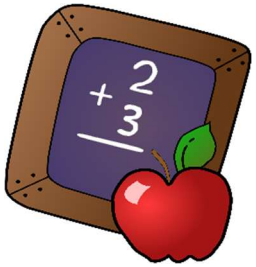
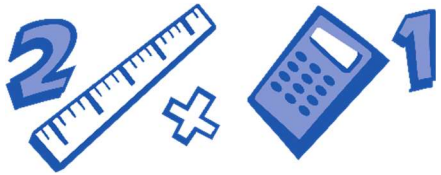
Programme of study for Numeracy for life



Progression Pathways Mathematics	
NUMBER Engage	• Explore manipulatives in increasingly complex ways. • Observe the results of their actions with interest. • Remember learned responses over an extended period. • Begin to anticipate known events. • Begin to apply potential solutions systematically to problems. • Persistence becomes more established when interacting with an activity. • Begin to act spontaneously and independently during familiar activity • Begin to request familiar activities.

Progression Pathways Mathematics – Number	PATHWAY 1
Number & Place Value	• Shows an awareness of number activities and counting. • Anticipates an event/action when taking part in a familiar number activity • Participate in a familiar number activity. • Gains experience of numerals

	• Indicates ‘one’, e.g. finger/object/gesture/sound, etc… • Respond to words more and gone.
Addition & Subtraction	• Take part in activities concerned with adding a group of objects. • Take part in activities involving taking away from a group of objects. • Respond to words more and gone. • Shows an interest in counting.
Multiplication & Division.	• Take part in activities concerned with adding or taking away from a group of objects. • Be aware of cause and effect in familiar mathematical activities. • Responds to the words more and gone. • Anticipate, follow and join in matching activities when given a contextual clue. • Joins in a 1:1 matching activity with support.
Fractions	• Shows an interest in counting • Anticipate an event/action when participating in a familiar number activity. • Gain experience with numerals in the classroom and other activities. • Put marks or symbols alongside pictures when undertaking mathematical activities. • Begin to search for objects that have gone out of sight, hearing or touch, demonstrating the beginning of object permanence.



PROGRESSION PATHWAYS FOR MATHEMATICS		
NUMBER & PLACE VALUE		
Create and Explore (Pathway 2)	Refine and Initiate (Pathway 3)	Consolidate and Apply (Pathway 4)
• Join in with some familiar number songs, stories and games with assistance or encouragement. • Begin to realise that numerals represent quantities by counting in any order when playing with numbers. • Demonstrate an understanding of contrasting quantities when there is a marked difference. • Use emerging understanding of counting small amounts to solve simple problems practically. • In practical situations indicate the correct number from a choice of two. • Indicate one or two • Make groups of 'one' and 'lots' • Use concrete resources to record quantities. • Make pictorial representations showing quantities of groups.	• Join in rote counting to 5 • Use practical methods to associate names and symbols with numbers. • Encounter and explore numerals 0-9 (and beyond) • Use practical methods – associate names and symbols with numbers. • Have some recognition of numerals 0-5. • Match numeral to numeral • Recognise that numbers record the number of objects. • Demonstrate understanding of 1:1 correspondence in a range of contexts. • Show an awareness of the vocabulary more or less in a range of contexts. • Relate numerals 0-5 to the correct quantity understanding that numerals always represent that quantity.	• Use ordinal numbers in different contexts. • Recite numbers in order from 0 to 10. • Recognise numerals 0-9 reliably • Relate numerals 0-9 to sets of objects. • Begin to record numbers of objects initially by making marks, progressing to simple tallying by making marks, progressing to simple tallying and writing numbers to 10. • Use language such as more and less to compare two numbers. • Recognise small numbers of objects without counting. • Count reliably up to 10 everyday objects showing understanding of 1:1 correspondence. • Know that numbers identify how many objects are in a set. • Match sets of objects to numerals that represent the number of objects. • Estimate how many objects they can see and check by counting.

