



**Tudor Grange
Academies Trust**



EYFS Curriculum Map: Mathematics

Early Years Foundation Stage

Mathematics 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.					
ES & PS	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Counting, & Cardinality	Develop counting-like behaviour. Listen to number names in rhymes and song.	Count in everyday contexts, sometimes skipping numbers. Take part in finger rhymes with numbers.	In everyday situations, take or give two or three objects from a group. Begin to count on fingers.	Name groups of 1, 2, and 3 with increasing accuracy. Count a regular arrangement of objects.	Begin to notice numerals. React to changes of amount in a group of up to three items.	Begin to say numbers in order, some of which are in the right order. React to changes of amount in a group of up to five items.
Composition	Recognise part-whole relations in nonverbal, intuitive, perceptual situations. Nonverbally represent parts that make a whole.	Give some, but not necessarily an equal number to each person.	Recognise that two groups (1-3 objects in each) have the same number.	Make a small collection (1-2 and possibly 3 objects) with the same number of another collection.	Review and practice- Recognise that two groups (1-3 objects in each) have the same number.	Review and practice- Make a small collection (1-2 and possibly 3 objects) with the same number of another collection.
Comparison	Match two objects that are the same.		Recognise that two very small collections have the same number.	Compare collections that are quite different in number using 'lots', 'more' or 'same.'	Compare similar collections but only involving very small numbers.	Compare collections using number words "one" and "two."



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Pattern	Detect and use patterning in movement activities or nursery rhymes that repeat words and actions.	Join in and anticipates repeated sound and action patterns.	Notice patterns.	Notice patterns and arrange things in patterns.	Recognise a simple pattern, usually ABABAB, as a pattern.	Begin to name and describe simple pattern, usually ABABAB.
Shape	Match familiar shapes (circle, square, triangle) with same size and orientation.	Match familiar shapes with different sizes and orientations.	Recognise and names a typical circle.	Recognise and names a typical square.	Recognise and name a typical triangle.	Recognise that two objects have the same shape.
Spatial Reasoning	Combine objects like stacking blocks and cups. Put objects inside others and take them out again.	Move their bodies and toys around objects and explores fitting into shapes.	Begin to remember their way around familiar environments.	Respond to some spatial and positional language.	Make simple constructions.	Uses spatial vocabulary to direct attention to spatial relations.
Measures	Explore differences in size.	Explore differences in length.	Explore differences in weight.	Explore differences in capacity. Interested in what happens next using the pattern of everyday routines.	Begin to anticipate times of events in the day. Compare sizes, length, weights, and capacity using gesture and language.	Begin to understand some talk about immediate past and future.
What a mathematician looks like in ES & PS	• Joining in with number rhymes. • Looking closely at objects and noticing differences. • Placing a toy 'on top' of another. • Finding something 'red' or 'big'. • Tidying away items correctly by categories. • Testing what shape fits and which shapes doesn't fit. • Saying which bowl has more at lunchtime. •					
Enriching Experiences	Baking National Number Day Local area walk Forest school maths					



Mathematics

EYFS Curriculum Map

Vocabulary

Numbers and Counting: count, how many, more, same, number words-one, two, three
Shapes: Circle, square, triangle, big and small
Pattern, pattern, stripes, spots, repeat
Spatial Relationships: Above, below, next to, in, out
Measurement: Big and small, heavy and light, long and short, full and empty
Basic Operations: Add, take away

Nursery	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Counting & Cardinality, Comparison and Composition Knowledge and Skills	Use number names in rhymes and song. Recognise, name, sort and group colours. Explore and match objects that are the same. Sort objects according to their similarities and differences.	Count a set of objects by saying one number name for each object. Count an irregular arrangement of objects. Know that a whole is bigger than its parts. Compare quantities.	Count 1 and 2 on fingers. Subitise to find 1 and 2. Recognise numerals 1 and 2. Count with one-to-one correspondence up to 2 objects in a line. Know how many are in a group of up to 2. Explore the smaller numbers within 1 and 2.	Count 3 and 4 on fingers. Subitise to find 3 and 4. Recognise numerals 3 and 4. Count with one-to-one correspondence up to 4 objects in a line. Know how many are in a group of up to 4. Explore the smaller numbers within 3 and 4.	Count up to 5 on fingers. Subitise to 5. Recognise the numeral 5. Count with one-to-one correspondence up to 5 objects in a line. Know how many are in a group of up to 5. Recite numbers past 5. Explore the smaller numbers within 5. Compare quantities to 5 by comparing numbers and explaining which is more/less.	Solve real world mathematical problems with numbers up to 5.
Pattern, Shape, Space & Measures Knowledge and Skills	Explore shapes and select them to fulfil a particular need based on their attributes.	Copy, extend and create AB patterns. Make comparisons between objects relating to size.	Talk about and explore 2D shapes using informal and mathematical language. Make comparisons between objects relating to weight.	Make comparisons between objects relating to length and height.	Talk about and explore 3D shapes using informal and mathematical language. Explore spatial relations and the properties of shapes.	Understand and use the language of position and direction. Make comparisons between objects relating to capacity.



