




Aldenham Prep School

Curriculum Policy

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Mrs V J Gocher	

INFORMATION

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Aldenham Preparatory School Curriculum Policy

Introduction

The curriculum is all the planned activities that we organise in order to promote learning, personal growth and development. It includes not only the formal requirements of the New National Curriculum, but also the range of extra-curricular activities that the school organizes to enrich the experiences of children. It also includes the 'hidden curriculum', or what the children learn from the way they are treated and are expected to behave. We aim to teach children how to grow into positive, responsible citizens, who can work and co-operate with others while 'taking care of their own learning', so that they can achieve their true potential. We believe in a broad curriculum enabling the pupils to become well rounded individuals.

Values

Our school curriculum is underpinned by our mission statement, our key aims and Golden Values; the 5 Cs (Appendix 1). The curriculum is the means by which the school achieves its objective of educating children in the knowledge, skills and understanding that they need in order to lead fulfilling lives.

At Aldenham we believe very strongly in offering breadth within our curriculum, so that the all-round talents of each individual child may be developed. This involves promoting the academic, creative and sporting facets of school life, as well as fostering children's natural curiosity, in order to empower them with a life- long love of learning.

At Aldenham Prep School:

- We value the way in which are children are unique, and our curriculum promotes respect for the views of each individual child, as well as for people of all cultures. We value the spiritual, moral, social and cultural development of each person, as well as their intellectual and physical growth.
- We value the importance of each person in our community. We organize our curriculum so that we promote co-operation and understanding between all members of our community.
- We respect each other for who they are and we treat them with fairness and honesty. We aim to enable each person to be successful, and we provide equal opportunities for all.
- We value our environment, and we aim, through our curriculum, to teach respect for our world and how we should care for it for future generations as well as our own.

Aims and objectives

The aims of our school curriculum are:

- to enable all children to learn and develop to the best of their ability;
- to promote a positive attitude towards learning, so that children enjoy coming to school, and acquire a solid basis for lifelong learning;
- to teach children the basic skills of literacy, numeracy, computing & coding
- to teach children about their developing world, including how the environment, culture and society have changed over time;
- to enable children to be happy, responsible and co-operative members of our community;
- to teach children to have an awareness of their own spiritual development, and to understand right from wrong.

Organisation and planning for EYFS, KS 1 & 2

We plan our curriculum in three phases:-

Long Term

Initially a curriculum map or long-term plan is drawn up. This indicates the broad learning intentions for each term and establishes which topics are to be taught to which groups of children. We review our long term plans on an annual basis. (See Appendix 2)

Medium Term

We use the national schemes of work as a basis for much of our medium-term planning. In our medium-term plans, we give clear guidance on the topics to be taught week by week. We store all of our medium-term plans stored on the intra-net, so that they can be easily updated and reviewed. (See Appendix 3)

Short Term

Our short-term plans are those that our teachers write or communicate on a weekly or daily basis. We use these to set out the learning objectives/ WALT for each session, and to identify which resources and activities we are going to use in the lesson. Prompts for differentiation and assessment are included at this stage of planning, as well as relevant cross-curricular links. (See Appendix 4)

A variety of AfL techniques are embedded in all areas of the curriculum as are steps to success (S2S). We continue to develop our evidence of assessment and progress.

Children who require Learning Support

The curriculum in our school is designed to provide access and opportunity for all children who attend the school. We adapt the curriculum to meet the needs of individual children.

If a child has a special need, our school does all it can to meet these individual needs. If a child displays signs of having special needs, his/her teacher makes an initial assessment. In most instances the teacher is able to provide resources and educational opportunities which meet the child's requirements, within the normal class organisation. If a child's need is more severe we will involve the Head of Learning Support and then the appropriate external agencies and professional assistance, in close consultation with parents.

The school provides a Pupil Passport and/or Targets for each of the children who are on the Learning Support register. This sets out the nature of the need and outlines how the school will aim to address that need. It also sets out targets for improvement, so that we can review and monitor the progress of each child at regular intervals.

When planning, teachers set suitable learning challenges and respond to children's diverse learning needs. Some children have barriers to learning that mean they have special needs and require particular action by the school.

