Burradon Primary School EYFS Maths Curriculum

STATUTORY EDUCATIONAL PROGRAMME: Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

2 Year old Provision

Mathematical Idea	Autumn Term	Spring Term	Summer Term
Sets and Sorting ***Attributes can be used to sort collections into sets (groups)*** *The same collection can be sorted in different ways.* *Seats can be compared and ordered.* *Recognise* *Copy* *Complete* *Continue / extend* *Describe* *Spot errors* *Create own*	• I have opportunities to watch adults sort and tidy resources in the room • I can fetch a familiar object when asked 'Please bring me the doll'	• I can go and find a similar resource when asked 'could you bring me another doll?' (Adult has a doll already)	• I can put all the dolls or cars or blocks in the right area. • I can spot the 'odd' item in a group of familiar things; the teddy in the group of dolls, the block in the group of cars etc.
Pattern and Regularity *Patterns are sequences governed by a rule.* *Identifying the rule of a pattern brings predictability and allows us to make generalisations* ***The same pattern structure can be found in many different forms.*** *(Visual, auditory, movement, in time)* *Recognise* *Copy* *Complete* *Continue / extend* *Describe* *Spot errors* *Create own* *Translate*	• I have opportunities to play rhythm instruments • I have opportunities to clap along to songs and music • I have opportunities to listen to rhymes.	• I can clap or stamp my feet when asked. • I can stop and start when holding hands with an adult • I can participate with some actions when an adult sings a familiar repeating rhyme eg Clap, clap, clap your hands Clap, clap, clap your hands Turn around and touch the ground Clap, clap, clap your hands	• I can stop and start when the music starts and stops • I can follow a 2-step pattern of movements done by an adult. • I can offer key words when an adult sings a familiar repeating rhyme eg Clap, clap, clap your hands Clap, clap, clap your hands Turn around and touch the ground Clap, clap, clap your hands • I can participate when an adult sings a familiar repeating rhyme eg
Counting / Number Sense ***Counting can be used to find out 'how many' in a collection.***	• I can step from one stepping stone to another • I can bring a specific item to an adult when asked	• I can go upstairs one at a time as an adult counts • I can recognise **'lots'** • I can recognise **'a few'**	• I understand **not enough** • I understand **just right** • I understand **too much** •I know numbers exist in the wider world (bus numbers, number plates etc)

Counting has rules that apply to any collection. *1 to 1 correspondence* ***Stable order principle*** *Order irrelevance* *Cardinal principal* *Abstract principle* *Subitising*		• I am interested in familiar numbers e.g. '2' on a birthday card • I can repeat a total when playing with an adult. • I listen to counting up number rhymes and songs	•I am interested in familiar numbers •I can touch one body part at a time, when asked •I can touch and say (e.g. "car") one object at a time (objects in a line) • I participate in counting up number rhymes
Number Operations ***Sets can be changed by adding items or taking some away.*** ***Sets can be compared using the attribute of Quantity and ordered by More than, Less than and Equal*** *A quantity can be decomposed into equal or unequal parts. The parts can be composed to form the whole.*	• I understand "**Gone!"** • I can ask for **more** • I can pass one item from a group, to an adult when asked	• I look for objects that have **gone.** • I have opportunities to **fill** and to **empty** a range of containers	• I can find a named object 'Please bring me a block / car' etc • I can bring **'another'** named object to an adult • I understand **'full'** and **'empty'**
Spatial Relationships ***Relationships between objects and places can be represented with mathematical precision.*** *Space and 2D representations of space reflect a specific point of view.* *Spatial relationships can be visualised and manipulated mentally.*	• I have had opportunities to play **inside** big boxes, tunnels, tents etc • I have had opportunities to move outside, running **around** things, **behind** things. • I have had opportunities to climb. '**up, 'down'** • I have had my crawling, cruising or walking described to me by an adult.	• I understand positional vocabulary in large scale physical play, **'on top' 'under' 'next to'**	• I can understand positional vocabulary when playing with small world, **'on top' 'under' 'next to' 'in' 'out'** • I can describe (with words or gestures) where I have been playing in the room or outside space.
Shape ***Shapes can be defined and classified by their attributes.*** *The flat faces of 3D shapes are 2D shapes.* *Shapes can be combined and separated to make new shapes.*	• I show awareness of shape as I play. • I enjoy playing with shapes! E.g. stacking, blocks and cups, making interesting shape collections/ objects.	•I know 3Dshapes exist •I join in with "shape talk" and adjectives **'round' 'shape' 'block' 'brick' 'ball'**	•I know 2d shapes exist – drawings or images •I can join in "shape talk" and adjectives **'round' 'wide' 'tall'** • I can 'post' shapes • I can complete simple inset puzzles

