**EYFS Maths Audit**

**This tool is designed as a good practice guide and audit tool, however, please remember that the practitioners are your ‘key’ resource, and it is how they support the children to access the resources, the language that they use and the modelling that they do, that will have most impact. As such this audit also includes the things you would want to see practitioners doing and saying.**

**Environment for babies and young children – Maths Focus**

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| **Enabling Environments – Resources** | **In Place/ Evident?** |
| Song Box/puppets are available and used. |  |
| Board/fabric books include references to number and shape. |  |
| Resources are organised in ways that can help with ‘sorting’, for example children can put all the balls in one tub, the cars in another and the rattles in another. |  |
| Construction items are available and use is modelled by the practitioners; to make towers/lines/enclosure that increase and decrease in size. |  |
| Babies always have access to a wide variety of objects of varied texture. |  |
| Babies always have access to a wide variety of objects of various weight; some items are appropriately ‘heavy’. |  |
| Children have access to collections of the ***same*** objects, but which are *different* sizes, like big/small balls, big/small cars and big/small teddies. |  |
| Children also have access to collections of things which are all of a similar size, small balls, small cars, big teddies etc. |  |
| There are a range of 2D and 3D shapes as part of the continuous provision, for example wooden mirrored blocks or acrylic cubes and foam circles/squares etc. |  |
| Babies have access to different cardboard boxes or tins with lids that can be removed for early problem solving. Like a cube with a square lid, a cuboid with a square or rectangle lid and a cylinder with a circular lid etc. |  |
| Babies have access to items that can be squashed, folded or pushed (fitted) inside containers, like scarves, voile, ribbon etc to develop an awareness of ‘capacity’. |  |
| Babies have access to things that can be stacked and fitted inside each other like cups, rainbow blocks, tins and present boxes etc. |  |
| Babies have access to simple shape/object inset jigsaw. |  |
| Babies have access to simple 2/3 piece jigsaws. |  |
| The environment supports 1-1 correspondence, for example eggs in an egg cups. Blankets for baby dolls. Booties for dolly’s feet. Bun tins for cupcake cases and press to ‘lift the flap’ resources and ICT equipment etc. |  |
| Babies have access to heuristic play items and treasure basket items. Practitioners model Number and SSM language when these are being used. |  |
| Obstacle courses or arrangements of large items are used so that children experience what it is like to be ‘inside’ ‘on top of’ ‘next to’ ‘under’ and to go ‘through’ objects. Practitioners model this language. |  |
| There are numerals in the environment; this could be within nursery rhyme cards, displays, posters or on Continuous Provision. |  |
| Babies access a range of resources that draw attention to pattern and shape, like balls, hoops, patterned socks or materials, ribbons and rainbow sticks etc. |  |
| Notes: | |
| Supportive and Skilled Practitioners | **In Place / Evident?** |
| Practitioners always play interesting games to encourage babies to look for things out of sight like ‘Peek-a-boo’ games. |  |
| Resources are available to encourage children to find things out of sight; like lift the flap books, ball dropping games and simple ‘revealing’ inset jigsaws. |  |
| Practitioners model the use of 1, 2, 3….to anticipate something happening and indicate the start of something, like throwing a ball, or blowing bubbles etc. |  |
| Practitioners model early language often and encourage children to repeat some of this language as part of their everyday modelling of new words and vocabulary. |  |
| Babies are supported to explore how things change by reducing and increasing; for example using phrases like ‘All gone’ to indicate there is no more milk/toast or asking ‘Do you want *more*?’ Associated maths vocabulary is used when exploring how stacking blocks get taller, or as a shape sorter fills up, as the items are inserted etc |  |
| Children are told what is about to happen for example, ‘going outside’, ‘having their nappy changed’ ‘having lunch’ etc to help them develop a basic awareness of routine (the passing of time) |  |
| Practitioners provide lots of opportunities to explore early conservation of number eg 2 cars spread apart, 2 cars close together, 2 cars in a line, 2 cars stacked on top of each other (the 2ness of 2) |  |
| EYP s play ‘copying’ games with the children, like pointing to their eyes, nose, mouth, patting their heads, toes etc. (matching / noticing similarities) |  |