ADDITION AND SUBTRACTION		
Create and Explore (Pathway 2)	Refine and Initiate (Pathway 3)	Consolidate and Apply (Pathway 4)
• Use emerging understanding of counting small amounts to solve simple problems practically with support • Demonstrate an awareness of contrasting quantities by making groups of objects with help. • Indicate 1 or 2. • Make groups of 'one' or 'lots'. • Use the term **one** and **lots**. • Realise that numerals represent quantities by counting in any order when playing with numbers.	• Use understanding of counting small amounts to solve simple problems practically. • Use the understanding of 'more'. • Match objects and images according to given criteria relating to number. • Demonstrate an understanding of more or less. • Demonstrate an understanding of 1:1 matching activities where there are not enough. • Realise when they have too many in 1:1 matching activity.	• Begin to use developing mathematical understanding, ideas, methods and counting to solve practical problems. • Continue to rote count onwards from any given number. • Remove or add one object to 10 and check how many are left by counting. .

MULTIPLICATION & DIVISION.		
Create and Explore (Pathway 2)	Refine and Initiate (Pathway 3)	Consolidate and Apply (Pathway 4)
• Demonstrate an awareness of contrasting quantities by making groups of objects with help. • Begin to sort sets of objects according to a single attribute. • With support, match objects to picture/s. • Use an emerging understanding of counting small amounts to solve simple problems practically. • Use concrete resources to record and remember quantities or make pictorial representations showing quantities of groups. • Begin to match two sets that are equal. • Make groups of 'one' and 'lots'. • Use the terms one and lots.	• Use practical methods to associate names and symbols with numbers. • Realise that numbers and tallies can record the number of objects. • Copy simple patterns or sequences. • Use understanding of counting small amounts to solve simple problems practically. • Use the understanding of "more". • Copy simple patterns or sequences. • Understand the notion of sharing between a number of people. • Begin to use developing mathematical understanding and counting to solve simple problems encountered in play, games or work. • Respond appropriately to key vocabulary and questions. • Copy a pattern made by an adult.	• Understand the notion of sharing equally between a number of people. • Use tallies or other marks to represent quantities.

FRACTIONS		
Create and Explore (Pathway 2)	Refine and Initiate (Pathway 3)	Consolidate and Apply (Pathway 4)
• Develop an awareness of contrasting quantities by making groups of objects with help. • Begin to sort sets of objects according to a single attribute. • Use emerging understanding of counting small amounts to solve simple problems practically. • Use concrete resources to record and remember quantities or make pictorial representations showing quantities of groups. • Begin to match two sets that are equal. • Make groups of 'one' and 'lots'. • Use the terms 'one and 'lots'.	• Use practical methods to associate names and symbols with number. • Realise that numbers and tallies can record the number of objects. • Use understanding of counting small amounts to solve simple problems practically. • Use the understanding of "more". • Copy simple patterns or sequences. • Understand the notion of sharing between a number of people. • Begin to use developing mathematical understanding. • Respond appropriately to key vocabulary and questions.	• Understand the notion of sharing between a number of people. • Use tallies or other marks to represent quantities.

NUMBER & PLACE VALUE		
Investigate	Investigate	Investigate

(Pathway 4)	(Pathway 4)	(Pathway 4)
• Continue to rote count onwards from any given number up to 20. • Estimate a small number of objects and check by counting. • Know numbers 0-10 relate to different but constant sizes of sets of objects. • Indicate first and last. • Start to record numbers of objects using numerals • Observe numerals 0-50. • Compare two given quantities of objects up to 10 communicating which is: Fewer/more/larger/smaller • Matches quantities • Find a given number to 10 find: - • Number before • After • One more /less	• Begin to talk about their work • Reads numbers1 - 20 accurately. • Recognise numbers to 20 randomly. • Record number of objects using numerals up to 20. • Counts reliably up to 20 using a range of objects. • Count to at least 20 forwards and backwards. • Knows the number that is 1 more and 1 less than any umber up to 20. • Order numerals from 0 to at least 20 in ascending and descending order. • Counts in ordinal numbers to 10. • Realises the relationship between ordinal and cardinal numbers. • Begins to use manipulatives to partition teen numbers into tens and ones. • Use the language: more than/less than (fewer)/most/equal to • Use the number facts they know to solve problems. • Identifies numbers in a range of contexts.	• Count 0 – 100 • Counts forwards and backwards between 0 and 100. • Knows numbers in the counting sequence are getting bigger. • Reads numerals to 100. • Records number of objects up to 20. • Relates cardinal numbers to dates. • Knows the number that is 1 more or1 less than any number up to 100. • Gives the empty set a value of 0 • Use the language of: - Total Altogether Double Difference between • Knows which of any 2 numbers is the larger/smaller (up to 30) • Find the missing number from a simple sequence of numbers to 20. • Counts reliably up to 20 • Partitions any number up to 20 into tens and ones (explaining the value).