Measurement ***Many different attributes can be measured, even when measuring a single object.*** *All measurement involves a 'fair' comparison.* *All measurements are Relational.* *Quantifying a measure helps us describe and compare more precisely.*	• I understand **'big', 'small'** • I understand **'bigger'**	• I can use adjectives **big, small, tall, short.** • I understand **'smaller'**	• I can understand adjectives **big, small, short, tall, hot, cold, young, old, fast, slow,** • I use the term **'big'** accurately • I use the term **'small'** accurately • I can ask for **'more'**
Data Analysis *The purpose of collecting data is to answer questions when the answers are not immediately obvious.* *Data must be represented in order to be interpreted, and how data are gathered and organised depends on the question.* *It is useful to compare parts of the data and to draw conclusions about the data as a whole.*	• I can indicate which snack option I would like. This is recorded by an adult • I can indicate what my favourite toy is and watch an adult link my photo (or mini me) with my favourite toy	• I can indicate my answer to a 'question of the day' eg 'Do you like bananas' and watch an adult record it • I can categorise resources; I can gather together food items in the home corner, or the figures from the small world area	• I have opportunities to make small collections of objects; leaves, pebbles etc and help an adult tally them • I can categorise with more specificity; tidy up mixed resources into 2 groups; separating red and blue blocks

Nursery Provision						
Mathematical Idea	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Sets and Sorting *Attributes can be used to sort collections into sets (groups)* *The same collection can be sorted in different ways.* *Seats can be compared and ordered.* *Recognise* *Copy* *Complete* *Continue / extend* *Describe* *Spot errors* *Create own*	• I can match pairs to demonstrate a secure grasp of commonality. • I can identify how groups of objects have been sorted by identifying the similarities between the objects.	• I can sort sets of objects such as building blocks into sets of identical members. • I can copy a given set based on colour OR size	• I can identify the 'biggest' or the 'smallest' group when an adult sorts a collection into 2 groups.	• I participate in group sorting activities where children are the 'objects', sorted for hair colour, lace up shoes etc	• I can sort a collection based on 'yes' / no' criteria	• I can sort objects by creating groups with a common property such as colour OR shape OR size. • I can sort one collection of objects 2 different ways – based on size OR colour
Pattern and Regularity *Patterns are sequences governed by a rule.* *Identifying the rule of a pattern brings predictability and allows us to make generalisations* *The same pattern structure can be found in many different forms. (Visual, auditory, movement, in time)* *Recognise* *Copy* *Complete* *Continue / extend* *Describe* *Spot errors* *Create own* *Translate*	• I can join in with 'Heads, shoulders, knees and toes' • I can hear body percussion and match the action eg clapping, knee tapping, stamping • I can copy a 1 move repeated sequence eg stretching up	• I can predict what will come next in an AB pattern. • I can follow zigzag, circle and wavy patterns with a crayon • I can hear a percussion beat and join in • I can copy a 2-move sequence eg stretch up, bend down, stretch up, bend down	• I can hear a 2-part percussion beat and join in • I have been told stories which have 'growing' patterns eg 'The enormous turnip', 'The napping house',	• Can spot patterns in the environment. Eg. Windows on houses, railings/fence patterns, road marking patterns, AB patterns on a basket. • I can continue a simple AB pattern based on size • I can continue a simple AB pattern based on colour • I understand the pattern of the day in simple terms eg nursery first then home.	• I can continue an ABAB linear pattern with everyday objects. • I can talk about the AB pattern an adult has created • I can watch an adult create an AB pattern and 'speak' the pattern • I can predict what will come next in an AB pattern.	• I can spot an error in a ABAB pattern. • I can create an AB pattern with marks • I can narrate pattern of the school day using**, now, next** • I can talk about the pattern of a day using **daytime, night-time**

