Rolling Programme of Outcomes and Themes

Numeracy- KS4

	Autumn		Spring		Summer	
	Theme	Outcomes	Theme	Outcomes	Theme	Outcomes
Year A	P1 (blue) P2 (green) P3(orange) P4(purple)	COUNTING PROPERTIES OF NUMBERS AND NUMBER SEQUENCES Begin to show enjoyment of light, sound, or touch sequences. Allow an adult to place an object in hands to experience the feel, and have one object changed for the next. Take an object to face to explore when the object is placed in hands. Look around for the next sound when the rhythmic beat on a drum stops. Track items that are being counted. Watch fingers, and allow an adult to count them using number names. Reach for toys as they are counted onto the table. Track the path of an object and anticipates where it will end, extend to include repetition and sequence, and experience of the associated language. Anticipate a count by vocalising or gesturing to suggest a continuation when an adult stops counting. Relate to items in increasingly systematic ways, e.g. collect items together or enjoys co-actively putting items into containers, encouraging one at a time. Participate as members of a group in games of change and chance by exchanging and stacking items. Show an interest in number activities and counting. PLACE VALUE AND ORDERING Experience touching and looking at single objects and hear them described as one. Encounter changing or different sizes of groups of things and hears adults comment on different groups. Shift attention between groups of objects; shows interest when adults change the size of groups. Shares a focus with an adult on finger manipulation, or touch sequences, showing some elements of anticipation.	Experiential: Data Handling	 Recognise sounds and smells in familiar situations. Associate an object with a real event, person or item. Use symbols to represent events, people and items. With support identify objects that fit a given criteria e.g. is this a dog? Pupil may respond using Yes or No. With help match objects to identical objects. With support attend to teacher pointing to a sequence of pictures/numbers and follow the sequence e.g. follows simple story board for a well-known story. May point to the set that has more when shown two different sets. May respond to words such as sort, match, and count. 	Experiential: Shape, Space & Measure P1 (blue) P2 (green) P3(orange) P4(purple)	MEASURES Experience stretching and curling, either just using hands or feet or perhaps a whole body experience. Experience the weight and size of different objects placed in hands. Feel a collection of different size spheres from table tennis to physiotherapy balls. Make small movements to accept small items, hold arms wide to receive very large toy, hear adult language associated with size. Feel heavy and light items on the lap, and hears adults comment on 'more', 'heavier', and 'bigger'. Respond to different language and intonation used by adult. Use grasp to develop awareness of texture, length, weight of familiar objects. Use hands to enclose an object to experience its global shape and contours. Point to items that have been taken away. Indicate through sound, sign or gesture that an items needs to be moved closer. Judge sizes of items being placed in containers, nesting boxes or buckets by adults; indicate whether or not they will fit. Use sound, sign or gesture to indicate the size/shape of cup to have a drink in. Push obstructions out of the way to obtain object. SHAPE AND SPACE React to or show pleasure at feeling a smooth round shape. Tolerate the introduction of forms or

Watch and feel adult mark-making, sequential movements or strokes, associated with keeping tally on events or objects.

Participate in collecting things together with an adult and experience adults' use of number names.

Experience use of number names for small numbers, e.g. associating the pointing of a finger to a single object or tracking as individual objects are pointed at or sequentially illuminated by a torch.

Receive tokens offered by adults or peers intended as tallies marking events such as scoring in a game.

Appreciate that adult finger-counting is denoting sequence of quantity.

Accept wooden or plastic numerals as tokens and be encouraged to explore their shapes. Recognise differences in groups of objects and chooses the larger group.

Place items in containers and empty them, anticipating the sequence with associated language used by adult or peer.

Begin to anticipate the ending or key elements of rhymes, songs and number games.

ADDITION AND SUBTRACTION

Become aware of adults entering and leaving their immediate vicinity and appreciating presence of one and more individuals. Extend glances between their own hands, or

Extend glances between their own hands, or between objects within close vision, or begins to feel alternative items.

Experience adult's use of language and intonation that refers to 'another' or 'more'. Extend awareness, watching sequences of items being placed or stacked, or being put into or taken out of bags, boxes, cupboards. Hear associated language.

Show anticipation and interest in watching collections being made.

Cooperate with adult or peers giving and taking, experience language associated with gain and loss.