| **Notes:** | |

**Environment for rising twos to rising threes– Maths Focus**

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| **Enabling Environments – Resources** | **In Place / Evident?** |
| **Children of this age may still have access to a number of resources from the baby room audit (depending on their learning needs) new experiences/resources could include:** |  |
| Practitioners initially model counting **forwards** before and significantly more often than counting back. |  |
| Practitioners have researched and are using rhymes which count ‘forwards’ as well as backwards. For example, ‘Once I caught a fish alive’, ‘here is the beehive’, ‘one potato two potato’ etc. |  |
| Toddlers have access to a range of objects of similar shape and size but of different weight. |  |
| Children also have access to collections of things which are all big/small. |  |
| Early numerals are visible in the environment and at the child’s height. |  |
| There are a range of 2D and 3D shapes as part of the continuous provision, for example wooden cuboids, pyramids and 2D shapes. |  |
| Toddlers have access to different boxes or tins with lids that can be removed for problem solving and shape recognition. Like a cube with a square lid, a cuboid with a square or rectangle lid and a cylinder with a circular lid etc. |  |
| Children have collections of gathered sticks in a range of size, shape, thickness, weight, length, colour, etc. |  |
| There are resources available to help children explore symmetry. |  |
| There are resources available to help children explore tessellation. |  |
| Children have access to shape and object inset jigsaws and 4+ piece jigsaws. |  |
| Children have access to things that can be stacked and fitted inside each other like playdough cutters of varying sizes, stacking items and Babushka dolls etc or tins / present boxes etc. |  |
| Children have access to heuristic play items and treasure basket items. Practitioners model Number and SSM language when these are being used. |  |
| There are age appropriate ‘collections’ of objects for children to investigate, count, sort and compare, like balls, bobbins, seed pods, boxes, extra-large buttons or cubes etc |  |
| Construction items are available and use is modelled by the practitioners. They make towers/lines/enclosures which increase and decrease in size and talk about what is happening. |  |
| Obstacle courses or arrangements of large items are used so that children experience what it is like to be ‘inside’ ‘on top of’ ‘next to’ ‘under’ and to go ‘through’ objects. Practitioners model this language and encourage children to use new vocabulary like ‘in’ and ‘out’. |  |
| There are a range of simple books which support the understanding of mathematical concepts for example, ‘Going on a Bear Hunt’ and ‘Ten in a bed’ to encourage ‘counting and naming’. |  |
| There are opportunities for children to match shapes to 2D silhouettes, for example spaces to hold a jack in a box, bead maze or mirror stand. |  |
| Children are supported to pour their own milk/water and develop an awareness of capacity, full and empty etc. |  |
| The items provided at the sand and water tray allow children to experiment with capacity, weight and comparison. Practitioners model the associated language. |  |
| **Notes:** | |
| **Supportive and Skilled Practitioners** | **In Place / Evident?** |
| Practitioners model the use of 1, 2, 3….to anticipate something happening and indicate the start of something, like throwing a ball, or blowing bubbles etc. |  |
| Practitioners continue to develop 1-1 correspondence, eg 2 balls for 2 children. 3 plates for 3 children, aprons on when playing in the water, bun tins with cupcake cases etc. |  |
| Children are told what is going to happen for example ‘going outside’, ‘having snack’ ‘tidying for lunch’ etc to help them develop an basic awareness of routine (the passing of time) |  |
| Children are asked to help with simple tasks that involve a developing awareness of quantity, for example asking the child for 2 pencils or 2 cars etc and counting as these are passed to you. |  |
| Practitioners provide lots of opportunities to explore early conservation of number eg 4 cars spread apart, 4 cars close by, 4 cars in a line, 4 cars stacked on top of each other (4ness of 4) |  |
| Children are encouraged to think about their age and the ages of their friends etc, this could be done through birthday celebrations, charts and discussions. |  |
| Language associated with amounts that increase and decrease are used often and children are encouraged to use this too, for example ‘Would you like ‘more’ banana? Or the banana has ‘all gone’, etc. |  |
| Practitioners use and explain numbers beyond 10 or 20 where appropriate. |  |