Counting / Number Sense *Counting can be used to find out 'how many' in a collection.* *Counting has rules that apply to any collection.* *1 to 1 correspondence* *Stable order principle* *Order irrelevance* *Cardinal principal* *Abstract principle* *Subitising*	• I participate in simple forward counting rhymes and songs • I have had opportunities to listen to counting up (growing stories) • I have had opportunities to act out growing stories • I can practice 1 to 1 correspondence eg put one paint brush into one pot, self-register using my picture, playing stepping stone games. • I	• I can count to 5 when singing along to simple forward counting rhymes and songs • I play games with dice with adults helping • I	• I can listen to 1 or 2 sounds and copy correctly. • I can listen to 1 or 2 sounds and tell you how many • I can count aloud to 5 on my own • I can compare 2 groups of different but similar sized items and say which has more	• I can reliably count up to 3 objects • I can do the right number of physical actions when asked to eg 3 claps, 2 stamps etc	• I can count to 5 in a variety of contexts – actions, images, sounds, objects • I can count to 10 when joining in with others • I can listen to up to 5 sounds and tell you how many • I can organise objects to make it easier to count accurately	• I can play simple dice track games I can compare quantities to 5 and know who has the most • I can count up to 5 objects accurately • I can do the right number of physical actions when asked up to 10 • I can subitise to 3.
Number Operations *Sets can be **changed** by adding items or taking some away.* *Sets can be compared using the attribute of **Quantity** and ordered by More than, Less than and Equal* *A quantity can be decomposed into equal or unequal parts. The parts can be composed to form the whole.*	• I can compare small sets of objects by processing language **'more than'**. • I can add 'more' when asked to when using physical resources eg sand or water etc	• I can compare small sets of objects by processing language **'more than'** and **'fewer than'** • I can 'take some away' when using physical resources eg blocks or playdough etc	• I can change capacity by adding more or by taking volume away • I can change weights by adding more or taking material away. • I can change lengths by adding more or taking materials away • I can compare 2 groups of objects and say which **has 'more'**	• I can play scoring games and say how many 'hits' and how many 'misses 'I got. • I can play sorting games where 1 collection is sorted into different amounts eg 10 children are sorted in different ways.	• I can compare 2 groups of objects and say which has **'fewer'**	• I can play scoring games where 2 different totals can be compared • I can use mathematical mark making to record the scores or outcomes from practical games and activities. • I can say who scored 'more' in a game
Spatial Relationships *Relationships between objects and places can be represented with mathematical precision.* *Space and 2D representations of space reflect a specific point of view.* *Spatial relationships can be visualised and manipulated mentally.*	• Process simple positional language - **on, under, in, out** during child-initiated play. • I will attempt a simple "drop in" jigsaw	• I can process and use **positional vocabulary** in large scale physical play. **In, On, Under, Out, Up, Down** • I can complete simple 'drop in' jigsaws	• I can process and use **positional vocabulary** accurately in small world scenes and when building. **In, On, Under, Out, Up, Down** • I will attempt a simple 2 piece jigsaw	• I can process and use positional vocabulary accurately when out in the wider locality. • I can complete a simple 2 piece jigsaw • I can copy a simple block construction from a picture with some guidance	• Process and use positional vocabulary accurately – **on, under, in, out, in front, behind.** • Process and use positional language accurately when describing pictures and images • I can complete a simple 4 piece jigsaw	• I can copy simple block constructions from a photograph. • I can follow instructions to move myself into the right place eg 'to the top of the slide, under the bridge, next to the tree' • I can move 'in front', 'behind' another child when asked to.
Shape	• I can build with different shapes and sizes and loose parts,	• I can use one-word **informal descriptions of properties of 3D**	• I can recognise and name	• I can ascribe meaning to 3D shapes when building	• I talk about the shape of everyday	• I can combine 2D shapes to make new shapes and