Cooperate in building and reducing towers, or filling and emptying containers such as boxes of toys or bun trays.

Offer and accept items, express anticipation and awareness of opportunity to obtain items, regret at losing.

Work with partner to extend patterns by adding 'another one'.

Point at items in sequence along a number line,

items into the hand.

Focus on interesting or sharply defined parts of stimuli, e.g. areas where high contrast creates line effect.

Manipulate and rotate objects, such as a cardboard tube, a triangular prism and an orange in hands.

Use grasp to develop awareness of texture, length, weight of familiar objects.

Use hands to enclose an object to experience its global shape and contours. Experience the language of shape during exploration.

Explore the consequential properties of shape, e.g. balls roll, boxes stand or slide, triangles topple.

Use hand movements to trace around the edge of an object.

Begin to search for objects that have gone out of sight, hearing or touch, demonstrating the beginning of object permanence.

POSITION AND DIRECTION

Develop a trust and be willing to be moved or turned to experience different stimuli.

Respond to familiar items being moved within their immediate vicinity.

Show some awareness or desire to find source of sound that comes from side or behind.

Shuffle or wriggle, moving head and/or body to gain different view.

Turn head or body to seek new sound, show awareness of sounds behind. With assistance attempt to place a small box on a larger one.

Maintain interest in looking as tower is built; respond to the bricks being knocked over.

Follow the placement of objects in a line, and then reach out for the last object.

With assistance, put a smaller object

coordinate pointing with associated words sounds including intonation of increase and decrease.

Initiate exploration and works independently collecting objects, expects things to be where they put them a few moments before.

Make a tower taller or shorted by adding or removing objects.

Follow sequence of pictures or numbers as indicated by the teacher during rhymes and songs.

REASONING ABOUT NUMBERS

Experience repeated contrasting sounds, e.g. high, low, high, low... long, short, long, short. Attempt to locate and focus on source of interesting sound patterns from voices, music, equipment, toys, or materials.

Accept and engage in co-active exploration, manipulating items with adult support.

Switch attention between objects on a table that are highlighted in turn using a torch beam, or are tapped to make distinct sounds.

Begin to show desire to follow modelled actions and imitate adult responses in movement and sound patterns, e.g. long and short beats on a drum

Beats on a drum or cymbal in response to a familiar piece of music being played.
Create a pattern which they then observe being continued by others.

Complete a familiar sequence that has something missing or shows awareness that part of the sequence is incorrect.

Show awareness of changes in shape, position or quantity.

Use a finger to indicate 'one'.

PROBLEMS INVOLVING 'REAL LIFE', MONEY OR MEASURES

Show awareness as objects are placed against the hand, or face, in a series of touch events, accompanied by adult sound sequence. Show some anticipation of touch as items are touched on face or moved down their arm towards the hand, where they may grasp as items enter the palm.

Retain a hold on objects for longer and takes objects to own face for examination.

Place hands in sink as a jug of water is being emptied.

Respond through facial expression or movement to '1, 2, 3, Go!'

Hold coins to drop into a tin being passed

inside a larger one.

Participate in the arrangement of objects in lines, under pots, on top of things, and remember where they are.

Recognise that their coat hangs on a hook.

Use emerging language skills to direct the hiding of objects.

Begin to search for objects that have gone out of sight, hearing or touch, demonstrating the beginning of object permanence.

Demonstrate interest in position and the relationship between objects.