These requirements are likely to arise as a consequence of a child having special educational needs. Teachers take account of these requirements and make provision, where necessary, to support individuals or groups of children and thus enable them to participate effectively in curriculum and assessment activities. Such children may need additional or different help from that given to other children of the same age.

Children may have special educational needs either throughout or at any time during their school career. This policy ensures that curriculum planning and assessment for children with special educational needs takes account of the type and extent of the difficulty experienced by the child. The SEND support takes the form of a four-part cycle through which earlier decisions and actions are revisited, refined and revised with a growing understanding of the pupil's needs and of what supports the pupil in making good progress and securing good outcomes.

This is known as the Graduated Approach. The flow diagram below illustrates this process



Homework

The school expects homework to be set as appropriate. As guidance we expect pupils to spend the following times on homework:

Year Group	Homework	Holiday Homework
Reception	Individual reading materials twice a week;	Reading task
Year 1	Reading every day; Spellings every week; Times tables after Christmas; A 30 minute Literacy task and a 30 minute Maths task once a week.	Reading task
Year 2	Reading every day; Spellings every week; Times tables every week; A 30 minute Literacy task and a 30 minute Maths task once a week.	Reading task
Years 3 and 4	Reading every day; Spellings every week; Times tables every week; Year 3 a 20 minute Literacy task and a 20 minute Maths task once	Reading task
	a week; Year 4 a 30 minute Literacy task and a 30 minute Maths task once a week; An on-going 2-3 week Learning Activity.	
Year 5	Reading, spellings and times tables every day; a 40 minute Literacy task and a 40 minute Maths task once a week; an on-going 2-3 week Learning Activity.	Reading task
Year 6	Before Christmas: reading, spellings and times tables every day; two 30-40 minute Literacy tasks and two 30-40 minute Maths tasks a week. After Christmas: reading, spellings and times tables; an on-going Learning Activity.	11+ practice papers until Christmas; Reading task after Christmas.

MAG&T

Class work is differentiated for the pupils and there is a register of children who have been identified as MAG&T.

The role of the Subject Co-ordinators

We aim for the subject coordinators to:

- Contribute to the whole School Development Plan
- provide a strategic lead and direction for the subject;
- support and offer advice to colleagues on issues related to the subject;
- monitor assessment and pupil progress in that subject area;
- provide efficient resource management for the subject.

It is the role of each subject coordinator to keep up to date with developments in their subject, at both national and local level. They review the way the subject is taught in the school and plan for improvement. This development planning links to whole-school SDP objectives. Each

subject leader reviews the curriculum plans for their subject and ensures that progression is planned into Schemes of Work. Subject leaders are also working towards keeping a portfolio of children's work, which will be used to show the achievements of children within each Year Group and to give examples of expectations of attainment.

Subject coordinators are:-

- Give a termly/annual budget for the subject
- Given staff meeting time
- Given coordinator time to update their file
- Given time to observe their subject being taught
- Meet with HoD of senior school regularly

Concerns and Complaints

Parents who have concerns about any aspect of the curriculum should discuss these in the first instance with the pupil's Class Teacher or Deputy Head. If the issue is not resolved parents should make an official complaint in writing to the Head of Prep. The school has a Complaints Procedure in place, which can be obtained from the Head of Prep

Monitoring and review

All teaching staff are responsible for monitoring the way the school curriculum is implemented. As part of the subject leadership programme each subject area is monitored in a cycle of review and development. The curriculum policy is reviewed annually.

V.J. Gocher/C.J.Watts
 January 2012
 November 2015
 January 2016
V J Gocher/ S Galpin
 October 2017

Appendix 1 Mission Statement

Mission Statement and Aims

The Prep School is a co-educational Independent IAPS School encompassing the Foundation Stage which is our Nursery and Reception classes (3-5 years), the Pre-Prep Department (5-7 years) and the Prep Department (7-11 years).

Our Mission Statement states that:

'At Aldenham Prep School, we provide a happy, nurturing and warm environment where quality learning takes place and the needs of each individual child are fulfilled.'

