



Autumn 2 YEAR B
Key Stage: Upper Juniors
Topic: Energy and Sustainability

Autumn 2 Year B		
English	Maths	
	Year 5	Year 6
<p><u>Read all about it!</u></p> <p>The MSC Napoli disaster links to our topic 'Energy and Sustainability'. Children engage with real articles from the time of the accident and learn to adopt the language of newspaper reports in order to write their own articles about a shipping disaster of their choice.</p> <p><u>Key Objectives</u></p> <ul style="list-style-type: none"> select vocabulary and grammatical structures that reflect what the writing requires using brackets, dashes or commas to indicate parenthesis using organisational and presentational devices to structure text and to guide the reader <p><u>Balanced arguments</u></p> <p>Linked to their geography topic, children present the pros and cons of wind farms by using drama and debate to explore different viewpoints. They learn to write a non-biased, balanced argument, presenting both sides of the debate.</p> <p><u>Key Objectives</u></p> <ul style="list-style-type: none"> recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms Use a range of devices to build cohesion (conjunctions) using modal verbs or adverbs to indicate degrees of possibility <p><u>A Christmas Carol</u></p> <p>In this classic heritage text, children learn to see the world through Scrooge's eyes. Writing in the first person, they consider language choices to portray Scrooge's character as his personality changes throughout the book. Children adopt the style and formality of Dickens, using previous knowledge from 'Great Expectations'</p> <p><u>Key Objectives</u></p> <ul style="list-style-type: none"> in narratives, describe settings, characters and atmosphere integrate dialogue in narratives to convey character and advance the action 	<p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number add and subtract fractions with the same denominator, and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers read and write decimal numbers as fractions recognise and use thousandths round decimals with 2dp to the nearest whole number and to 1dp read, write, order and compare numbers with up to 3 decimal places solve problems involving decimals write percentages as a fraction with denominator 100, and as a decimal fraction solve problems which require knowing percentage and decimal equivalents 	<p>Fractions (including decimals and percentages)</p> <ul style="list-style-type: none"> simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1 add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions multiply simple pairs of proper fractions, writing the answer in its simplest form divide proper fractions by whole numbers associate a fraction with division and calculate decimal fraction equivalents identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places multiply one-digit numbers with up to 2 dp by whole numbers use written division methods in cases where the answer has up to 2dp solve problems which require answers to be rounded to specified degrees of accuracy recall and use equivalences for FDP

	Computing	History	Geography
Description	Children will use Google Sheets and understand how to use formulae to solve calculations		Children learn about energy and sustainability, using Iceland as a case study (continued from Autumn 1)
NC Objectives	<ul style="list-style-type: none"> 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Select, use and combine a variety of software Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content 		<ul style="list-style-type: none"> Understand the location and characteristics of a range of the world's most significant human and physical features. Develop use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.
Substantive Knowledge	<ul style="list-style-type: none"> Children will learn how to create a Google Sheet that calculates the sum and total Children will be able to format data that has been collected using conditional formatting 		<p>Locational knowledge</p> <ul style="list-style-type: none"> Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America <p>Human and physical geography</p> <ul style="list-style-type: none"> Describe human geography, including: types of settlement and land use, economic activity, and the distribution of natural resources including energy
Disciplinary Skills	<ul style="list-style-type: none"> Children will understand how data is collected Children will understand how to use simple formulae Children will understand how to edit and form different cells in a spreadsheet Children will understand how to write spreadsheet formula Children will understand how data is collected 		<p>Geographical skills and fieldwork</p> <ul style="list-style-type: none"> Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied Use the eight points of a compass, four and six-figure grid references, symbols and key to build their knowledge of the United Kingdom and the wider world Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies
Vocabulary	3D Algorithm Binary image CAD Compression CPU Data Drag and drop Fetch, decode, execute ID card Input JPEG Memory Online community Operating system Output Pixels RAM Responsible RGB ROM Safe		Climate sustainability renewable human impact green energy wind farm
Assessment	Children create their own formula and formatting on Google Sheets		Essay about energy and sustainability, using Iceland as a case study