NUMBER & PLACE VALUE

Embed (Pathway +4)	Embed (Pathway +4)	Embed (Pathway +4)
• Count to and across 100 forward/backward, beginning with 0 or 1 or any given number. • Count in multiples of 2s…5s…10s • Begins to use the place value of each digit to order numbers of 100. • Know the number that is 1 more and 1 less than any number up to 100. • Use the language of least • Partitions numbers into tens and ones • Begin to sort numbers into odd and even. • Use place value and number facts to solve simple problems.	• Counts forwards and backwards between two given numbers up to 100. • Counts in multiples of 2s/5s/10s • Begins to use the place value of each digit to order numbers up to 100. • Know the number that is 1 more and 1 less than any number up to 100 with support • Use the language of least. • Partitions numbers into tens and ones. • Begin to sort numbers into odd and even. • Use place value and number facts to solve simple problems.	• Read numbers up to 100. • Order numbers to 100. • Compare numbers to 100. • Use place value and order numbers up to 100, sometimes using less than (<) equals (=) and greater than (> signs correctly. • Write numbers up to 100 in numerals. • Count forwards and backwards from 0 in 2's. • Count forwards and backwards from 0 in 5's. • Count forwards and backwards from any number in 10's • Partition numbers into hundreds, tens and ones. Estimates numbers to 100 • Demonstrates knowledge that zero is a placeholder. • Reasons about place value and number facts to solve problems.

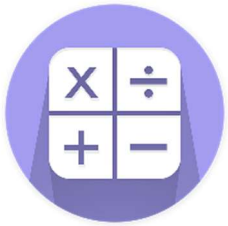
ADDITION AND SUBTRACTION		
Investigate (Pathway +4)	Investigate (Pathway +4)	Investigate (Pathway +4)

• Makes estimates and predictions. • Uses developing mathematical understanding & ideas to solve practical problems. • Use mathematical methods and counting to solve practical problems. • Begin to relate addition to counting on • Use objects to do addition to 10. • In practical activities and discussions, begin to use the vocabulary involved in adding. • Begin to relate subtraction to taking away. • In practical activities and discussions, begin to relate vocabulary involved in subtraction. • Begin to relate addition to combining two groups of objects, counting the objects, extending to 3 groups of objects. • Separate sets up to 10 objects into 2 groups.	• Understand addition as finding the total of two or more sets of objects. • Understand subtraction as taking away objects from a set and finding how many are left. • Solve addition and subtraction problems involving up to 10 objects in a range of contexts. • Count on and back • Solves addition by counting on. • Solves subtraction by counting back. • Uses number bonds to 5. • Understands and uses the vocabulary involved in addition and subtraction. • Represent working out with objects and pictures and diagrams. • Understands when to use the symbols… **+ – =** • Begin to describe solutions to practical problems.	• Recall and use addition and subtraction facts for all numbers up to 5 and some facts to 10. • Count back from 20 to find out how many are left. • Counts on to find the total to 20. • Add and subtract one digit and two-digit numbers to 20, including zero, using concrete objects, structured apparatus, pictorial representations and basic written methods. • Begin to use addition + and subtraction – and equals = signs to record their work. • Identifies the operation required to solve a simple problem. • Read mathematical statements they have recorded • Use skill and approaches to solve single step problems. • Recalls number bonds to 10.