Our Key aims are:

- To ensure that each individual pupil is nurtured and encouraged to make the most of their own special talents
- To encourage a love of learning in order to aspire to academic excellence and a broad education for all pupils
- To emphasis the importance of the social, moral and spiritual dimensions of community life in a multi-cultural society
- To provide a well-planned, well organized environment giving children rich and stimulating experiences
- To foster good relationships and partnerships between pupils, parents, staff and the wider community

Appendix 2 Golden Values



Appendix 3

Long Term Plan

Year 6 Curriculum Map 2017-18

Year 6 Curriculum Map 2017-18

YEAR 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Continuous
Literacy	Biography and Autobiography Different genre Science fiction Mystery Rational Stories Fantasy Power of Imagery - Poetry Common Entrance Practice Historical Fiction Journalistic Writing Time Travelling Descriptions Common Entrance Practice		Common Entrance Focus – descriptions and story practice Balanced arguments War Horse review Poetry – Spring Balloon debates Play scripts Persuasive writing Adverts Letters Balloon debates		Recounts Diary writing Explanations Character descriptions Advertising performance Revisions of the different text types		Speaking & Listening The 'tools of the trade' – reading, handwriting, spelling, grammar & punctuation. Guided reading Comprehensions
Maths	Place value and rounding Negative numbers Multiplying/dividing by decimals including 10, 100, 1000 BODMAS Squares Square roots Powers of numbers Problem solving Multiples, factors and prime numbers Quadrilaterals Classifying shapes according to their properties Circumference and area of circle Measure and calculate unknown angles Averages	Simplifying fractions Ordering fractions Adding, subtracting, multiplying, dividing fractions Multi step problems Perimeter and area of triangles and rectilinear shapes Ordering fractions Adding, subtracting, multiplying and dividing fractions Finding fractions of amounts Finding percentages of amounts Problems involving decimals, fractions and percentages Pie charts and line graphs	Number and place value Measurement and statistics Multiplication and division Position and direction Fractions decimals and percentages	Algebra Addition and subtraction Time calculators	Fractions, decimals and percentages Counting, partitioning and calculating Securing number facts Understanding shape including circle circumference and area	Measures and capacity Handling data	Using & manipulating numbers to help solve problems. Exploring & developing mental strategies.
Science	Circulatory System	Healthy Lifestyles	Light	Electricity	Evolution and Inheritance	Classifying Animals	Using and applying science: investigation & experiments.
Geography	Rivers		The Seasons and local weather	Pollution/Africa and Kenya	South America/the rainforest and The Amazon	South America/the rainforest/ Chile	Learning geographical skills
History	Aztecs Summary of World War One		Britain Since 1930s World War 11 The Holocaust				Interpreting historical evidence. Appreciating chronology & history.
Art	Landscapes and Perspectives WATER COLOURS		Propaganda Posters Natural sculpture		Pop Art Roy Lichtenstein		Pupils should be taught to develop their techniques, including their

			(x 3 sessions with PS) Henri Moore Goldsbury SCULPTURE		Andy Warhol COLLAGE		control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. Pupils should be taught to create sketch books to record their observations and use them to review and revisit ideas 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) about great artists, architects and designers in history.
D&T	None this term due to exams		Make Do and Mend – sewing and cooking		Controllable vehicles		Planning, Making, Evaluating and improving.
Computing	Coding	Spreadsheets	Blogging E-Safety	Text Adventures	Networks	Quizzing	
Music	Keyboard and notations	Carol Service	Exploring sound sources	Lyrics & melody.	Performing together	Music processes.	Singing and performing.
PE & Games	Football / Netball Badminton	Football / Netball Gymnastics	Rugby / Hockey Basketball	Rugby / Hockey Dance	Crick, softball, rounders & athletics.	Crick, softball, rounders & tennis.	It's cool to exercise. It's great to be part of a team.
RE	Buddhism	Worship and Community	Expression and visual arts	Life of Jesus	Christians belief about God	Responsibility for the environment Suffering	Faith
PSHE	Being me in my world	Celebrating difference	Dreams and goals	Healthy Me	Relationships	Changing me	
French	Introducing reading and writing along with role-plays. Topics include: Myself, Face & Body, Transport, People, House, Animals, Food, Drink, Shops, At the Table, Clothes & Directions						Writing Reading
Creative Curriculum							