| Practitioners plan and model opportunities for ‘whole body’ counting that can be felt and vocalised; like counting their claps or jumps. |  |
| **Notes:** | |

**Environment for pre-school and older children– Maths Focus**

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| **Enabling Environments – Resources** | **In Place / Evident?** |
| ***Children of this age may still have access to a number of resources from the rising 2s-3s audit (*depending on their learning needs) new experiences/resources could include:** |  |
| Maths resources are regularly refreshed and reviewed. |  |
| Mathematical resources are accessible throughout the environment, as well as within any maths area/table. |  |
| The outdoor environment complements and extends the indoor environment with regard to maths. |  |
| The resources offer challenge and can be used in a differentiated way. |  |
| Children access, choose and select resources independently. |  |
| Children return them independently to the designated area. |  |
| Children can explore mathematics through movement, e.g., dance, obstacle courses, group games, ring games, den-making, travelling games and construction on a large scale etc. |  |
| Resources are available to encourage ordering for e.g., a washing line at child height so that children can peg numerals/objects on, in increasing and decreasing order (number or size) or for identifying matching pairs of socks, matching patterns or repeated patterns etc. |  |
| There are opportunities for children to explore shape and number on a large and small scale, inside and out. For example water painting, numerals/dots to count outside, loose parts for constructing with, den building materials, using yard chalks for drawing shapes on the floor or a large chalkboard, a trundle wheel or metre sticks and space/equipment indoors for this too. |  |
| Any pre-fixed playground markings are utilised. Chalked markings are used to support mathematics through shape and numerals hunts and drawings, and by creating tracks and hopscotch grids etc. |  |
| Practitioners model and explain how to measure the temperature using a weather station. |  |
| There is a balance between natural and commercially produced resources to support mathematical exploration of number and Shape, Space and Measure. |  |
| Children access games supporting mathematical development independently e.g., lotto, snap, dominoes, and track games. |  |
| Opportunities are planned to support children with mathematical recording, like making charts and tallies. How many leaves did they find? Stones? Who chose a strawberry? Who had orange? How many children here today? How many boys/girls etc |  |
| A variety of resources and ‘targets’ are used to support scoring and the use of tallies, e.g. basket-ball hoops, beanbags, quoits and skittles are easily available |  |
| There are age appropriate ‘collections’ of objects for children to investigate, sort, compare, sequence, count, share and make patterns with, e.g. boxes, buttons, socks, coins, beads, seeds, shells, pebbles, counters and keys etc. |  |
| There are collections of gathered sticks and other natural resources in a range of size, shape, thickness, weight, length, colour, etc. For example sticks, stones, shells, leaves, conkers and pine cones. Children can help develop collections. |  |
| Children have access to atelier items and practitioners model and encourage the children to use positional and shape language when talking about the arrangements. |  |
| Resources are available to support the exploration of weight, for example balance scales and a range of items to weigh, like pebbles, seeds, sand, plastic counters, wooden blocks and standard weights etc. Remember equal units of numicon blocks also ‘weigh the same’. |  |
| Receptacles of the same capacity but different shapes are used in the water/sand area to develop an awareness of conservation. E.g. a range of 1 litre cuboids, cubes, and cylinders etc. |  |
| Practitioners model and encourage the use of balancing scales. They encourage critical thinking and problem solving as well as modelling language; ‘What’s happened to the basket of 4 pigs?’ ‘Why is the basket of 4 pigs lower than the basket of 2 pigs?’ |  |
| ***Practitioners are aware of*** the different types of pattern and resources are available to support these, ***including:***   * Sound * Radial * Rotating * Symmetrical * Spiral * Staircase * Repeating * Spiral * Tessellating   \*Practitioners talk about these patterns and how they are created. |  |
| Resources are visible which provide meaningful mathematical opportunities for children, for example song boxes and items/puppets to use with rhymes that encourage counting forwards, backwards and early subtraction / addition. E.g. ‘5 little speckled frogs’, ‘5 little ducks’ ‘10 little monkeys’. |  |