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					Begin to describe a sequence of events, real or fictional.
What a mathematician looks like in Nursery	• Matching shapes to complete inset puzzles and jigsaws. • Making simple pattern arrangements in the creative area and with loose parts. • Playing maths games indoors and outside. • Sorting, counting and classifying collections of objects, including natural resources. • Exploring which objects will fit inside containers and which will not. • Finding the sixth missing piece of pizza in the role play to make the whole pizza.	• Talking about, comparing and ordering objects by weight or size. • Starting to use mathematical language in context. • Counting how many plates and cups are needed for a teddy bears picnic. • Singing number rhymes and songs. • Working with adults in provision who scaffold and extend their learning. • Sharing out fruit/ counting items at snack time.	• Counting during play in a wide range of different contexts. • Talking about their daily and weekly routine. • Responding to songs that involve positional language. • Investigates fitting themselves inside and moving through spaces. • Transferring their mathematical knowledge to support their learning in other areas. • Compare quantities and numbers during a game.		
Enriching Experiences	Shape walk Baking	National Number Day Local area walk	Forest school maths		
Vocabulary	Number and place value- zero, one, two ... to ten, count, subitise, number, numeral, more than, fewer than, less than, same Addition and subtraction- add, take away, altogether Multiplication and division- share, fair, same, lots of Measurement length, long(er), short(er), compare height, tall(er)/short(er), compare size, tiny, little, small(er), medium, big, bigger, large(er), smaller than, larger than, bigger than, compare weight, light(er), heavy (er), lighter than, heavier than, compare capacity, full, empty, half full, nearly full, holds more, holds less time, first, then, next, after that, today, yesterday, tomorrow, morning, afternoon, evening, night-time, lunchtime, dinner time, breakfast Pattern- Pattern, repeat Geometry- shape, sharp, pointy, round, curvy and flat, straight, same, different Position and direction- in, on, under, up, down, across, in front of, behind, forward, backwards				

Reception	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Counting & Cardinality, Comparison and Composition Knowledge and Skills	Perceptually subitise to 3. Know that the last number in the count tells us 'how many' things there are altogether(cardinality) Count with 1:1 correspondence. Recognise that 3 and 4 can be made by combining sets in different ways. Perceptually and conceptually subitise to 4. Compare sets based on attributes.	Count to 5 and represent 5 in different ways. Count beyond 5. Find & match objects that are the same. Begin to understand that whole things are often made up of smaller parts and that a whole is, therefore, bigger than its parts. Recognise that 3, 4 and 5 can be made by combining sets in different ways. Match numerals to quantities within 10. Verbally count beyond 20.	Subitise within 5. Match numerals to quantities within 5. Understand that every whole number is 1 more than the previous number. Order numbers to 5. Recognise that 5 can be made by combining sets in different ways. Understand 6 and 7 as '5 and a bit' numbers. Compare two sets. Make unequal sets equal.	Describe the '1 more/1 less' relationship of numbers to 10. Verbally count beyond 20. Subitise 6. Compare numbers using their knowledge of ordinality. Order numbers between 1 and 10. Recognise that 7 can be made by combining sets in different ways. Know that some numbers can be made with 2 equal parts-doubles. Identify what the whole is when there are two equal parts. Sort numbers according to whether they are odd or even.	Count larger amounts. Subitise using structured arrangements. Explore the composition of numbers within 10. Identify pairs of numbers that make 10. Identify a missing part of 10. Solve problems involving the composition of 10. Understand that whole numbers are made up of smaller numbers. Know that numbers can be composed and decomposed in different ways. Understand numbers to 10 in relation to one another.	Review and assess