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Year 6 Medium Term Plan for Christmas Term

Key Dates	2 INNET DAYS																	Manahat (13 th)
Topic	1	2	3	4	5	6	7	8 and 9	10	11	12	13	14	15				
Year 2017	4 th Sept	11 Sept	18 th Sept	25 th Sept	2 nd Oct	9 th Oct	16 th Oct	Half Term	6 th Nov	13 th Nov	20 th Nov	27 th Nov	4 th Dec	11 th Dec				
Computing Coding Spreadsheets	Plan and code a program that uses variables to achieve a stated effect.	Plan and code a program that uses variables to achieve a stated effect.	To organise code and debug code.	Explain and use coding language.	To create a programme using code.	To use code to plan, create and debug a text based adventure.	To use code to plan, create and debug a text based adventure.	To use a spreadsheet to investigate the probability of throwing a dice.	To use a spreadsheet to investigate the probability of throwing a dice.	To use formulae in a spreadsheet to calculate.	To use a spreadsheet to calculate effectively.	To use a spreadsheet to calculate effectively.	To use a spreadsheet to calculate effectively.	To use a spreadsheet to calculate effectively.				
English	Assesses event writing using a WW1 soldier's perspective (using various conjunctions).	Biography and Autobiography using a WW1 soldier's perspective (using various conjunctions).	Science Fiction Writing using UFO Comprehensive in a WW1 soldier's perspective (using various conjunctions).	Modern Writing using American (Sheriff) Comprehensive in a WW1 soldier's perspective (using various conjunctions).	Modern Writing using American (Sheriff) Comprehensive in a WW1 soldier's perspective (using various conjunctions).	Fantasy Writing using a story summary Comprehensive in a WW1 soldier's perspective (using various conjunctions).	Power of nature Writing using a story summary Comprehensive in a WW1 soldier's perspective (using various conjunctions).	Historical Fiction Writing using a WW1 soldier's perspective (using various conjunctions).	Time Travelling Writing using a WW1 soldier's perspective (using various conjunctions).	Time Travelling Writing using a WW1 soldier's perspective (using various conjunctions).	Journalism Writing using a WW1 soldier's perspective (using various conjunctions).	Descriptive Writing using a WW1 soldier's perspective (using various conjunctions).	TEST WEEK	COOPER'S WEEK				
Maths	Place value Rounding	Mental and Written addition and subtraction of large numbers	Squares Square roots Powers of numbers	Written methods for multiplication and Division	Circumference and Area of circles	Reading Ruler Converting units of measurement	Written methods for multiplication and division with decimal numbers	Sampling factors	Multiplying and dividing decimals	20 and 30 shapes and areas of shapes	Expressing fractions as decimals	Finding per cent	Pie charts and line graphs	Area and Perimeter				

Year 6 Medium Term Plan for Christmas Term

	MOVEMENT T	PHYSICAL THEATRE	PHYSICAL THEATRE	FREEZEFRAM E	MIME	COMBI NED SKILLS	
Drama	To use movement to suggest different characters Yes! Let's Leave World Environments and movement Issues Enriches Work	To progress the ideas of drama through synchronised movement Telling Change & Metaphor & Storyline Robert	To develop accessible Physical Theatre sequences Super solo Object freeze? Sign names group and recorder	Securing use of level and focus on ensembles With giant People like Jugglers, Fireballs,	Use detail as mime and focus on ensembles Chorus Whisper Move Daily Routine Mime cards OTT	Create a skills and develop new things into their own drama Sign name Duo routine	
French	Telling the time Telling of address s Geography about yourself and others Greeting Forms of address s Geography about yourself and others Person Identity Problem	Telling the time Clocks How many? ? Colours Propositions	Telling the time Clocks How many? ? Colours Propositions Seasons	Clothes Colours Propositions What is there? ? Gender of terms Agreement of adjectives I've/she is wearing	Skillsets Colours Propositions What is there? ? Gender of terms Agreement of adjectives I've/she is wearing Personal belongings Colours Agreement of adjectives Possessive Pronouns Lost found French Day	Agreement t of adjectives Possessive s adjectives un/ma/fem/a Locustfound	Christin me, tradito in a vocabulary story
Games	Chess pieces board game chess how pawns to use, follower & rule. NETBALL L: These chess pawns how pawns to use, follower & rule.	Foot work Passing and receiving. Breakdown of positions.	Attacking, dodging, set and sprint design, footwork.	Shooting, ball court game Follows a St. Helix's	Shoot trip with and without a se- leader Ball court	Revised all skills to date, full court game. Flowers s Reduces/ No!	Centre pawns-s, attacking and defend ing. Horse manue s Football Festival