Supported: P5 – P7 Number	around the group. Indicate choice from two objects. Consistently use a recognised response to indicate preferred choice of mathematical activities. Anticipate, follow and join in mathematical activities when given a contextual clue. Indicate 'one' or 'two' Show awareness of contrasting quantities	Supported: Shape Space & Measure –	 Have an understanding of object permanence Find big and small objects on request 	Supported: Shape Space & Measure -	 Understand day/night. Relate familiar events to times of the day, days of the week and
Number	 Understand one-to-one correspondence in a range of contexts Join in rote counting up to five Count reliably to three, make sets of up to three objects Understand the concept of 'more'. Join in with number rhymes, songs, stories and games Rote count to ten Count at least five objects reliably Recognise numerals from 1 to 5 and understand that each represents a constant number or amount Understand 'less' Respond to 'add one' when working with a number of objects 	Length & Mass	 Compare the size of one object with that of another where there is a marked difference and perhaps where there is not great difference Explore the position of objects Manipulate three-dimensional shapes. Show understanding of words, signs and symbols that describe positions Respond to forwards and backwards. Pick out described shapes from a collection. Compare sizes and quantities using familiar vocabulary in practical situations. 	Time	 seasons of the year. Identify significant or desirable activities on specific days of the week Read an individual visual timetable. Understand the order of the day and simple timetables, for example, to plan TV viewing or radio listening, to find the starting time of films, to know when the school bus should arrive and depart. Understand the duration of an activity by using sand timers, stopwatches etc Understand the difference of doing things fast/slow. Talk about past events or future plans. Name the 7 days of the week Sequence the 7 days of the week. Explore by commenting on environmental cues related to Time. Start telling the time: O'clock using an analogue clock. Learn order and explore seasons. Learn and order months of the year.
Independent:	To count one more one less.	Independent:	Understand the exchange process:	Independent:	To know:
P7 - NC	 To know smallest/biggest 	Money	money in return for items or services.	Shape Space	• The 7 days of the week
Number	• Recognise & order numbers to 10/20		Use of coinage in a variety of settings in and out of school of mini	& Measure -	12 Months of the yearWhat a fortnight is
	• Write numbers to 10		in and out of school e.g. mini-	Time	What a forthight is How many weeks in a year
	• Know the symbols for + & =		enterprise, shopping, charity		How many days in a year
	• Understand simple number sentences		fundraising.		What a decade, century &
	of addition		Recognise shapes and colours of		millennium is

- Number bonds to 10
- Count to 100
- Count in 10's to 100
- Count in 10's from a given number
- Count in 5's up to 100
- Count in 2's up to 50
- Begin to count on in 20's relating to 2's
- Begin to count in 50 relating to counting in 5's
- Recognise patterns in number
- Place Value Th H T U
- Partition up to 4 digit numbers
- Add numbers using place value (not bridging through)
- Bridge through 10 when adding
- Use mathematical terminology
- Students learn basic subtraction (numbers bonds from 10 – starting with one less.)
- Begin to use the language and understanding of 'difference between' – counting up from smaller to larger number
- Students to learn basic subtraction (numbers bonds from 10 – counting up from smaller to bigger.)
- Find the difference between numbers below 100 (encourage strategy of counting from a given number 10's.)
- Find the difference between numbers from 1000 and below (encourage strategy of counting from a given number in 100's and 10's)

- money.
- To sort coins into appropriate groups.
- Students explore different pounds e.g.£1, £2, £5, £10
- Recognise or/and use £ and p notation for money
- Recognise 1p, 2p, 5p, 10p, 20p and 50p coins
- Explore how many p makes £1
- Using money up to IOp or £10 involving whole numbers. Compare the two. For example: 5p+5p=10p £5+£5=£10
- Count coins reliably, depending on ability.
- Explore physically and compare 1p/£1 to other simple amounts. 2p =1p+1p, £2=£1+£1

Read and write these amounts.

- Count on in 2p/£2
- Count on in 5p/£5
- Count on in 10p/£10
- Count on in 50p
- Begin to add 2p together
- Begin to add 5p together
- Begin to add 10p together
- Begin to add different small amounts e.g. 1p+2p=3p. Explore number bonds to 10.
- Count on in 20p
- Count on in 50p
- Begin to add smaller amounts to 20p
- Begin to add smaller amounts to 50p
- Begin to add 20p together
- Begin to add 50p together
- Begin to add different £ together relate to number bonds to 10
- Add coins, depending on ability
- Subtract coins, depending on ability.
- Interpret + and in practical
- Situations involving money. Use a calculator to check calculations.
- Use their developing mathematical

- How many seconds in a minute
- How many minutes in an hour
- How many hours in a day
- How weeks in a year
- How many days in a year
- What an analogue clock is
- Minute hand & Hour hand
- O'clock
- Half past
- Quarter past & quarter to
- Five minute intervals
- Read the time from a 12 hour digital clock
- Learn seasons
- Learn how to read the date in words
- Learn to read the date in numbers
- Explore and learn what a 12 hour digital clock is about.
- Read the time from a 12 hour digital clock
- Explore and learn what a 24 hour digital clock is about.
- Learn to read the time for a digital
 24 hour clock.

