Phonics Levelled reader Reading Plus</p>	<p>Flipped homework: Find out all about space rockets. Use different sources (print off fact sheet) to describe what a space rocket is and how they have changed over time.</p>

Area of learning: Fractions**Skills**

Children explore fractions in different representations, for example, fractions of shapes, quantities and fractions on a number line. They explore and recap the meaning of numerator and denominator, non-unit and unit fractions

Knowledge of skills:

Identifying fractions
Equivalent fractions
Fractions greater than 1
Improper fractions to mixed numbers

Mental maths

Mental division strategies
Key question
Busses hold 60 passengers, 125 passengers want to go

Purpose: Writing to entertain

Text type: Narrative with a space theme – Using character/setting description to write a short chapter

Text:

Knowledge and skills:

- Use a wide range of punctuation accurately and consistently
- Recognise and use abstract nouns
- Identify and use nouns, pronouns, adjectives and determiners appropriately Identify and use verbs, adverbs, prepositions and conjunctions

Vocabulary: Space, g-force, rocket, comics, earth, planets, , Space station, moon, atmosphere, orbit, moon, atmosphere, orbit, Planet, satellite, sphere, solar system, moon

Building a rocket.

(Based on children's forces knowledge and what they noticed at space centre they will be given the opportunity to design, build and test their very own rockets.)

Killer Questions

Why do you think certain rockets failed?

How can we create a working model of a rocket?

We will be making a powered rocket and the children will work through a process of design/make/test and refine.

We will be using bottle rocket challenge (explore opportunities for external workshop to come into school to create rockets, details to be updated.

D3.1a - **As Technicians WALT:** generate ideas and create a specification for our own rockets so that we make it.

Outcome- Children use blue hat to create design specification

D3.3a - **As Technicians WALT:** Use tools and equipment safely so that we can build our rockets.
Outcome – Create rockets

D3.4b - **As Technicians WALT:** test and evaluate our rockets so that we can propose new ideas.
Outcome – Children test and PMI their rockets

S3.2g -As Scientists WALT: identify the effect mechanisms, including levers have on exerting force.
Outcome – Class complete a meteorite recovery

National storytelling week

Time to talk day

Rosa Parks Day

LGBT History month

World Cancer day

Number bond or timetables practise:

812/6 x tables focusing on all 4 number sentences for each calculation

Spellings:

Alter, Altar, Ascent, Assent, Bridal, Bridle, Cereal, Serial, Compliment, Complement

Rocket Phonics Levelled reader Reading Plus**Flipped homework:**

Create poster/fact sheet that will explain to others how to keep healthy.

5RG Class assembly 2SP INSPIRE

04.02.24 (5)	<p>Area of learning: Addition of fractions</p> <p>Skills Children build on their equivalent fraction knowledge to compare and order fractions less than 1 where the denominators are multiples of the same number. Children compare the fractions by finding a common denominator or a common numerator. They use bar models to support their understanding.</p> <p>Knowledge of skills: Order fractions Add fractions within 1 Add 3 or more fractions</p> <p>Mental maths Mentally convert mixed numbers to fractions and vice versa</p>	<p>Purpose: Writing to entertain Text type: poetry: Laika the astronaut (linked with reading skill of performance poetry) Knowledge and skills:</p> <ul style="list-style-type: none"> - Use commas - Identify and use verbs, adverbs, prepositions and conjunctions appropriately - Recognise and use varied sentence types <p>Vocabulary: Astronaut, space, g-force, rocket, comics, earth, planets, , Space station, moon, atmosphere, orbit, moon,</p>	<p>A series of Unfortunate Events</p>	<p>Science: May the force be with you! (Children will be given the opportunities to apply their scientific thinking to carry out a range of experiments involving forces.)</p> <p>Killer Questions What forces stop objects moving freely through the air? Why don't aero planes fall out of the sky because of this force?</p> <p>S3.2f- As Scientists WALT: Identify the effects of friction acting between moving surfaces. Outcome- Children conduct a bike challenge</p> <p>S3.2f- As Scientists WALT: Identify the effects of friction acting between moving surfaces. Outcome- Children conduct a path challenge</p> <p>B3.9- As British citizen WALT: identify how bullying can have a negative effect on wellbeing Outcome – Children create roll on the wall to show effects of bullying</p>	<p>Waitangi day</p> <p>Safer Internet Day</p> <p>Charles Dickens Birthday</p>
	Homework	<p>Number bond or timetables practise: 8/4 x tables focussing on all 4 number sentences for each calculation</p>	<p>Spellings: Principal, Principle, Profit, Prophet, Descent, Dissent, Desert, Dessert, Draft, Draught</p>	<p>Rocket Phonics Levelled reader Reading Plus</p>	<p>Flipped homework: List the name and number of planets Choose one, what can you find out about it? How can you present the information?</p>
20.02.23	Half Term				<p>Shrove Tuesday Ash Wednesday</p>