Year 6 Medium Term Plan for Christmas Term

[illegible]

Year 6 Medium Term Plan for Christmas Term

		Breys Football all Person is moving with and without opposit ion. 3x3	Goalkeeping in 3/1 Shooting (Pg 125)	Keeping possession in 3/1 FCPS/ALPH A & GUE (Pg 125)	Attacking/Def ending & transition Pg127	Fast Attack game Pg128	Possession and scoring 4x4 with Targets.	Passing recap, Long & short Timing and pace	Crossing the ball 5x5 with vingers.	Future of Hockey (Pg 6)	Heading & positioning recap Throughballs (Pg 6)	Hockey es Street Game.	Soccer Star Street Game.	
Rivers local and worldwide rivers; use, and management, ecology and degradation, flooding, water supplies, water conservation Madison Park Outdoor Center (field trip)														
History Actors and summary of World War I		Locate where the Actors lived on a map and find out the Actors were and when they lived	Find out how the Actors lived the city of Tombchill in	Investigate how Actors society was organised	Find out what the Actors society lived how lives impacted on their lives.	Actors society accident	Investigate what only the lives of the Actors		End of the Actors	Remembrance Day	5 Great Performers in WWI	Causes of WWI	Life in the trenches	Treaty of Versailles
	INSET	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	HOLLERSON TWAT at HOLLERSON VOICES WORKSHOP	Class service prep - vests and half term	Half Term	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep
Music	INSET	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	Listening, appreciating improvised composition g & performers in the style of jazz/ Harmonist Pep	HOLLERSON TWAT at HOLLERSON VOICES WORKSHOP	Class service prep - vests and half term	Half Term	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep	Class classroom performances / Card service prep
PE	INSET	Bullfighting Basic game Familiarisation skills UH Game Holding	OH clear shot Rolling Drop shotkick Long & Short game	Drop shotkick Long & Short game	Shotkick rules and shoot game. One goal & short kick. High Serve.	Recap of all skills covered in previous games.	Skills ladder level system to assess. Two groups.		Vaulting Hurdle step/step Irregularity.	Recap Hurdle step/vault over bench	Sides/Gale vault/Lane of rider control	Shotkick rough vault. Hurdle tramp.	Vaulting g vaults smallest at station n.	Horse Cross Country
		Class rules and identifying trees, goals and equipment	Understand the rights and responsibilities of the player	Investigate the impact of the game on the player	Learn to make the right choice and responsibilities of the player	Understand the rights and responsibilities of the player	Learn to make the right choice and responsibilities of the player		Review of democracy and responsibilities of the player	Learn to make the right choice and responsibilities of the player	Review of the Houses of Parliament	Understand the difference between the Houses of Parliament	Explain the rights and responsibilities of the player	Learn to make the right choice and responsibilities of the player
PSHE Being me in my world		Class rules and identifying trees, goals and equipment	Understand the rights and responsibilities of the player	Investigate the impact of the game on the player	Learn to make the right choice and responsibilities of the player	Understand the rights and responsibilities of the player	Learn to make the right choice and responsibilities of the player		Review of democracy and responsibilities of the player	Learn to make the right choice and responsibilities of the player	Review of the Houses of Parliament	Understand the difference between the Houses of Parliament	Explain the rights and responsibilities of the player	Learn to make the right choice and responsibilities of the player