| Where appropriate the concept of ‘money’ is being developed, for example with price labels in the home bay/shop or on petrol station resources outside etc. |  |
| There are opportunities for less able and younger children to continue developing their awareness of 1-1 correspondence. Eggs in an egg cup, match backs, counting out snack and chocolate box inserts for use with dough etc. |  |
| Children have access to a range of objects of similar shape and size but of different weight; they are encouraged to talk about these similarities and differences. |  |
| IT equipment is available to support mathematical understanding. This could be on a tablet / IWB and using apps or programmes like ‘Number Blocks’ ’CBeebies’ and BBC maths etc. |  |
| IT equipment is available to support mathematical understanding includes programmable toys like beebots / roamer / Codar Oillar / pixie which require programming to turn and pace. |  |
| Children always have access to resources and materials that encourage size recognition; these are provided in all continuous provision areas indoors/outdoors. |  |
| There are a range of opportunities and equipment for children to explore 2D and 3D shapes. Resources vary in shape, size and texture. |  |
| There are a range of opportunities and equipment for children to make their own 2D and 3D shapes for example using construction kits and shapes sets, like octagons, magnetic blocks and Knex or ‘build a straw’ items etc. |  |
| ‘Feely bags’ are used to challenge children to talk about the properties of shapes and to name them. Including Flat and 3D shapes. |  |
| There are resources available to help children explore and understand symmetry. |  |
| There are resources available to help children explore and understand tessellation. |  |
| Mathematical descriptive language and images are visible in appropriate places, e.g., near the dough table: long, short, wide, thick, thin, big, small etc. or near the atelier: spiral, oval, square, circle etc. (this can remind the adults to model this language too) |  |
| There are a range of books which support the understanding of mathematical concepts for example ‘Press Here’, ‘Ten in a bed’ ‘Ten terrible dinosaurs’, ‘One is a snail, ten is a crab’ ‘Hungry Caterpillar’ and ‘10 play hide and seek’. Etc |  |
| Obstacle courses or arrangements of large items are used so that children experience what it is like to be ‘inside’ ‘on top of’ ‘next to’ ‘under’ and to go ‘through’ objects. Practitioners model this language and children are encouraged to describe the different ways they have moved. |  |
| Challenges are left out for children indoors and out, like numbered cards with the same number of dots, can the children find that given number of items? (they can cover each dot as they find items too – early addition/subtraction) |  |
| Maths games are played; hopscotch, shopping games, frustration, dice games etc. |  |
| The environment includes numerals that are seen in everyday life, for example a diary, a clock, a phone, a TV remote, a calendar and weighing scales in the domestic play area. |  |
| Note pads, paper and writing implements are placed alongside small world and role-play areas to encourage the writing of numbers. |  |
| Practical maths opportunities are provided outdoors, for example ‘Den building materials’ – How big? How many children will fit inside? How many long sticks do we need? How many pegs etc? |  |
| The items provided at the sand and water tray or in the mud kitchen and digging patch allow children to experiment with capacity, weight and comparison. Practitioners model the associated language. |  |
| Children have access to a wide range of receptacles including wheelbarrows, buckets and spades, to fill and empty and to transport heavy items. |  |
| Children have access to outdoor blocks and containers for the blocks – how many will fit in? More if upright or laid down, how many small blocks will fit? Large blocks? |  |
| There are items outdoors to support a developing awareness of and use of positional language, like guttering and balls/water, ramps and cars and blocks for making enclosures or obstacle courses etc. |  |
| Opportunities for gardening/growing and looking at plants are planned. To count seeds, discuss depth of holes, discuss height/growth of the plants, discuss similarities and differences, capacity of water etc. |  |
| Children have materials available to them which support the writing of numerals, for example number lines, charts or wooden numerals. |  |
| There are opportunities for children to match 3D shapes to 2D silhouettes, for example spaces to store wooden blocks and home bay items or sand/water toys. |  |
| ***Children have access to a wide range of resources inside and/or out which can support the development of their Math’s skills, including but not exclusively:*** |  |