	Art	DT	Science
Description		Children design, create and evaluate a cams toy	Children learn about the solar system and how celestial bodies relate to each other
NC Objectives		<ul style="list-style-type: none"> • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups • evaluate their ideas and products against design criteria • understand how key events and individuals in design and technology have helped shape the world • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] 	<p>Children:</p> <ul style="list-style-type: none"> • 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
Substantive Knowledge		<ul style="list-style-type: none"> • Design - work confidently in a range of contexts; describe the purpose and audience; model ideas using prototypes; use annotated sketches • Make - select suitable tools and equipment; order stages of the making process; measure, mark out and cut materials accurately; use techniques that involve a number of steps • Evaluate - consider views of others (including intended users); critically evaluate the quality of design • Technical knowledge - Know how mechanical systems such as levers and linkages create movement; know that mechanical systems e.g cams, pulleys or gears create movement 	<p>Children:</p> <ul style="list-style-type: none"> • Name all of the planets and learn their positions in the solar system • Understand the movement of the moon relative to the Earth, through acting out the movement • Know that the sun, Earth and moon are approximately spherical • Use objects to demonstrate the Earth's rotation to explain day and night and the apparent movement of the sun across the sky
Disciplinary Skills		<ul style="list-style-type: none"> • To apply the substantive knowledge of the existing products and materials to create their own toy that is fit for purpose, functional and aesthetically pleasing • Make thoughtful improvements based on critical evaluation • Apply learning from other subjects (maths, science and art) to help design, make and evaluate quality products that work 	<p>Children:</p> <ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary, for example, how does the mass of an object affect the size of the crater formed • Take measurements, using a range of scientific equipment, with increasing accuracy and precisions, taking repeat readings where appropriate, for example measuring the relative distances of the planets from the sun • Record data and results of increasing complexity using scientific diagrams and labels • Use test results to make predictions to set up further comparative and fair tests
Vocabulary		Cam movement mechanism push pull rotate slider component	Axis eclipse galaxy geocentric heliocentric moon orbit planet rotate satellite solar system star
Assessment		Children design and make their own cam toy	Headstart assessment on Earth and space

	PE	Music	Religious Education	
Description	Indoor - creative Outdoor - hand and stick invasion	Children learn to play a calypso bass line and create and perform their own version	Description	Children learn about the Holy Trinity and explore Mary's feelings about raising Jesus
NC Objectives	<ul style="list-style-type: none"> Play competitive games, modified where appropriate and apply basic principles suitable for attacking and defending Develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics] Perform dances using a range of movement patterns Take part in outdoor and adventurous activity challenges both individually and within a team Compare their performances with previous ones and demonstrate improvement to achieve their personal best 	<ul style="list-style-type: none"> Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression Improvise and compose music for a range of purposes using the inter-related dimensions of music Listen with attention to detail and recall sounds with increasing aural memory Use and understand staff and other musical notations Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians Develop an understanding of the history of music. 	Living Difference Concept Cycle	<p>Inquire To accurately explain the Christian concept of Incarnation and how this relates to the Trinity.</p> <p>Contextualise To accurately explain how passages in the Bible, depicting the Nativity, reflect the Christian belief that Jesus is God Incarnate. To identify how artists have shown the human and Godly qualities of Jesus in their artwork. To accurately explain the Christian belief in the Trinity and relate this to the idea of Incarnation.</p> <p>Evaluate To discern the value of Incarnation for Christians and reflect on what the idea of Incarnation may mean to them</p> <p>Communicate To respond creatively and to begin to describe their response to the Trinity.</p> <p>Apply To explain some examples of how the ideas of Incarnation and the Trinity may affect their lives or the lives of others.</p>
Substantive Knowledge	<p>Creative</p> <ul style="list-style-type: none"> Perform dances using a range of movement patterns. <p>Hand and stick invasion</p> <ul style="list-style-type: none"> Sending an object and receiving and object in combination and spatial awareness play competitive games, modify where appropriate and apply basic principles. 	<ul style="list-style-type: none"> Explore, recognise and identify a range of different scale patterns including pentatonic, major and minor and could extend to: raga, chromatic, modes, and how they influence music Identify voices / instruments within families and their role in a wider range of ensembles; refine the use of voices and percussion instruments with intended impact Explore and use a wider range of developmental structures 	Religious Traditions	CHRISTIANITY
Disciplinary Skills	<ul style="list-style-type: none"> Work creatively on their own, with a partner and in a group to create dances Perform to an accompaniment Perform dances fluently and with control Evaluate and refine their own and others' work. Talk about dance with understanding, Use different techniques for controlling, dribbling and shooting using a putter and ball. Developing hand eye coordination. Sending an object to a specific target using control and accuracy. 	<ul style="list-style-type: none"> Extend imaginative vocal use, chant and sing in balanced parts with expressive interpretation Demonstrate precise and confident instrumental skills and use them to perform with musical awareness Recognise which refinements need to be made and know how to make them Understand, select and use a range of notation for specific purposes including precise graphic notation and stave notation Respond to, identify, compare and contrast music with an awareness of the music's context and purpose 		
Vocabulary	Flexibility, rhythm, expression, strike, dribble, control, accuracy.	Calypso, metre, syncopated, rhythm, rhythmic pattern, accompaniment, chord, harmony	Vocabulary	Incarnation, Trinity, special
Assessment	Creative - perform a dance Hand and stick invasion - accuracy of target hitting	Perform a calypso bass line and create and perform their own version of Calypso Sparkle	Assessment	Creative writing from POV of Mary - realisation of Jesus as God incarnate