Year 6 Medium Term Plan for Christmas Term

Year 6	Health Form 1	Character Form 1				Art Form 1	Health Form 2	Character Form 2	Art Form 2	Health Form 3	Character Form 3	Art Form 3
			prime numbers									fig decimals, fractions and percent ages
Science <i>Animals</i> Keeping healthy and the Circulatory System.	Lab Safety Name the main parts of the heart	Double circulation. Modelling how the heart pumps blood around the body	What happens when we breathe in and out? Measuring lung capacity	Function of the blood	Effect of exercise on our pulse rate	Effects of tobacco, alcohol, caffeine, solvents & other drugs.	What happens to our food?	What makes a healthy diet	The benefits of healthy routines in daily living and common risks to be avoided.	Revision and reinforcement of all areas	Assessment	
Art and DT Watercolour landscapes	Artec Mosaic Art Look at how artists use perspective and investigate a variety of interesting images	Observe an artist's work closely and sketch a section	Precise implementing David Hockney's style into our own work	Draw the outline of a landscape, focusing on perspective	Add colour to their landscape in the style of David Hockney	Using watercolour	Watercolour landscape	Create a landscape scene using Mexico as a stimulus	Van Gogh style landscape s	Van Gogh style landscape s	God's Eyes	Christ as Christ landscape poet

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Appendix 5 Short Term Plan

Year 5 Term: Christmas Scheme of Work – 2017-18 Unit / Topic: Science – Feel the Force

Lesson Objective	Main Teaching	Pupil Activities	Resources	Cross-Curric. Hwk Links
Session 1	NO LESSON DUE TO INSET / BUS/CRAFT			
Session 2 WALT: identify the effects of air resistance, water resistance and friction by identifying forces acting on objects. Key Question: What are forces? How do they affect the movement of an object? Key vocabulary: Force, push, pull, balanced, unbalanced, opposing, gravity, air resistance, water resistance, friction, buoyancy. AFL: use of talk partners, lolly sticks, no hands up, assessing prior learning.	Intro: Children to complete 'Start of unit Test' – Raing stars. What Are Forces? Children identify the pictures on the Lesson Presentation as pushed or pulls. Discuss their ideas. Main Explain how forces affect the movement of an object and discuss the different types of force as shown on the Lesson Presentation. Identifying Forces: Children use one of the differentiated Identifying Forces Bingo Boards to play a form of Bingo as described on the Lesson Presentation. Read out a Force Card for children to fill in on their Bingo board. Look for children who can identify the different forces. Plenary Force Examples: Children share their own examples of forces acting on objects and discuss with a partner.	BINGO Activity 1: Starter: Children use the initial letters of force provided. Main: Children refer to the opposing forces as provided as a prompt. Dessert: Children complete the blank labels on the diagrams. Forces in Action Activity 2: Children complete the Forces in Action Activity Sheet by identifying the forces and drawing arrows to show their relative size. Look for children who can identify and explain the forces and their relative size, showing whether they are balanced or unbalanced. Starter: Children may need support when drawing and labelling their own examples. Main: Children may use the Forces Word Mat as a prompt. Dessert: Children work independently.	Lesson pack SMSC: encouraging children to justify their opinions, to think about outcomes. FBV: develop the skills to express their opinions, know that their opinions matter, and can challenge the ideas of others with respect.	

