

EYFS links to MATHEMATICS

The tables below demonstrate the curriculum and skill progressions across EYFS through discretely taught sessions and purposeful play opportunities across the environment. These termly progressions will build upon the exploration, problem solving, vocabulary, understanding, knowledge and skills needed for children to access Mathematics as a curriculum area beyond EYFS.

Curriculum progression:

CELT EYFS Curriculum – 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.					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Outcomes	I can recognise up to 3 objects, without having to count them individually I can recite numbers to 5.	I can talk about and explore 2D and 3D shapes using mathematical language. I can begin to compare quantities using the language of 'more than', 'fewer than'. I can experiment with representing my own symbols and marks as well as numerals.	I can compare objects relating to size, length, weight and capacity. I understand the 'one more than/one less than'	I can explore composition of numbers to 10. I can count beyond ten. I can extend and create ABAB patterns.	I can recall number bonds for numbers 0–5 and some to 10. I can copy and create repeating patterns	I can count beyond 20. I am familiar with number patterns up to 10, including evens and odds, double facts and sharing.

	I can say one number for each item in order: 1,2,3,4,5		relationship between consecutive numbers. I can link the number symbol (numeral) with its cardinal number value up to ten.		including ABBC patterns. I can compare length, weight and capacity.	I can subitise up to 5.
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CELT EYFS Curriculum - Communication and Language

Educational Programme
 The development of children’s spoken language underpins all seven areas of learning and development. Children’s back-and-forth interactions from an early age form the foundations for language and cognitive development. The number and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added, practitioners will build children's language effectively. Reading frequently to children, and engaging them actively in stories, non-fiction, rhymes and poems, and then providing them with extensive opportunities to use and embed new words in a range of contexts, will give children the opportunity to thrive. Through conversation, story-telling and role play, where children share their ideas with support and modelling from their teacher, and sensitive questioning that invites them to elaborate, children become comfortable using a rich range of vocabulary and language structures.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Listening and Attention outcomes	I can listen to others in one-to-one or small groups when the conversation interests me. I can listen to familiar stories with increasing attention and recall. I can join in with repeated refrains and anticipate key events and phrases in rhymes and stories.	I am beginning to focus my attention and actively listen. I can follow simple directions, if not already intently focused on a self-chosen task.	I can listen to instructions and carry them out in my play. I can share instructions with others.	I can indicate two-channelled attention, e.g. paying attention to something of interest for short or long periods; can both listen and do for short span.	I can listen for extended periods of time, paying attention to the speaker. I am beginning to ask questions about what I have heard. I am starting o take turns in a conversation with others.	I can listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.

<p>Understanding outcomes</p>	<p>I can understand the use of objects (e.g. Which one do we cut with?)</p> <p>I am beginning to understand prepositions such as under, on top, behind by carrying out an action or selecting correct picture. I can respond to instructions with more elements, e.g. Give the big ball to me; collect up all the blocks and put them in the box.</p> <p>I am beginning to understand why and how questions.</p>	<p>I can understand a range of complex sentence structures including negatives, plurals and tense markers.</p> <p>I am beginning to understand humour, e.g. nonsense rhymes, jokes.</p>	<p>I can follow a story without pictures or props.</p> <p>I can listen and responds to ideas expressed by others in conversation or discussion.</p>	<p>I can understand questions such as who; why; when; where and how.</p>	<p>I can make comments about what they have heard.</p> <p>I can hold a conversation when engaged in back-and-forth exchanges with their teacher and peers.</p>	<p>I can make comments about what they have heard and ask questions to clarify their understanding.</p> <p>I can show an understanding of what has been read to me by retelling stories and narratives using my own words and new vocabulary.</p> <p>I can predict key events in stories.</p> <p>I can use and understand recently introduced vocabulary during discussions.</p>
<p>Speaking outcomes</p>	<p>I am beginning to use more complex sentences to link thoughts (e.g. using and, because).</p> <p>I can use language in recalling past experiences.</p> <p>I can retell a simple past event in correct order (e.g. went down slide, hurt finger).</p> <p>I can use talk in pretending that objects stand for</p>	<p>I can use talk to explain what is happening and anticipate what might happen next.</p> <p>I can question why things happen and give an explanation.</p> <p>I can use a range of tenses e.g play, playing, played.</p>	<p>I can extend vocabulary, by grouping and naming, exploring the meaning and sounds of new words.</p> <p>I can use language to imagine and recreate roles and experiences in play situations.</p>	<p>I can link statements and stick to a main theme or intention.</p> <p>I can use talk to organise, sequence and clarify thinking, ideas, feelings and events.</p> <p>I can introduce a storyline or narrative into my play.</p>	<p>I can participate in small group, class and one-to-one discussions, offering my own ideas, using recently introduced vocabulary.</p> <p>I can offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.</p>	<p>I can express my ideas and feelings about my experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from my teacher.</p>