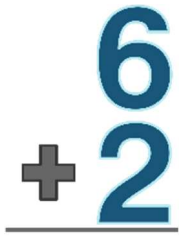
ADDITION AND SUBTRACTION		
Embed (Pathway +4)	Embed (Pathway +4)	Embed (Pathway +4)
• Recall number facts to 10 • Investigate simple problems. • Solves simple problems with numbers up to 20 • Adds two numbers to make 20. • Understand the sum does not change regardless of the objects used. • Create a number of stories to 20. • Subtract two single digits numbers.	• Use concrete objects and pictorial representations to add two-digit numerals to single digits. • Use concrete objects and pictorial representations to subtract two-digit numerals to a single digit. • Solves one-step problems using addition and subtraction using concrete objects and pictorial representations. • Solves missing number problems. • Explains the effect of adding or subtracting zero. • Recognise that addition and subtraction can be done in any order. • Begins to use number bond facts to 100. • Can add multiples of 10. • Can subtract multiples of 10.	• Uses concrete objects and pictorial representations to add a two-digit numeral to two-digit. • Uses concrete objects and pictorial representations to subtract two-digit numerals from two digits. • Use the knowledge that subtraction is the inverse of addition. • Choose the correct operation when solving addition and subtraction problems. • Read, write and interpret mathematical statements involving addition (+) subtraction (-) and equals (+) signs. • Partition numbers to simplify a problem. • Solve one-step problems that involve addition and subtraction using concrete objects and pictorial representations.

MULTIPLICATION AND DIVISION.		
Investigate (Pathway +4)	Investigate (Pathway +4)	Investigate (Pathway +4)
• Shares objects between 2 groups • Try to share things equally. • Combine two equal groups. • Talk about, recognise and recreate simple patterns.	• Double numbers to 5 • Divide objects between 2 groups. • Creates groups of small quantities. • Share small quantities.	• Count on to find a double to 20 • Doubles any number to 10. • Uses an array to solve problems. Counts in 2's from 0 • Counts in 5's from 0 • Count in 10's from 0 • Begin to recall and use doubling and halving facts for numbers up to a double of 5. • Begins to recognise even numbers to 10. • Solve single-step problems involving grouping and sharing by using objects.

MULTIPLICATION AND DIVISION.		
Investigate (Pathway +4)	Investigate (Pathway +4)	Investigate (Pathway +4)
• Shares objects between 2 groups • Try to share things equally. • Combine two equal groups. • Talk about, recognise and recreate simple patterns.	• Double numbers to 5 • Divide objects between 2 groups. • Creates groups of small quantities. • Share small quantities.	• Count on to find a double to 20 • Doubles any number to 10. • Uses an array to solve problems. Counts in 2's from 0 • Counts in 5's from 0 • Count in 10's from 0 • Begin to recall and use doubling and halving facts for numbers up to a double of 5. • Begins to recognise even numbers to 10. • Solve single-step problems involving grouping and sharing by using objects.



MULTIPLICATION AND DIVISION.		
Embed (Pathway +4)	Embed (Pathway +4)	Embed (Pathway +4)
• Doubles any number to 10 • Begins to double numbers to 20 • Begins to calculate multiplication problems with support. • Begins to calculate division problems with support.	• Recalls doubles to 20 • Recognise even numbers. • Recognises odd numbers. • Recalls multiplication and division facts for the “two times tables” • Uses an array for x2 • Understands when to use the signs for times and divide and equal = • Writs number sentences using the correct signs. • Understand division as sharing equally.	• Recalls multiplication facts for five times table. • Recall division facts for 5 times table. • Recalls multiplication facts for five times table. • Understands multiplication as repeated addition. • Solves problems using multiplication facts. • Solves problems using division facts.



FRACTIONS		
INVESTIGATE (Pathway +4)	INVESTIGATE (Pathway +4)	INVESTIGATE (Pathway +4)
• Begins to use the term 'half'	• Begins to use the fraction one-half. • Can half numbers to 10. • Shares concrete objects between a given number. .	• Recognise, find and name a half as 1 of 2 equal parts of an object or shape. • Recognise and find half a set of objects. • Divide groups of objects in half. • Share objects into 4 equal parts.