Session 4 WALT: investigate the effects of air resistance. Key Question: How does air resistance affect the time it takes for a parachute to fall? Key vocabulary: Gravity, air resistance, Galileo, Galileo, mass, parachute, force. AFL: use of talk partners, lolly sticks, no hands up, assessing prior learning.	Intro: Gravity and Falling: Use the Lesson Presentation to explain that gravity causes objects of the same size and shape but of different mass to fall at the same rate. Discuss Galileo's experiment and how it proves this. Children may find this hard to grasp as air resistance often causes objects with less mass to fall more slowly. Children watch this clip to demonstrate a feather and a hammer falling on the Moon to address this misconception. http://www.bbc.co.uk/education/clip/59/shr08 Main Air Resistance: Use the Lesson Presentation to explain the effects of air resistance, and how this affects objects falling when on Earth. Children discuss the useful and unhelpful effects of air resistance using the diagrams on the Lesson Presentation. Plenary Super Skydiving: Children come to their conclusion in the form of a report on the differentiated Super Skydiving Report Activity Sheet.	Activity 4 The Perfect Parachute: Explain the content of the investigation using the Lesson Presentation. Ensure children understand how to make their different parachutes. Children discuss the possible variables, then reveal the suggestions on the Lesson Presentation. Children choose their independent, dependent and controlled variables for their investigation. They should record their choices and their prediction on the differentiated Perfect Parachutes Activity Sheet, then conduct their investigation. Children complete their results on the creativity sheet. Look for children who can plan and carry out their own investigation into the effects of air resistance on different parachutes. Starter: Children use prompts to select their variables. Main: Children explain their prediction, referring to air resistance.	Plastic sheets, such as bin bags or plastic bags • Paper • Card • String • Sticky tape • Objects to attach to the parachutes, such as paper clips, toy figures or modelling clay Measuring sticks	SMSC: encouraging children to justify their opinions, to think about outcomes. FBV: develop the skills to express their opinions, know that their opinions matter, and can challenge the ideas of others with respect.
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Session 5 WALT: explore the effects of water resistance. Key Question: How does water resistance and streamlining affect the performance of a boat? Key vocabulary: Water resistance, streamline, force. AFL: use of talk partners, lolly sticks, no hands up, assessing prior learning.	Intro: Water Resistance: Children discuss their experiences of water resistance using the photograph on the Lesson Presentation as a stimulus. Explain the force of water resistance, referring to the diagram on the Lesson Presentation. Main Streamlined Shapes: Children watch this BBC clip to identify streamlined shapes. Explain streamlining using the examples on the Lesson Presentation. Children work in groups to conduct the mini investigation into streamlined shapes as described on the Lesson Presentation. Explain why the shapes fell at different speeds as a result of some shapes being more streamlined than others. Plenary Children suggest adaptations to make their boat even faster if it was raced again.	Activity 1: Boat Race: Children complete the boat race challenge as described on the Lesson Presentation. Provide children with the junk modelling equipment so they can make their boats, then time how long it takes each boat to cross the water tray. Children complete the differentiated Boat Race Activity Sheet by drawing and labelling their design, making a prediction and evaluating their boat's performance. Look for children who can explain the effects of water resistance, and explain how they designed their boat to minimise these effects. Starter: Children use the key words to evaluate their boat's performance. Main: Children explain their choices when designing their boat. Refer to water resistance and streamlined shapes in their evaluation.	Plasticine or modelling clay 3 identical measuring cylinders per group Water Junk modelling materials Large water tray Battery powered hand held fan Stopwatch	SMSC: encouraging children to justify their opinions, to think about outcomes. FBV: develop the skills to express their opinions, know that their opinions matter, and can challenge the ideas of others with respect.
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Session 3 WALT: explain the effect of gravity on unbalanced objects. Key Question: What is the difference between weight and mass? Key vocabulary: Gravity, force, Isaac Newton, Newton, Newton metre, weight, mass. AFL: use of talk partners, lolly sticks, no hands up, assessing prior learning.	Intro: Falling Down: Children discuss their ideas about gravity using the cartoon on the Lesson Presentation. Explain the force of gravity using the information on the Lesson Presentation. Main Discovering Gravity: Children watch this clip (until approximately 1 minute 38 seconds) to find out about how Isaac Newton discovered gravity. http://www.bbc.co.uk/education/clip/59/shr08 Weight and Mass: Explain the difference between weight and mass, and how to measure them, using the information on the Lesson Presentation. Children watch this clip to find out more about weight and mass. http://www.bbc.co.uk/education/clip/59/shr08 Plenary Finding a Link: Children discuss their results and try to spot a link between weight and mass. Explain the link using the Lesson Presentation.	