19.02.24 (6)	<p>Area of learning: Add and subtract fractions</p> <p>Skills Children recap their Year 4 understanding of adding and subtracting fractions with the same denominator. They use bar models to support understanding of adding and subtracting fractions.</p> <p>Knowledge of skills: Add and subtract fractions Subtract and add mixed number fractions</p> <p>Mental Maths Mental strategies for making 1 using fractions</p>	<p>Purpose: Writing to inform</p> <p>Text type: Newspaper article to inform the reader about a moon landing – Neil Armstrong</p> <p>Text:</p> <p>Knowledge and skills:</p> <ul style="list-style-type: none"> - Use reported speech - Identify and begin to use relative clauses - Use a wide range of punctuation accurately and consistently - <p>Vocabulary: space, gravity, planets, solar system, astronaut, g-force, rocket, comics, earth, moon, atmosphere, orbit, atmosphere, orbit, satellite, sphere, solar system, moon</p>	<p>A series of Unfortunate Events (Links to newspaper article)</p>	<p>S3.2f- As Scientists WALT: Identify the effects of water resistance between moving surfaces.</p> <p>Outcome- Children conduct a boat challenge</p> <p>Killer Question How can I make myself a healthier person through my actions? Why should I?</p> <p>B3.12- As British Citizens WALT: identify the impact of unhealthy eating and other behaviours on the human body</p> <p>Outcome – Children complete sorting activity and retrieve facts from a case study.</p>	<p>World Wildlife day</p> <p>St David’s Day</p> <p>Fair Trade Fortnight</p>
	Homework	<p>Number bond or timetables practise: 9/3 x tables focussing on all 4 number sentences for each calculation</p>	<p>Spellings: Pause, cause, sauce, fraud, launch, author, August, applaud, astronaut, restaurant</p>	<p>Rocket Phonics Levelled reader Reading Plus</p>	<p>Flipped homework: List key facts about the moon Use a CAF to show key information. Is the phrase dark side of the moon correct? how do you know? Could the earth survive without the moon, what would happen if the moon wasn’t there anymore?</p>

Area of learning:
Calculations of fractions of amounts

Skills

Children use their knowledge of finding unit fractions of a quantity, to find non-unit fractions of a quantity. They use concrete and pictorial representations to support their understanding. Children link bar modelling to the abstract method in order to understand why the method works.

Knowledge of skills:

Finding fractions of amounts
Using fractions as operators
Applying understanding of fractions in problem solving activities.

Mental maths

Mental strategies for multiplying and dividing whole numbers by fractions

Purpose: Writing to inform
Text type: Newspaper article to inform the reader about a moon landing – Neil Armstrong

Text:

Knowledge and skills:

- Use reported speech
- Identify and begin to use relative clauses
- Use a wide range of punctuation accurately and consistently

Vocabulary: space, gravity, planets, solar system, astronaut, g-force, rocket, comics, earth, moon, atmosphere, orbit, atmosphere, orbit, satellite, sphere, solar system, moon

A series of Unfortunate Events

(Links to newspaper article)

Science What will we find in space?