FRACTIONS		
EMBED (Pathway +4)	EMBED (Pathway +4)	EMBED (Pathway +4)
• Recalls half of even numbers to 10. • Recalls half of even numbers to 20 • Recognises a half as one of two equal parts of an object, shape or quantity. • Knows that two halves make a whole. • Finds half a length. • Recognises a quarter as one of 4 equal parts.	• Recognise and uses the symbols ½ and ¼ • Identifies halves and quarters of shaded objects. • Finds a quarter of a set of objects.	• Finds half and a quarter of a set of objects. • Finds half and a quarter of a shape • Finds half and a quarter of a length up to 100cms • Recognise the following fractions: 2/4 ¾ 1/3 2/3 • Begins to demonstrate understanding of equivalent fractions.

ENGAGEMENT STEPS (ENGAGE)
• Explore manipulatives in increasingly complex ways. • Observes the results of their own actions with interest. • Remember learned responses over extended period of time. • Begins to anticipate known events. • Begin to apply potential solutions systematically to problems • Persistence becomes more established when interacting with an activity. • Begin to act spontaneously and independently during familiar activity. • Begin to request familiar activities.

MEASURE
Money & time (Pathway 1) Experience
• Be aware of cause and effect in familiar mathematical activities. • Through exploration, gain awareness of difference in time.
Standard Units

• Have experience of using a range of standard and non-standard measuring equipment.
• Through exploration gain awareness of differences in
  • Length
  • Capacity
  • Mass
• Search for objects that have gone out of sight
• Matching objects of similar/same size

MEASURE Money and Time		
PATHWAY 2	PATHWAY 3	PATHWAY 4
(Explore & create)	(Refine and initiate)	Consolidate and Apply).
• Experience exchanging coins in exchange for items in a practical context. • Encounter the vocabulary of time through daily discussion of days of the week and timetabled events for the day.	• Respond to some words, signs and symbols related to time. • Participate in the sequencing of pictures of two daily events. • Begin to be aware of the language of time used in everyday routines. • Begin to understand that different coins are used in the “real life” • Match objects and materials according to a model or picture. • Respond appropriately to key vocabulary and questions. • Begin to understand coins have different values. • Use 1p coins for items up to 5p and then 10p • Develop awareness of time through discussion about daily events and when they happen.	• Understand different coins have different values • Begin to use developing mathematical understanding and counting to solve simple problems involving coins. • Begin to be aware of and repeat the language of time. • Recognise order in the day through ordering significant events. • Links personal events to the passing of time. • Associate familiar activities and experience to seasonal changes.

MEASURE Standard Units		
PATHWAY 2	PATHWAY 3	PATHWAY 4
(Explore & create)	(Refine and initiate)	Consolidate and Apply).
• Have experience of using a range of standard and non-standard measuring equipment. • Find 'big' and 'small' objects on request. • Compare the overall length/capacity & mass through practical activities and through problem-solving with an adult/peer • Join in with solving problems involving weighing and comparing the mass of different sizes and shapes of objects. • Search intentionally for objects in their usual place.	• Show awareness of the vocabular 'more' and 'less' in practical situations. • Order things by criteria according to model or picture. • Have experience of using a range of standard measuring equipment. • Use standard measuring and non-standard measuring equipment with adult assistance. • Use familiar words to compare sizes and quantities. • Order things - using trial and improvement – with assistance, draw what they have done and know this is a record. • Begin to use developing mathematical understanding and counting to solve simple problems that they may encounter in play, games or work. • Respond appropriately to key vocabulary and questions. • Compare the overall **length**, **capacity**, of one object with another when the difference is not great. • Gain an understanding of concepts of **length** & **capacity & mass** through practical activities. • Match objects & materials to a given criteria relating to **capacity, length && mass**	• Use familiar words to describe measures in practical contexts. • Choose appropriate standard and non-standard measuring equipment by selecting two or three items. • Order 3 items by their **length, capacity and mass** • Begin to use some vocabulary related to measures in a practical context. • Compare directly 2 objects. • Begin to use developing mathematical understanding and counting to solve simple problems involving measure. • In role play and practical situations, estimate to compare 2 or 3 objects.