	something else in play, e.g. This box is my castle.					
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Skill progression through play-based learning landscape:

Construction play skills

Skill Level	Physical Skills	Social and Emotional Skills	Cognitive Skills	Focus Materials
Autumn	Balance, proprioception, hand-eye coordination, gross motor movement, shoulder pivot, elbow pivot, bilateral coordination, grasp, stacking, selecting appropriate resources, showing preference for a dominant hand Lifting and transporting	Social interaction, building relationships, cooperation, expressing a preference, indicating emotion or feeling	Experiencing texture Experiencing cause and effect – trajectory Experiencing scale Creating lines Experiencing differences in height, width, length and shape Exploring and experimenting with stacking and assembling, different arrangements	Large scale block play Basic construction sets eg Duplo, Junior K'nex Large scale loose parts – eg planks, tyres, crates, guttering
Spring	Fine motor movement, wrist pivot, palm arches, in hand manipulation, thumb opposition Development of spatial awareness	Beginning to develop negotiation skills Developing resilience and perseverance Including narrative in play	Developing imagination and fantasy Applying knowledge of cause and effect (force and motion) Using material to problem solve – using knowledge of height, width, length and shape	<i>All of the above plus ...</i> Small scale block play Construction sets – eg Mobilo, Lego

	Development of overall body strength, co-ordination, balance and agility		<p>Counting, sorting, comparing</p> <p>Classifying by common characteristics – grouping</p> <p>Enclosing – making tunnels, houses - showing understanding of outside and inside</p> <p>Making things equal – sharing and grouping (linking to fractions 1/2)</p> <p>Planning outcomes before starting to construct</p> <p>Observing outcomes</p> <p>Developing understanding of using pictorial representations to support ideas</p>	<p>Small scale loose parts – eg selection of natural objects, nuts and bolts</p> <p>Pictures of models</p>
Summer	Pincer grip, finger isolation, knuckle, DIP (Distal interphalangeal joint) and PIP (Proximal interphalangeal joint) joint development	<p>Creating imaginative scenarios, linking with small world and role play</p> <p>Empathy, thinking about the perspectives of others</p> <p>Negotiation</p> <p>Reasoning, predicting, relating to previous experience</p> <p>Collaboration</p>	<p>Creating shapes; including an awareness of symmetry and pattern</p> <p>Sharing and grouping – linking to fractions (1/4)</p> <p>Understanding of height, width, length and shape in problem solving</p> <p>Applying knowledge gained to new ideas, developing imagination and fantasy</p> <p>Predicting possible cause and effect (force and motion)</p> <p>Testing ideas and reviewing afterwards</p> <p>Following step by step instructions</p>	<p><i>All of the above plus</i></p> <p>More complex construction sets – eg small polydrons, k'nex</p> <p>Instruction cards</p>