Activity 1: Children use the Newton and Gravity Fact Sheet to answer the comprehension questions on the differentiated Newton and Gravity Activity Sheet. Look for children who can explain Isaac Newton's role in discovering more about gravity. Starter: Answer literal questions based on the Fact Sheet. Main: Answer inferential questions based on the Fact Sheet. Activity 2: Measure the Force of Gravity: Explain how children will measure the weight and mass of different objects using the Lesson Presentation. Children complete the differentiated Measuring Gravity Activity Sheet with their prediction, results and conclusion, and conduct the investigation in pairs. Look for children who can measure the weight of objects, and who can explain that the weight of an object is caused by gravity pulling it down. Starter: Use prompts to make their prediction. Use key words to fill in gaps in the explanation of gravity, weight and mass. Main: Fill in gaps in the explanation of gravity, weight and mass. Dessert: Write their own explanation of gravity, weight and mass.	Newton metres Objects to be measured Clear bags with handles	SMSC: encouraging children to justify their opinions, to think about outcomes. FBV: develop the skills to express their opinions, know that their opinions matter, and can challenge the ideas of others with respect.
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Session 7 WALT: explore and design mechanisms. Key Question: What Are Mechanisms? Key vocabulary: Mechanism, lever, gear, cog, pulley, machine, force. AFL: use of talk partners, lolly sticks, no hands up, assessing prior learning.	Main What Are Mechanisms? Briefly explain mechanisms using the information on the Lesson Presentation. Organise children into groups of three. Children split up as described on the Lesson Presentation and move to different tables. On the table they should find the pre-cut jigsaw pieces from the Mechanisms Facts Activity Sheet. Children read the facts and piece the jigsaw back together, making notes on their Mechanisms Jigsaw Activity Sheet. Children go back to their original group at times and share their findings, completing their Mechanisms Jigsaw with the new information from their group members. Cracking Contraptions: Discuss the different machines shown on the Lesson Presentation. Point out that the machines use many different mechanisms to achieve a simple purpose. If you wish, children could watch this 'Telescope' episode of Wallace and Gromit's Cracking Contraptions. https://www.bbc.com/007-0904 Use the pictures on the Lesson Presentation to discuss some examples of the different mechanisms. Plenary Children to complete end of unit assessment.	Identifying Mechanisms: Children identify the type of mechanisms used in the objects shown on the Lesson Presentation. Share the answers with the children. Marvellous Machines: Children design their own crazy machine that uses lots of mechanisms to achieve a simple aim. Children can choose a card from the pre-cut Machine Aim Cards Activity Sheet to select an aim for their machine, or they can think of their own aim. Children draw and explain their designs on the differentiated Marvellous Machines Activity Sheet. Once finished, children share their machine designs with a partner, and evaluate each other's machine and explanation. Starter: Children use the sentence starters and key words to structure and scaffold their explanation and evaluation. Main: Children explain and evaluate independently.	https://www.bbc.com/007-0904 SMSC: encouraging children to justify their opinions, to think about outcomes. FBV: develop the skills to express their opinions, know that their opinions matter, and can challenge the ideas of others with respect.
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Session 6 WALT: investigate the effects of friction. Key Question: What Is Friction? Key vocabulary: Friction force, brake, variable, reliable. AFL: use of talk partners, lolly sticks, no hands up, assessing prior learning.	Intro: What Is Friction? Children discuss the statements about friction and decide if they are true or false. Share the answers and explain them using the information on the Lesson Presentation. Main Friction in Action: Children watch this clip to observe the way brakes utilise the force of friction. Explain how the brakes work using the information on the Lesson Presentation. http://www.bbc.co.uk/education/clip/59/shr08 Design a Brake Pad: Explain the context of the investigation and how to carry it out referring to the Lesson Presentation. Plenary Children to present their work to the rest of the class.	Reliable Results: Discuss the variables with the children, pointing out the need for consistency with the controlled variables in order to gather reliable results. Groups of children discuss how they can try to keep the controlled variables consistent. Find the Best Brake Pad: Children complete their prediction on the differentiated Investigating Friction Activity Sheet. They will then conduct the investigation and complete the table on the activity sheet with their results. Once completed, the children will demonstrate which material they think makes the best brake pad, and explain their choice on the activity sheet. Starter: Use key words to explain their prediction and choice of material. Main: Write their own explanations. Dessert: Make generalisations about the properties of materials that create most friction.	Tricycles (ideally one per group if possible) Thick card cut out into playing card sized pieces Five different materials to test (e.g. carpet, vinyl flooring, tin foil, towels, bubble wrap, plastic)	SMSC: encouraging children to justify their opinions, to think about outcomes. FBV: develop the skills to express their opinions, know that their opinions matter, and can challenge the ideas of others with respect.
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Curriculum Policy

Document History

Date:	Pages:	Amendments:	Reason:	Name:
Oct 17		Update Planning examples		SG