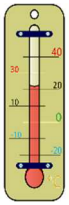
MEASURE Money and Time		
PATHWAY 5		
(Investigate)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Begin to understand and use vocabulary related to money • Use 1p coins to make quantities up to 10p. • Use developing mathematical ideas and methods to solve practical problems involving **time** and **money** in a real or roleplay context. • Understand and use the language of time. • Begin to recognise the o'clock on a clock face. • Sequence familiar events to the named day/month/season. • Compare how long it takes to do something using a simple timer. • Make simple estimates and predictions.	• Solve simple measure problems practically using direct comparison and non-standard units. • Sort coins and recognise the value of 1p,2p,5p,10p,20p, £1 and £2 coins. • Begin to recognise the days of the week and sequence the events of a day in chronological order using appropriate language such as before/after/next/morning/afternoon. • Tell the time at the hour.	• Recognise and know the value of different denominations of coins and notes. • Begin to recognise and use the symbols for pounds (£) and pence (p) • Combine amounts to make small amounts. • Sequence the events of several days in chronological order using appropriate language. • To tell the time to half past the hour, turn the hands of a geared clock to show these times or draw hands on a clock face to show o'clock times. • Recognise and use language relating to dates, including the days of the week, weeks, months and tears. • Know that there are 7 days in a week. • Know the name of the day before or after a given day. • Solve simple measure problems in a practical context using standardised units.

MEASURE Money and Time		
PATHWAY 5		
(Embed)		
• Give equivalent amounts to 50p. • Give change to 20p • Name the days that make the weekend. • Names and sequences the seasons of the year. • Relate times of the day to events. • Recognise regular times on a clock. • Solve simple problems related to hours. • Reads hours and half hours on a digital clock. • Shows an hour and a half hour on a clock. • Solves simple problems relating to half hours. • Count the seconds in times with a clock.	• Place 3 non-sequential amounts up to £1in order. • Compare and order intervals of time. • Recognise, tell and write the times: o'clock/half past/ quarter past. • Begin to recognise quarter to the hour. • Draw hands on a clock face to show the time on the hour and at half past. • Solve problems involving money, including changing the time and measures of time.	• Recognise and use the symbols for pounds (£) and pence (p) to combine the amounts to make a particular value. • Find different combinations of coins that equal the same amounts of money. • Uses different coins to make the same amount. • Solves simple problems involving addition & subtraction of money of the same unit. • Solves simple problems of the same units fir giving change. • Compares the intervals of time. • Uses > < = (more or less equal) to compare time intervals. • Reads a clock showing quarter past/quarter to the hour. • Show quarter to and quarter past on a clock. • Begins to tell the time in 5-minute intervals. • Shows the time in 5-minute intervals on a clock.

MEASURE

Standard Units.		
PATHWAY 4		
(Investigate)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Order 3 items by length • Order 3 items by height • Compare the height of people • Compares the size of objects. • Puts objects in order of size. • Begins to use comparative language. • Order 3 items by weight. • Begins to use scale. • Compare weight by handling. • Compares weight using a pan balance. • Know weight does not depend on size. • Use comparative language. Heavy / light • Orders 3 items by capacity. • Find which container will hold the most.	• Orders items according to length where the difference is not great. Orders objects according to width. • Compares distances. • Uses non-standard units to measure length. • Uses the correct vocabulary when comparing length (longer/shorter than) • Balances scales using items of equal weight • Put 3 objects in order of their weight by handling. • Check estimation of weight using scales. • Find a range of objects heavier/lighter than • Use the correct vocabulary when comparing mass. • Estimates which container holds the greater volume • Checks estimation of capacity using non-standard units. • Compare the volume of three containers and order them by size • Uses the correct vocabulary when comparing capacity.	• Uses parts of the body to measure objects. • Compares length and height. • Describes length and height. • Estimates length using non-standard units. • Checks their estimates. • Solves practical problems involving height and length. • Begins to measure using a ruler. • Use balance to find out which is heavier. • Compares weight and size. • Compares mass and weight. • Solves practical problems involving mass and weight. • Uses vocabulary to describe weight. • Measures and begins to record mass and weight in standard units with support. • Calculates capacity using non-standard units. • Compares and describes capacity and volume. • Records their measurements of volume and capacity in terms of units used. • Begins to use containers to compare capacity. •
MEASURE Standard Units.		
PATHWAY 4+		