Investigation play skills

Skill Level	Physical Skills	Social and Emotional Skills	Cognitive Skills	Example Focus Materials
Autumn	<p>Fine motor - whole hand grasp when using large magnifying glasses and tweezers, using large bug pots, pestle and mortar mixing leaves, large torches</p> <p>Fine motor - whole hand development - kneading, pushing, rolling, pinching, twisting, plaiting, squeezing, threading, pressing (making bread, pastry, playdoh)</p> <p>Gross motor – balance, climbing, running, walking (exploring immediate environments: school grounds/fields/ wooded areas)</p> <p>Gross motor skills – exploring weather with windy day resources (wind socks, ribbons, big bubble wands)</p> <p>Fine motor - whole hand development – using drawing tools</p> <p>Hand eye co-ordination when tracking bubbles, clouds and using tools</p>	<p>Using resources safely</p> <p>Sharing resources</p> <p>Co-operation</p> <p>Handle living things with care</p> <p>Explaining what they observe to a friend</p>	<p>Be curious</p> <p>Use their senses</p> <p>Use new vocabulary</p> <p>Awe and wonder</p> <p>Explore</p> <p>Listen to and enjoy information books, stories, videos and games</p>	<p>Sticks, stones leaves, pine cones, pumpkins and gourds</p> <p>Large magnifying glasses for ease of handling</p> <p>Large bug pots for ease of handling</p> <p>Magnetic wands with long handles</p> <p>Mirrors</p> <p>Large tweezers</p> <p>Playdough and other malleable materials including food eg bread and pastry</p> <p>Objects for exploration for sound – instruments</p> <p>Sand and water exploration – wheels, spades, buckets, funnels , food colouring (covers for sand and water)</p> <p>Potion making resources – pestle and mortar, herbs, food flavouring and colours, leaves</p> <p>Light exploration – torches, coloured plastic, tent</p>

<p>Spring</p>	<p>Fine motor skills – whole hand and pincher grip when planting bulbs/seeds using tools (trowels)</p> <p>Gross motor – balance, large spades for digging holes to plant bulbs</p> <p>Fine motor – pincer grip when using smaller tweezers, magnifying glasses, bug pots, horseshoe magnets,</p> <p>Gross motor – balance, climbing, running, walking (exploring immediate environments)</p> <p>Hand eye co-ordination when using resources</p>	<p>Using resources safely</p> <p>Handle living things with care</p> <p>Sharing resources</p> <p>Explaining what they observe to a friend</p> <p>Co-operation</p> <p>Recreating roles and real-life experiences being a scientist</p> <p>Perseverance</p>	<p>Explain concepts of growth and decay</p> <p>Ask and answer questions</p> <p>Sorting</p> <p>Name and describe</p>	<p>Small magnifying glasses</p> <p>Watering cans</p> <p>Seeds, bulbs, seed packets, trowels, garden forks</p> <p>Online activities to develop observation eg Explorify</p> <p>Floating and sinking resources eg boats, pebbles</p> <p>New life resources – tadpoles, eggs, tanks, wormery, ant farm, lobster hatchery</p> <p>Hand held microscopes</p>
<p>Summer</p>	<p>Fine motor – pincher grip when manipulating pipettes to investigate colour changes in potions, manipulating small tweezers, bubble wands, horseshoe magnets, magnetic balls, using drawing tools resources with control</p> <p>Fine motor - whole hand grasp when using tools for gardening</p> <p>Gross motor – balance, climbing, running, walking (exploring immediate environments: parks, woods, beach)</p>	<p>Using resources safely</p> <p>Sharing resources</p> <p>Co-operation</p> <p>Handle living things with care</p> <p>Explaining what they observe to a friend</p> <p>Resilience</p> <p>Perseverance</p> <p>Predicting and testing</p>	<p>Spot similarities and differences</p> <p>Observation</p> <p>Reference to non-fiction books</p> <p>Investigation</p> <p>Record findings</p>	<p>wind-up toys, pulleys, sets of cogs with pegs and boards.</p> <p>Shells, pebbles, seaweed, crabs, nets</p> <p>Water, ice, sun and shadows</p> <p>Identification cards</p> <p>Microscopes</p>

	Gross motor – control and balance Hand eye co-ordination when manipulating resources			
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Additional areas – ‘tinker table’