Shapes can be defined and classified by their attributes. *The flat faces of 3D shapes are 2D shapes.* *Shapes can be combined and separated to make new shapes.*	• I make good choices based on my understanding of properties eg large blocks at the bottom	shapes as I build, eg **box, ball, tube**	basic 2d shapes. **Square, Triangle, Circle**	according to their properties. • I process vocabulary of shape eg **sides, corners**	objects e.g. **'round' 'tall'**	narrate the effects created. • I can combine 3D shapes to make new shapes • I can name and discuss some properties of 2D and 3D shapes. **'sides', 'corners'; 'straight', 'flat', 'round'**
Measurement *Many different attributes can be measured, even when measuring a single object.* *All measurement involves a 'fair' comparison.* *All measurements are Relational.* *Quantifying a measure helps us describe and compare more precisely.*	• I can process and use **language of everyday size** during play. **Big , Small** • I can process the language of full and empty	• I can process and use **language of everyday size** during play. • I can correctly identify a '**big'** and a '**small'** item • I can make a liner pattern or line of blocks **'longer'** when asked. • I can make a linear pattern or line of blocks **'shorter'** when asked	I use everyday language to when playing; '**big/little/small/tiny, massive, huge etc** • I can compare capacities using the language 'full and empty'	• I can process language to fill and empty containers. • I can process language to create structure or arrangements **longer, shorter, taller, wider** , **bigger, smaller** than mine. I can use absolute measurement vocabulary to describe every day objects such as **heavy, tall, big, tiny, full, empty**	• I can compare lengths by aligning and accurately identify **longer, shorter**. • I can use the language of size to describe and order objects by height **higher, lower, taller, shorter** • I can sequence pictures from a familiar rhyme/story and my daily routine. •	I can compare area of 2D shapes by placing them on top of each other identifying and naming **bigger and smaller** • I can talk about things that have already happened and things that are going to happen- **first', 'then...**'
Data Analysis *The purpose of collecting data is to answer questions when the answers are not immediately obvious.* *Data must be represented in order to be interpreted, and how data are gathered and organised depends on the question.* *It is useful to compare parts of the data and to draw conclusions about the data as a whole.*	• I can put a sticker or my photo under the picture of my favourite book / fruit / toy etc and discuss with adults • I can represent data by answering simple q's; by placing my photo in a 'yes' or 'no' column	• I can tally with objects; placing a counter in a jar each time I see a red car when watching from the yard • I can sort laundry into types; socks and shirts and say which has more	• I can make comparisons by indicating which thing is most popular; which fruit has the most votes for favourite	• I can represent data by creating a human bar graph; lining up behind favourite fruits / books / toys etc • I can categorise familiar resources; ie sort cutlery	• I can tally objects; make a small collection and represent each item with a sticker or mark on a piece of paper • I can sort a collection into 2 groups; sticks and pebbles	I can notice trends; I can say there are more or fewer children in Nursery in comparison to another day based on a visual representation I recognise a range of attributes and can sort objects by both colour and shape

Reception Provision						
Mathematical Idea	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Sets and Sorting *Attributes can be used to sort collections into sets (groups)* *The same collection can be sorted in different ways.* *Seats can be compared and ordered.* *Recognise* *Copy* *Complete* *Continue / extend* *Describe* *Spot errors* *Create own*	• I can match objects that are the same. • I can sort sets into groups based on one given attribute. • I can sort by one principle and recognise the **odd one out** in a set. • I can make a collection of things which are similar eg leaves or pebbles	• I can recognise the sorting attribute and continue to add to an existing set • I can tell you the attribute of a set created by an adult.	• I can spot errors in a set created by adult • I can create my own set from a collection which has only 2 attributes	• I can create a set based on a given attribute. • I can make groups of 5 objects	• I can split a collection into 2 identical groups. • I can split a given collection and say which group has more.	• I can make sets 10 • I can sort a collection of shapes into 3 groups, **Circles, triangles and squares**
Pattern and Regularity *Patterns are sequences governed by a rule.* *Identifying the rule of a pattern brings predictability and allows us to make generalisations* *The same pattern structure can be found*	• I can explore patterns—Completing an AB visual linear patterns (NCETM Progression) • I can narrate pattern of the school day using**, after, before.** •	• I can make AB transient linear patterns. • I can create AB transient linear pattern	I can talk about the pattern of a day using **morning, lunchtime, afternoon,**	• I can talk about the pattern of a day using **bedtime, evening**	• I can narrate the pattern of the week using the names of the day	I can narrate the pattern of a week using the **names of days, weekend, today, tomorrow, yesterday**