(Embed)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Familiar with standard units of length. • Suggest suitable units to measure an object. • Recognises a range of measuring tools. • Measures length with accuracy. • Suggests suitable units to weigh an object. • Suggest suitable units to measure capacity. • Recognise standard units used to measure capacity. • Compare and order lengths, mass volume or capacity and record the results using greater than (>) less than (<) and equals (=)	• Use different objects as a simple measuring device. • Begins to use standard units of measure. • Describe a range of measuring tools. • Measures length with accuracy. • Describes items being longer or shorter than a given length. • Begins to understand when item are weighed. • Familiar with different types of scales. • Begin to measure using kilograms • Begin to measure using litres.	• Knows 1 metre = 100cms • Describes an object as longer or shorter than a standard measure. • Measures in cms using a ruler. • Uses a metre rule to measure in units of 10cms. • Understands the need to identify the unit used when recording. • Chooses and uses appropriate standard units to estimate and measure lengths and heights. • Measures to the nearest unit. • Compares, orders and records temperature. • Finds the weight of objects up to 100g. • Solve simple problems involving weights.



Progression Pathways Mathematics GEOMETRY
Engagement Steps (ENGAGE)
• Explore manipulatives in increasingly complex ways. • Observes the results of their own actions with interest. • Remember learned responses over extended period of time. • Begin to anticipate known events. • Begin to apply potential solutions systematically to problems. • Persistence becomes more established when interacting with an activity. • Begin to act spontaneously and independently during familiar activity. • Begin to request familiar activities.

Progression Pathways Mathematics GEOMETRY
PATHWAY 1 (Experience)
PROPERTIES OF SHAPES
• Begin to search for objects that have gone out of sight, hearing or touch; demonstrating the beginning of object performance. • Anticipate, follow and join in matching activities when given a contextual clue. • Take part in activities that involve adding or taking away from a group of objects. • Show awareness of changes in shape. • Be aware of cause and effect in familiar mathematical activities.
POSITION, DIRECTION & MOVEMENT
• Search for objects that are hidden/out of sight. • With support, shows interest in position and relationship between objects (e.g. stacks/lines up objects) • Show awareness of changes in position. • Encounter and notice changes of orientation of themselves and objects.

Progression Pathways Mathematics GEOMETRY		
PATHWAY 2	PATHWAY 3	PATHWAY 4

PROPERTIES OF SHAPES		
Create and Explore	Refine and initiate	Consolidate and Apply
• Search intentionally for objects in their usual place • Begin to sort sets of objects according to a single attribute. • Join in activities involving shapes and be aware of the names that describe them. (With support match objects or pictures of shapes)	• Explore 2D, 3D shapes. Match objects and materials according to a given criteria relating to shape. • Begin to combine shapes to make models, copy simple models with support. • Begin to pick out named shapes from a collection, sort items as instructed. • Identify when an object is different and does not belong to a given category. • Copy a model of 3D shapes.	• Begin to use mathematical language e.g. circle. • Describe simply the shapes of 2D and 3D • Notice similarities and differences between shapes. • Describe shapes in simple models, pictures and patterns. • Sort shapes into suggested categories. • Collect and label groups of similar items/shapes.

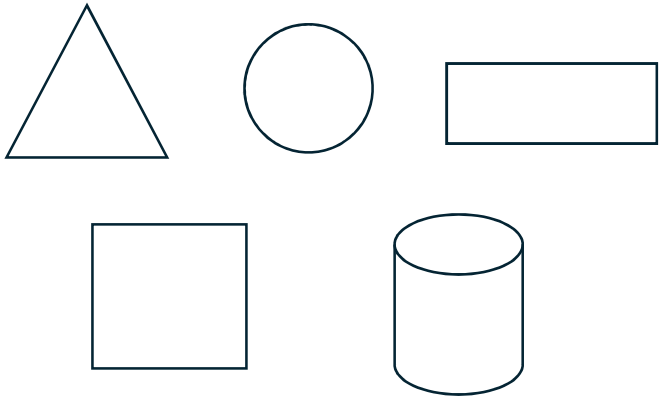
Progression Pathways Mathematics	GEOMETRY	
PATHWAY 2	PATHWAY 3	PATHWAY 4
Position, Direction and Movement		
Create and Explore	Refine and initiate	Consolidate and Apply
• Initiate and explore changes of orientation of themselves and objects.	• Initiate and explore changes of orientation of themselves and objects.	• Describe repeating patterns • Describe the relationship of objects through pictures and patterns. • Gain experience of instructions involving the idea of turn. • Encounter a wide range of everyday language to describe position, direction and movement.