games or other work.			understanding of counting to solve simple problems encountered in play, games or other work.		
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ear B	Experiential:	MEASURES	Experiential:	COUNTING PROPERTIES OF NUMBERS	Experiential:	Recognise sounds and smells
.a. D	Shape, Space	Experience stretching and curling, either	Number		Data Handling	familiar situations.
	& Measure	just using hands or feet or perhaps a whole		Begin to show enjoyment of light, sound,		Associate an object with a re-
	& Wicusure	body experience.	P1 (blue)	or touch sequences.		event, person or item.
	54 (1.1)	Experience the weight and size of different		Allow an adult to place an object in hands		Use symbols to represent ever
	P1 (blue)	objects placed in hands.	P2 (green)	to experience the feel, and have one object		people and items.
	P2 (green)	Feel a collection of different size spheres	P3(orange)	changed for the next.		With support identify objects
	P3(orange)	from table tennis to physiotherapy balls.	P4(purple)	Take an object to face to explore when the		a given criteria e.g. is this a d
	P4(purple)	Make small movements to accept small		object is placed in hands.		Pupil may respond using Yes
	· ·(parpie)	items, hold arms wide to receive very large		Look around for the next sound when the		With help match objects to id
		toy, hear adult language associated with		rhythmic beat on a drum stops.		objects.
		size.		Track items that are being counted.		With support attend to teach
		Feel heavy and light items on the lap, and		Watch fingers, and allow an adult to count		pointing to a sequence of
		hears adults comment on 'more', 'heavier',		them using number names.		pictures/numbers and follow
		and 'bigger'. Respond to different language		Reach for toys as they are counted onto the table.		the sequence e.g. follows sim
		and intonation used by adult. Use grasp to develop awareness of texture,		Track the path of an object and anticipates		story board for a well-known
		length, weight of familiar objects.		where it will end, extend to include		May point to the set that has
		Use hands to enclose an object to		repetition and sequence, and experience of		when shown two different se
		experience its global shape and contours.		the associated language.		May respond to words such a
		Point to items that have been taken away.		Anticipate a count by vocalising or		match, and count.
		Indicate through sound, sign or gesture		gesturing to suggest a continuation when		
		that an items needs to be moved closer.		an adult stops counting.		
		Judge sizes of items being placed in		Relate to items in increasingly systematic		
		containers, nesting boxes or buckets by		ways, e.g. collect items together or enjoys		
		adults; indicate whether or not they will fit.		co-actively putting items into containers,		
		Use sound, sign or gesture to indicate the		encouraging one at a time.		
		size/shape of cup to have a drink in.		Participate as members of a group in		
		Push obstructions out of the way to obtain		games of change and chance by		
		object.		exchanging and stacking items.		
		,		Show an interest in number activities and		
				counting.		
		SHAPE AND SPACE				
		React to or show pleasure at feeling a		PLACE VALUE AND ORDERING		
		smooth round shape.		Experience touching and looking at single		
		Tolerate the introduction of forms or items		objects and hear them described as one.		
		into the hand.		Encounter changing or different sizes of		
		Focus on interesting or sharply defined		groups of things and hears adults comment		
		parts of stimuli, e.g. areas where high		on different groups.		
		contrast creates line effect.		Shift attention between groups of objects;		
		Manipulate and rotate objects, such as a		shows interest when adults change the size		
		cardboard tube, a triangular prism and an		of groups.		
		orange in hands.		Shares a focus with an adult on finger		
		Use grasp to develop awareness of texture,		manipulation, or touch sequences, showing		
		length, weight of familiar objects.		some elements of anticipation.		
		Use hands to enclose an object to		Watch and feel adult mark-making,		
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sequential movements or strokes,

experience its global shape and contours.