in many different forms. (Visual, auditory, movement, in time) *Recognise* *Copy* *Complete* *Continue / extend* *Describe* *Spot errors* *Create own* *Translate*						
Counting / Number Sense *Counting can be used to find out 'how many' in a collection.* *Counting has rules that apply to any collection.* *1 to 1 correspondence* *Stable order principle* *Order irrelevance* *Cardinal principal* *Abstract principle* *Subitising*	• I can compare amounts saying when they have the **same, more or fewer.** • Count forward to 10 naming the number after • I can count sets of objects or actions, demonstrating the cardinal principle within 5. • I can subitise to 3.	• I can count backwards from 10. • I can count sets of objects or actions, demonstrating the cardinal principle within 10.	• I can subitise to 5. • I explore number composition to 5.	• I can talk about the 'staircase pattern' in numbers up to 5. • I can order numbers to 10.	• I can count on from a given number • I can count forwards and back within 20. • I can count sets of objects up to 10. • I can count things that cannot be seen. • I know composition of 10 as '5 and a bit.'	• I can verbally count beyond 20. • I can recall subtraction facts within 5 and apply. • I can count back within 10, understanding number before and counting back from a given number. • I can count sets of objects up to 20. • I can count using a rekenrek.
Number Operations *Sets can be **changed** by adding items or taking some away.* *Sets can be compared using the attribute of **Quantity** and ordered by More than, Less than and Equal* *A quantity can be decomposed into equal or unequal parts. The parts can be composed to form the whole.*	• I understand number composition of quantities to 3. • I can compare sets of objects using language 'more' and 'fewer.'	• I can use language 'whole' and 'part' to describe objects eg a toy.	• I understand number composition of quantities to 5 • I understand the composition of 6 and 7.	• I understand the composition of 8.	• Composition of 9 • I can recall and apply **double** 1 to double 5 • I can recall **evens and odds.**	• I can recall and apply **doubles** and **halves** within 10. • I can demonstrate understanding of the composition of 10.
Spatial Relationships *Relationships between objects and places can be represented with mathematical precision.* *Space and 2D representations of space reflect a specific point of view.*	• I can copy complex large block constructions from a photograph. • I can complete a 6 piece jigsaw • I have opportunities to draw from observation	• I can describe landmarks on Google maps of a familiar area. • I can follow directions to change the position of blocks in my play • I can use dough to make figures that will fit into different sized containers	• I can complete an 8 piece jigsaw • I can copy and complete LEGO models from a plan or photograph. • I can follow verbal instructions • I have opportunities to draw things which are	• I understand there is a difference between left and right • I can visualise and recall a familiar short route, eg classroom to hall, focussing on turns and landmarks	• I have access to rubicks cubes and • I can remember and perform a 4 sequence set of actions • I can articulate where objects are located in	• I can complete a jigsaw with 12 pieces or more. • I can move to the left or the right when directed • I can follow a simple map in a less familiar area • I can estimate lengths and sizes before measuring

Spatial relationships can be visualised and manipulated mentally.			different sizes in one group	• I can follow a simple map in an area I'm familiar with	the classroom	• I can mentally trace the route I take to school focussing on turns and landmarks
Shape *Shapes can be defined and classified by their attributes.* *The flat faces of 3D shapes are 2D shapes.* *Shapes can be combined and separated to make new shapes.*	• I can name 2D shapes.	• I can name the properties of 2D shapes.	• I can design with 2D shapes. • I can make 2D shapes out of other 2D shapes.	• I can sort 2D shapes according to properties.	• I can make 3D shapes out of 2D shapes • Name and attributes of 3D shapes in relation to their usefulness for building	• I can continue and create circular and symmetrical designs with 2D and 3D shapes. • Sort 3D shapes according to properties
Measurement *Many different attributes can be measured, even when measuring a single object.* *All measurement involves a 'fair' comparison.* *All measurements are Relational.* *Quantifying a measure helps us describe and compare more precisely.*	• I can use the vocabulary '**big**' and '**small**' • I can use the vocabulary '**heavier**' and '**lighter**.'		• I can say which is **heavier/lighter** by looking at a balance scale. • I can balance a scale using cubes. • I can explore the capacity of a container eg how many cups fill the jug?		I can use vocabulary **long** and **short**. I can use vocabulary longer and shorter. I can use vocabulary **tall** and **short.** I can use vocabulary **taller** and **shorter.**	
Data Analysis *The purpose of collecting data is to answer questions when the answers are not immediately obvious.* *Data must be represented in order to be interpreted, and how data are gathered and organised depends on the question.* *It is useful to compare parts of the data and to draw conclusions about the data as a whole.*	• I can follow a visual sequence and extend it • I can identify which category has the highest stack of blocks or the most stickers on a chart • I can sort a collection of plastic resources like compare bears into 2 hoops – for colour and then for size	• I can do early problem solving by deciding which activity to do based on a class vote •	• I can record results from a simple sink or float activity	• I can sort a collection of natural objects like leaves into 2 hoops • I can collect data; noting down who walked to school and who walked, who wants milk etc	• I can interpret simple representations (bar, pictogram, tally) to say which has more and which has fewer.	• I can sort a collection of mixed plastic resources into 2 overlapping hoops. Red things and bears, do any fulfil both criteria and fit in the middle? • I can represent findings in pictograph form