(Children will be given the opportunity to explore space. They will generate their own killer questions, which will be explored through scientific questioning and experimentation.)

Killer Question:

What do you think the temperature would be in Pluto?
Explain
When does the solar eclipse occur?

S3.1a - As Scientists WALT: develop scientific enquiry questions so that we can plan an investigation.

Outcome: Children use blue hat to plan an investigation

World Wildlife day

St David's Day

Fair Trade Fortnight

Number bond or timetables practise:
Mixed multiplication practice

Spellings:
Pollinate, Captivate, Activate, Motivate, Communicate, Medicate, Elasticate, Hyphenate, Alienate, Validate

Rocket Phonics Levelled reader Reading Plus

Flipped homework:

Research astronauts such as Buzz Aldrin, why are they famous?
Give fact sheet, Use secondary sources.
Extension What do people have to do to train as astronauts?
Think of creative ways of showing this.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">04.3.24 (8)</p>	<p>Area of learning: Decimals and decimal calculations</p> <p>Skills Children use place value counters and a place value grid to make numbers with up to two decimal places. They read and write decimal numbers and understand the value of each digit. They show their understanding of place value by partitioning decimal numbers in different ways.</p> <p>Knowledge of skills: Identify decimals up to 2 d.p. Decimals converted to fractions Understand 1000s Thousands as decimals</p> <p>Mental maths Mental calculations (applying skills) in calculating fractions of amounts</p>	<p>Purpose: Writing to inform Text type: Biography to inform the reader about Neil Armstrong</p> <p>Knowledge and skills:</p> <ul style="list-style-type: none"> - Use dashes, commas, and brackets to indicate parenthesis - use relative clauses - Use a wide range of punctuation accurately and consistently - <p>Vocabulary: space, gravity, planets, solar system, astronaut, g-force, rocket, comics, earth, moon, atmosphere, orbit, atmosphere, orbit, satellite, sphere, solar system, moon</p>	<p>A series of Unfortunate events (Link diary entry)</p>	<p>Building a planetarium! (Children will explore sculptures. They will generate their own ideas for creating sculptures ready for our planetarium. Children will choose which medium to use and be able to explain why.)</p> <p><u>Killer Question:</u> How are sculptures different to paintings? Why would sculptures be better to create a virtual experience?</p> <p>A3.4b -As Artists WALT: explore a range of sculptures so that we can use the techniques to plan for our own. Outcome: Children observe images of sculptures and describe how certain techniques have been used</p> <p>A3.4b -As Artists WALT: use a range of materials so that we can create our own sculptures of the planets. Outcome: Children create their own sculptures (modrock)</p> <p>A3.4a -As Artists WALT: use a range of materials so that we can create our own sculptures of the planets . Outcome: Children create their own sculptures (modrock)</p> <p>S3.2h -As Scientists WALT: Identify planets and their movement in relation to the sun. Outcome: Children create and represent the solar system using practical resources (craft project)</p>	<p>Purim</p> <p>Holi</p> <p>World Book Day</p> <p>International Woman’s day Start of Ramandan</p> <p>British Science Week Mother’s day</p>
	<p>Homework</p>	<p>Number bond or timetables practise: 100 x tables focusing on all 4 number sentences for each calculation</p>	<p>Spellings: Criticise, Advertise, Capitalise, Finalise, Equalise, Fertilise, Terrorise, Socialise, Visualise Vandalise</p>	<p>Rocket Phonics Levelled reader Reading Plus</p>	<p>Flipped homework: Design on paper how you are going to present features of your planet exhibition. Use your ideas as a base for creating it.</p>