| Dice |  |
| Numbered spinners |  |
| Dominoes |  |
| Counting blocks, small parts, 10s, numicon, unifix (or similar) to support visual representation and conservation of number. |  |
| Tape Measures (could also be in a tool box with spirit level too) |  |
| Balance scales |  |
| Number tracks |  |
| Number rows (sometime with missing digits) |  |
| 10 grids (2 rows of 5) |  |
| 100 squares |  |
| Sand Timer |  |
| Stop watches |  |
| Clocks |  |
| Days of the week |  |
| Money in the role play area (real where possible) |  |
| Heavy things, sand, rocks, water, wooden blocks (weights) |  |
| Large Calculator, |  |
| Rulers |  |
| Height Chart |  |
| Outdoor Land Art items (children can help forage) |  |
| Peg board and pegs |  |
| Number Lines – used for increasing/decreasing ordinal numbers. |  |
| Number Lines – used for identifying matching pairs / ordering by size etc |  |
| Square / Lined paper |  |
| **Notes:** | |
| **Supportive and Skilled Practitioners** | **In Place / Evident?** |
| Practitioners continue to model counting **forwards** and where appropriate, begin to introduce counting **back.** |  |
| Practitioners have researched and are using rhymes which count ‘forwards’ as well as backwards. For example, ‘Once I caught a fish alive’, ‘here is the beehive’, ‘one potato two potato’ etc. |  |
| Children are encouraged to ‘know’ when there are 2, 3 or 4 objects without counting and are praised when recognising this; practitioners understanding that it is not always helpful to get children to recount and ‘check’ that they have the right answer. (Subitising awareness) |  |
| Practitioners use open ended questions to encourage mathematical language. |  |
| Practitioners plan in opportunities for children to estimate, like how many scoops to full a tub, how many steps to cross the yard etc |  |
| Practitioners play ‘Maths I Spy’ games….with my little eye something that is long, thin, and blue? etc |  |
| Practitioners encourage children to collect things to talk about (pebbles, cones, flowers, feathers etc) the adults can model and encourage mathematical language to describe the items. |  |
| Children regularly go on ‘number hunts’ or practitioners include this in their discussions with children (spotting numbers in the environment to support conversation/discussion) |  |
| Practitioners use ‘real life’ opportunities to develop maths and problem solving skills. How many children staying for dinner? How many more chairs do we need? Will any chairs be empty? Do we need 1 or 2 tables? Will we have enough toast? How do you know? |  |
| Children are regularly included in problem solving: There were 5 leaves and the rabbit ate 1, how many are left? Can 6 pencils be shared fairly between 2 children? |  |
| Children are regularly included in problem solving: 4 red fish and 2 blue fish, how many more red fish than blue fish? (focussing on the use of vocabulary and problem solving skills) |  |
| Children are encouraged to think about their age and the ages of their friends etc, this could be done through birthday celebrations or a birthday chart/display. |  |
| Children are given opportunities to recall events in their lives that have happened and that are going to happen in the future, for example a holiday they had a ‘long time ago’ or a birthday in 5 more sleeps etc. |  |
| Story times and circle times are used to ‘recall events’ from stories or home life experiences to support an understanding of the passing of time. |  |
| Children are encouraged to use time language like first, next and lastly etc when recalling how they made a model, followed a recipe or got dressed etc. |  |
| Adults encourage children to sort and match including at tidy up time. How many pencils should be in the tin? |  |
| Children are consistently encouraged to explore real-life problems, for example identifying if they can share the role play slices of bread fairly or ***if*** more children can come to the water tray when 4 is the limit? |  |
| All practitioners are accurately modelling the use of mathematical vocabulary including that which names the properties of 2D and 3D shapes. |  |
| Adults model and use the correct vocabulary at all times for example they say that 16 is 10 and 6 more rather than 1 and 6 (which would make 7). |  |
| Practitioners encourage, model and support children with size language. |  |
| Practitioners are aware of and model the ‘order irrelevance principle’ (the total number of items remains the same regardless of which item you count first) |  |
| Practitioners point out shapes in the environment and in the art work and creations that children make. |  |