	PSHE	MFL (French)	
Description	Celebrating Difference: Children learn about The Equality Act and develop their understanding of diversity	Children learn about the artist Matisse and explore Christmas traditions in France	
NC Objectives	<p>PSHE Association</p> <ul style="list-style-type: none"> Value the different contributions that people and groups make to the community Know about diversity: what it means; the benefits of living in a diverse community; about valuing diversity within communities Understand stereotypes; how they can negatively influence behaviours and attitudes towards others; strategies for challenging stereotypes Know about prejudice; how to recognise behaviours/actions which discriminate against others; ways of responding to it if witnessed or experienced 	<ul style="list-style-type: none"> Explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help Develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases Read carefully and show understanding of words, phrases and simple writing Appreciate stories, songs, poems and rhymes in the language Broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary Describe people, places, things and actions orally and in writing 	
Substantive Knowledge	<ul style="list-style-type: none"> I understand there are different perceptions about what normal means I understand how being different could affect someone's life I can explain some of the ways in which one person or a group can have power over another I know some of the reasons why people use bullying behaviours I can give examples of people with disabilities who lead amazing lives I can explain ways in which difference can be a source of conflict and a cause for celebration 	<ul style="list-style-type: none"> Study the collage work of Matisse Describe colours and shapes Learn a traditional French song Describe French Christmas traditions 	
Disciplinary Skills	<ul style="list-style-type: none"> I can empathise with people who are different I am aware of my attitude towards people who are different I know how it can feel to be excluded or treated badly by being different in some way I can tell you a range of strategies for managing my feelings in bullying situations and for problem-solving I appreciate people for who they are I can show empathy with people in either situation 	<ul style="list-style-type: none"> Listen and show understanding of single words through physical response. Repeat modelled short phrases Recognise a familiar question and respond Recognise and use the first person possessive adjectives (mon, ma) Name the gender of nouns, name the indefinite article for both genres and use correctly Repeat modelled short phrases 	
Vocabulary	Normal ability disability empathy perception diversity fairness prejudice racism harrasment bullying	Carré rectangle étoile ovale triangle ligne Noel grands sapins neige bois champs	
Assessment	Summarise by discussing the importance of understanding difference and diversity	Children describe the work of Matisse and show understanding of Christmas traditions	