				Begin to understand that double numbers are even numbers, and all other numbers are odd.		
Pattern, Shape, Space & Measures Knowledge and Skills	Match, sort and compare objects according to their attributes. Identify and make sets. Compare amounts. Compare and order according to size, mass (weight) and capacity. Continue, copy and create AB patterns. Identify, name, describe and compare circles & triangles. Understand and use the language of position and direction.	Identify, name, describe and compare shapes with 4 sides. Describe and order a sequence of events. Measure time in simple ways. Compare and order according to mass (weight) and capacity.	Describe and compare length and height. Order and sequence events in time.	Understand that a 2-D shape is completely flat, and a 3-D shape is solid. Recognise, name and describe the properties of 3-D shapes. Recognise that a shape can have other shapes within it, just as numbers can. Select, rotate and manipulate shapes. Continue, copy and create more complex patterns.	Explore the properties of shapes by selecting, rotating and manipulating shapes. Explain shape arrangements using positional language. Understand that shapes can be combined and separated to make new shapes. Describe the properties of 2-D shapes.	Understand and identify the unit of repeat within a pattern. Create repeating patterns and rules for them. Replicate constructions, models, and places. Visualise from different viewpoints. Make maps and plans to represent places. Use positional language to describe what they see from different viewpoints.
What a mathematician looks like in Reception	- Using their subitising skills when tidying up. - Hearing and joining in with the counting sequence in songs, rhymes and routines. - Showing quantities and numbers using their fingers and exploring different ways of representing numbers on their fingers. - Building the Number Blocks using unifix cubes. - Recording their mathematical thinking using marks, drawings or numbers.		- Sorting odd and even Number Blocks according to their 'shape.' - Joining in with verbal counting beyond 20, hearing the repeated pattern within the counting numbers. - Using natural and found objects to create pictures, number lines and patterns. - Sequencing events from stories. - Printing repeating patterns in the painting area.		- Counting how many children are in class today. - Exploring a range of representations of numbers. - Playing track games. - Recording numbers for a purpose linked to the daily routine, for example, how many children want milk. - Demonstrating their breadth of knowledge when given higher level challenges. - Selecting appropriate mathematical resources to use when solving problems.	



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	- Exploring capacity/measurement in the water tray. - Weighing and measuring when baking. - Following positional/directional instructions to find objects.	- Making 3D shapes and structures using various construction kits, malleable materials and junk boxes. - Noticing and naming shapes indoors and outside. - Describing their journey to school.	- Making small worlds in the block play. - Drawing on their developing mathematical knowledge when solving simple problems.
Enriching Experiences	Baking	National Number Day Local area walk	Maths walk Voting station
Vocabulary	Number and place value- zero, one, two...to twenty and beyond, count, subitise, number, numeral, order/ordinal, compare, forwards, backwards, one more, one less, equal to, more than, less than (fewer) Addition and subtraction- add, plus, altogether, total, take away/minus, number bonds, part, whole Multiplication and division- double, half, twice as many, equal, unequal, share, group, lots of, odd, even Measurement- length, measure, long(er)(est), short(er)(est), width, wide(er), narrow(er,) compare height, tall(er)(est)/short(er)(est), compare size, tiny, little, small(er)(est), medium, big/bigger/ biggest, large(er)(est), smaller than, larger than, bigger than, compare weight, light(er)(est), heavy (er)(est), lighter than, heavier than, balanced, compare capacity, full(er)(est), empty(er)(est), more than, less than, half empty, half full time, quicker, slower, earlier, later, before, after, first, then, next, after that, today, yesterday, tomorrow, morning, afternoon, evening, night-time, lunchtime, dinner time, breakfast, day, week, hour, minutes Pattern- Pattern, repeat, unit of repeat, AB etc, order Geometry - shape, 2-d shapes, flat, sides, curved, straight, rectangle, square, circle, triangle, 3-d shapes, solid, cubes, cuboids, cone, spheres, pyramid, edges, faces, vertices Position and direction- over, under, between, around, through, into, next to, behind, beneath, on top of		
Assessment	- practitioner's knowledge of the child - child's view of his or her own learning - information from a range of contributors (teaching assistants, parents/carers and other significant adults) - any material or representations from the child - assessment scores and/or information - a collection of anecdotal and significant moments observations.		



Mathematics EYFS Curriculum Map

Common Assessment Tasks	Baseline	CA1		CA2		CA3
Mathematical Development Early Learning Goals	ELG: Number Children at the expected level of development will: • Have a deep understanding of numbers to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.			ELG: Numerical Patterns Children at the expected level of development will: • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.		



Sources

Department for Education (2024) Early years foundation stage statutory framework for group and school-based providers.

Development Matters- Non-statutory curriculum guidance for the early years foundation stage.

Birth to 5 Matters- Non-statutory curriculum guidance for the early years foundation stage.

Planning for the Early Years

EEF's Early Years Evidence Store

Nursery curriculum map to be used in conjunction with the Tudor Grange Primary Academy Nursery Long Term Mathematics Plan.

Reception curriculum map to be used in conjunction with a White Rose subscription and in conjunction with the National Centre for Excellence in the Teaching of Mathematics' (NCETM) Mastering Number Programme.

Reception Number knowledge and skills statements- Mastering Number Programme

Reception Shape, Space and Measures knowledge and skills statements - White Rose Education