| Small group time activities are planned and differentiated according to children’s next steps, for example children developing an understand of 3, 10 or 1 more and 1 less etc. |  |
| Practitioners take part in activities and discussions which support their understanding of height and length, for example who is the tallest, shortest, who has the largest stride, the smallest hand etc |  |
| Practitioners use snack times as an opportunity for teaching maths; 1-1 correspondence, sharing, 1 more, 1 less, early additional and subtraction etc. |  |
| Practitioners explicitly talk about the ‘characteristics’ and properties of items when sorting, so for example items with 3 holes, items that are bumpy, items that are cube shaped with 8 vertices etc. |  |
| Where appropriate children are introduced to and encourage to use Venn diagrams when sorting and classifying. |  |
| Practitioners support children to pour their own milk/water and children know when to stop and if their cup is ‘full’ etc. |  |
| Practitioner model and encourage the counting of objects which can be seen but not touched, like fans on a ceiling or pictures on a high display. |  |
| Practitioners model and encourage the counting of objects which can be heard but not touched, like the beats of a drum or shells dropping into a pot one by one. |  |
| Practitioners plan and model opportunities for ‘whole body’ counting that can be felt and vocalised; like counting jumps/steps forwards and back along a number line. |  |
| **Notes:** | |
| **Enabling Environments – Displays** | **In Place / Evident?** |
| There are clear pictures and silhouettes of objects to show where things belong. Children are expected to help tidy up. |  |
| Displays include numbers that have been typed and where appropriate handwritten by both adults and children. |  |
| Displays celebrate children’s achievements in mathematics. |  |
| Children have opportunities to display their own mathematical mark making. |  |
| Children’s ways of recording measurement is evident (capacity, length, mass, time) using standard and non-standard methods. |  |
| Some displays are interactive and are used to promote children’s exploration and curiosity of mathematics (possibly within investigation stations / ateliers etc) |  |
| Numerals, words and number patterns are displayed in a meaningful way (inside and outside) for example through road signs and registration plates in small world play areas. |  |
| Numbers are visible in the outdoor environment, for example numbered parking bays, images of environmental numbers, like speed signs and vehicle registration plates etc. |  |
| Items with numbers from real life events are used in role play, play dough and workshop areas, for example numbered birthday cards, candles (or straws) and birthday banners etc. |  |
| Shape vocabulary is visible in the environment including 2D and 3D vocabulary. |  |
| There is evidence that the children are learning about the value of 0 / Zero. |  |
| 0 is represented in the environment appropriately (with no content/value) |  |
| Visual aids such as timetables are used effectively. |  |
| Numbers are displayed in English and other languages and scripts. |  |
| Evidence of Subitising is visible; on dice, numicon, pencil pots, toilet doors, number lines etc |  |
| Evidence of Cardinal Numbers in the environment (which give a total number in a set/group) 1 cow, 4 legs, 2 eyes etc |  |
| Evidence of ordinal Numbers in the environment (which identify the position of an item) he came 3rd she came 4th) |  |
| Evidence of ordinal Numbers in the environment (which show an increase / decrease of value, eg numbered stairs) 1, 2, 3, 4, / 2, 4, 6, 8, / 10, 9, 8, 7 / 5, 10, 15, 20 / 50, 40, 30, 20, 10 etc |  |
| Evidence of Nominal Numbers in the environment (which represent/name an item) eg bus no 7, player number 6, seat number 3, toilet number 2 |  |
| **Notes:** | |
| **Parents as Partners** | **In Place / Evident?** |
| Parents are encouraged to support their children’s developing maths skills; this could include sending home a counting rhyme challenge, asking parents to look for numbers on the way to/from school or going on a shape hunt etc, or counting things like the number of ‘manhole covers’ or ‘shops’ on the way to school. |  |
| Parents are provided with information about how to support maths skills at home; like setting the table, counting the stairs, pairing up the clean socks, seeing who has the biggest/smallest hands and feet, baking, looking for numbers when shopping or asking if the bath is full/empty? etc. |  |
| Maths activity packs are included in the home learning library; for example simple snakes and ladders games, frustration, dominoes, card games etc |  |
| Maths activities are used during stay and play sessions; for example simple snakes and ladders games, frustration, dominoes, card games etc |  |
| **Notes:** | |