11.03.24 (9)	<p>Area of learning: Decimals</p> <p>Skills Children develop their understanding of rounding to the nearest whole number and to the nearest tenth.</p> <p>Children order and compare numbers with up to three decimal places.</p> <p>Knowledge of skills: Rounding decimals Ordering and comparing decimals Understanding percentages</p> <p>Mental maths Multiplying dividing by 10, 100 and 1000</p>	<p>Purpose: Writing to inform: Writing to inform</p> <p>Text type: Biography to inform the reader about Neil Armstrong</p> <p>Text type:</p> <p>Knowledge and skills:</p> <ul style="list-style-type: none"> - Use dashes, commas, and brackets to indicate parenthesis - use relative clauses - Use a wide range of punctuation accurately and consistently - <p>Vocabulary: space, gravity, planets, solar system, astronaut, g-force, rocket, comics, earth, moon, atmosphere, orbit, atmosphere, orbit, satellite, sphere, solar system, moon</p>	<p>A series of unfortunate events</p> <p>(Link diary entry)</p>	<p>Preparing for exhibition. (Children will use ICT to produce resources for our planetarium exhibition. They will present key learning using floor books, sculptures, VR experiences iMovie.)</p> <p>C3.1c - As Digital Technicians WALT: combine photos and videos to create a multimedia video Outcome- Children use Doink and google expeditions to create a short video/animation about space</p> <p>C3.1c - As Digital Technicians WALT: combine photos and videos to create a multimedia video Outcome- Children use Doink and google expeditions to create a short video/animation about space</p> <p>C3.1d - As Digital Technicians WALT: manipulate sound/music to create a desired effect Outcome- Children will use their finalised clip and place it into iMovie to add sound/music</p> <p>S3.2h- As Scientists WALT: describe the movement of the planets in relation to the sun. Outcome: Children create and represent the solar system using practical resources (craft project)</p>	<p>British Science week</p> <p>St Patrick's Day</p> <p>International day of Maths</p>
	Homework	<p>Number bond or timetables practise:</p>	<p>Spellings:</p>	<p>Rocket Phonics Levelled reader Reading Plus</p>	<p>Flipped homework:</p>

18.02.24 (10)	<p>Area of learning: Decimals and percentages</p> <p>Skills</p> <p>Children are introduced to 'per cent' for the first time and will understand that 'per cent' relates to 'number of parts per hundred'. They will explore this through different representations, which show different parts of a hundred. Children will use 'number of parts per hundred' alongside the % symbols</p> <p>Knowledge of skills: Percentages as fractions and decimals Real life percentage problems</p> <p>Mental maths Multiplying, dividing by 10, 100 and 1000</p>	<p>Purpose: Writing to inform Text type: diary entry:</p> <p>Knowledge and skills:</p> <ul style="list-style-type: none"> - Identify and use nouns, pronouns, adjectives and determiners appropriately - Use reported speech - use relative clauses - Use a wide range of punctuation accurately and consistently - <p>Vocabulary: space, gravity, planets, solar system, astronaut, g-force, rocket, comics, earth, moon, atmosphere, orbit, atmosphere, orbit, satellite, sphere, solar system, moon</p>	<p>A series of Unfortunate events</p> <p>(Biography)</p>	<p>B3.8 - As British Citizens Walt: understand how a digital footprint works and the impact on sharing information online.</p> <p>A3.6- As British Citizens WALT: understand importance of permission seeking and giving in different types of relationships</p> <p>Science: Unit Retrieval and evaluation – Forces and Earth and Space</p>	<p>World Poetry Day</p> <p>Spring Equinox</p> <p>World Water Day</p> <p>Daylight Saving Time</p>
	Homework	<p>Number bond or timetables practise: Mixed multiplication mental exercises</p>	<p>Spellings: Homophones and near homophones</p>	<p>Rocket Phonics Levelled reader Reading Plus</p>	<p>Flipped homework: How can we review what we have learned this term? How could we present this?</p>