Supported: Shape Space & Measure - Time	 Understand day/night. Relate familiar events to times of the day, days of the week and seasons of the year. Identify significant or desirable activities on specific days of the week Read an individual visual timetable. Understand the order of the day and simple timetables, for example, to plan TV viewing or radio listening, to find the starting time of films, to know when the school bus should arrive and depart. Understand the duration of an activity by using sand timers, stopwatches etc Understand the difference of doing things fast/slow. Talk about past events or future plans. Name the 7 days of the week Sequence the 7 days of the week. Explore by commenting on environmental cues related to Time. Start telling the time: O'clock using an analogue clock. Learn order and explore seasons. Learn and order months of the year 	Supported: Number	 Indicate 'one' or 'two' Show awareness of contrasting quantities Understand one-to-one correspondence in a range of contexts Join in rote counting up to five Count reliably to three, make sets of up to three objects Understand the concept of 'more'. Join in with number rhymes, songs, stories and games Rote count to ten Count at least five objects reliably Recognise numerals from 1 to 5 and understand that each represents a constant number or amount Understand 'less' Respond to 'add one' when working with a number of objects 	Supported: Money	 Understand the exchange process: money in return for items or services. Use of coinage in a variety of settings in and out of school e.g. mini-enterprise, shopping, charity fundraising. Explore prices in class and real life contexts. Recognise shapes and colours of money. Respond appropriately to key vocabulary and questions, e.g. 'How many?" Count reliably up to five pennies or pounds. Show awareness of contrasting quantities Recognise 1p coins unaided and match 1p, 2p, 5p, 10p, 20p and 50p coins.
Independent: P7 - NC Number	 To count one more one less. To know smallest/biggest Recognise & order numbers to 10/20 Write numbers to 10 Know the symbols for + & = Understand simple number sentences of addition Number bonds to 10 Count to 100 Count in 10's to 100 Count in 10's from a given number Count in 5's up to 100 Count in 2's up to 50 Recognise patterns in number Place Value Th H T U Partition up to 4 digit numbers 	Independent: Time	To know: The 7 days of the week 12 Months of the year What a fortnight is How many weeks in a year How many days in a year What a decade, century & millennium is How many seconds in a minute How many minutes in an hour How many hours in a day How weeks in a year How many days in a year What an analogue clock is Minute hand & Hour hand O'clock Half past Quarter past & quarter to Five minute intervals	Independent: Money	 Understand the exchange process: money in return for items or services. Use of coinage in a variety of settings in and out of school e.g. mini-enterprise, shopping, charity fundraising. Recognise shapes and colours of money. To sort coins into appropriate groups. Students explore different pounds e.g.£1, £2, £5, £10 Recognise or/and use £ and p notation for money Recognise 1p, 2p, 5p, 10p, 20p and 50p coins Explore how many p makes £1 Using money up to IOp or £10

	 Add numbers using place value (not bridging through) Bridge through 10 when adding Use mathematical terminology Students learn basic subtraction (numbers bonds from 10 – starting with one less.) Begin to use the language and understanding of 'difference between' – counting up from smaller to larger number Students to learn basic subtraction (numbers bonds from 10 – counting up from smaller to bigger.) Find the difference between numbers below 100 (encourage strategy of counting from a given number 10's.) Find the difference between numbers from 1000 and below (encourage strategy of counting from a given number in 100's and 10's) 	 Read the time from a 12 hour digital clock Learn seasons Learn how to read the date in words Learn to read the date in numbers Explore and learn what a 12 hour digital clock is about. Read the time from a 12 hour digital clock Explore and learn what a 24 hour digital clock is about. Learn to read the time for a digital 24 hour clock. 	involving whole numbers. Compare the two. For example: 5p+5p=10p £5+£5=£10 Count coins reliably, depending on ability. Explore physically and compare 1p/£1 to other simple amounts. 2p =1p+1p, £2=£1+£1 Read and write these amounts. Count on in 2p/£2 Count on in 5p/£5 Count on in 10p/£10 Count on in 50p Begin to add 2p together Begin to add 5p together Begin to add 10p together Begin to add different small amounts e.g. 1p+2p=3p. Explore number bonds to 10. Count on in 50p Begin to add smaller amounts to 20p Count on in 50p Begin to add smaller amounts to 50p Begin to add 50p together Begin to add 50p together Begin to add 50p together Segin to add 5n together Begin to add 5n together
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Note:

- With **Independent learners group** it is essential that other aspects of topic areas are taught throughout the foundation subjects: For example, measure is taught specifically with those students in Food Tech, DT, P.E. etc. Would ideally like to see planning in this area in the planner for the particular subject.
- All 3 groups of learners to experience numeracy **U&A/Problem Solving** in other subjects cross curricular approach