GEOMETRY
PATHWAY 4+
PROPERTIES OF SHAPE

(Investigate)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Use language such as 'circle' or 'bigger' to describe the shape and size of 2dshapes in everyday talk. • Use language such as *solid* or *corner* to describe the shape and size of 3D shapes in everyday talk. • Begin to name common 2D shapes such as *circle* or *square*, *triangle* & *rectangle.* • Begin to name common 3D shapes such as *cubes, cuboids, pyramids* and *spheres.* • Sort shapes and everyday items according to own criteria and justifying decisions. • Count how many objects share a property. • Sort objects by shapes and /or size. • Draw simple shapes. • Find shapes on the face of objects.	• Recognise and name common 3D shapes. • Recognise and create repeating patterns with objects and shapes. • Identifies 3D shapes. • Identify and describe properties of 2D shapes, including the number of sides and line of symmetry in a vertical line. • Identify and describe £D shapes including the number of edges, vertices and faces. • Identify 2D shapes in the surface of 3D shapes (e.g. a circle on a cylinder and a triangle on a pyramid). • Compare and sort common 2D and 3D shapes in everyday objects. • Find specific shapes when asked. • Uses shapes to make models. • Put shapes in order according to size. • Matches shapes regardless of size.	• Identifies 2D shapes. • States the number of sides in each 2D shape. • Demonstrates the 2D vertical line of symmetry in a 2D shape. • Identifies 3D shapes. • Knows the number of faces in a 3D shape. • Knows the number of vertices in a 3D shape. • Sorts and compares common 2D and 3D shapes • Draws lines and shapes using straight edges.

GEOMETRY		
PATHWAY 4+		
PROPERTIES OF SHAPE		
(Embed)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Compare and sort common 2D and 3Dshapes and everyday objects, on the basis of their geometric properties	• Recognise, name and describe the properties of common 2D shapes including pentagons and hexagons.	• Identifies 2D shapes. • States the number of sides each 2D shape.

including vertices, sides, edges and faces. • Identify lines of symmetry in a vertical line of 2D shapes. • Identify 2D shapes on the surface of 3D shapes. • Solve problems involving shapes and reason about their properties.	• Recognise, name and describe the properties of common 3D shapes including cones and spheres. • Solve simple problems involving shapes.	• Demonstrate the vertical line of symmetry in a 2D shape. • Know the number of vertices in a 3D shape • Know the number of faces in a 3D shape.



GEOMETRY		
PATHWAY 4+		
Position, Direction and movement.		
(Investigate)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Describe structures using terms related to shape position. • Describe the position of objects in a picture. • Place objects where asked. • Moves into position when requested.	• Respond to and use terms such as first, second and third. • Describe position, direction and movement for whole and half turns.	• Describe position directions and movement including whole, half turns, quarter and three quarter turns. • Solve simple problems involving position and direction.

• Finds items from simple positional and directional clues.		
GEOMETRY		
PATHWAY 4+		
Position, Direction and movement.		
(Embed)		
Create and Explore	Refine and initiate	Consolidate and Apply
• Order and arrange combinations of mathematical objects in patterns and sequences. • Identifies objects on name positions. • Describe the position of an object. • Recognise that some common objects have corners which are right angles.	• Follows directions to move in straight lines and turns. • Turn clockwise and anticlockwise. • Move a finger along a line describing direction and corners. • Make right angles using different materials. • Repeat and rotates a shape to create a linear pattern.	• Orders mathematical objects in a sequence. • Arrange mathematical objects in a pattern. • Use mathematical vocabulary to describe position. Describe the movement using the language of direction. • Recognises a ¼ turn is a right angle. • Shows how many right angles in a ¼, ½, three- quarter turn. • Identifies right angles in 2D shapes. • Recognises that rectangles have right angles at each corner.