Kingsland Primary School

Maths: Progression Map

Subject–specific curriculum

Key Vocabulary is identified in **bold.** This is the typical vocabulary teachers will use in lessons. Some of this vocabulary may be used by pupils whose expressive language is at an appropriate level, but the expectation of pupils to do this will be judged by teachers with the overall communication needs of each pupil in mind. The aim is to support pupils to understand some of this vocabulary over time.

N.B. whilst the coverage of knowledge & skills is the same between the SLD and subject-specific SCERTS curriculum pathways, SCERTS Maths teaching will often be within a functional context in line with overall aims and approaches of subject-specific SCERT-based teaching.

Maths progression map:– subject-specific curriculum **Number:** number & place value (counting)

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Recall, respond to and interact with a wide range of number, counting & rhyme songs ♦ Rote learn and recall number names through a wide range of sensory and practical based activities ♦ Interact with number-based games, including through technology ♦ Explore concrete objects in a variety of contexts, perhaps using number-based songs & rhymes e.g. Ten Green Bottles ♦ Experience use of language relating to number names ♦ Experience use of language relating to place value	♦ Order numbers and amounts of objects through a wide range of practical and real-life contexts, such as counting and rhyme songs ♦ Use language relating to number names ♦ Use language relating to place value e.g. '**next', 'before', 'one more', 'one less'** etc. ♦ Order a range of given numbers, numerically 1-3, 1-5, 1-10 ♦ Demonstrate an understanding of the concepts **'many'** and **'few'** i.e. chooses many crisps rather than one or two ♦ Make sets with **'one'** and with **'lots of'** objects ♦ Demonstrate an understanding of 1:1 correspondence in every day situations ♦ Make groups of objects ♦ Begin to recognise small amounts of objects up to 3 (subitising)	♦ Use language associated with number and place value appropriately and in context ♦ Understand that numbers have an order and that the **largest** number has the **most** value e.g. 1 sweet or 15 sweets and zero as a place holder ♦ Understand and use number order through the use of ordinal numbers ♦ Read numbers and put out the correct amount associated with that number in practical contexts e.g. when shopping & buying 5 oranges ♦ Apply understanding of 1:1 correspondence through problem solving activities, as well as day to day situations ♦ Read numbers presented in different ways e.g. dots on a dice, roman numerals

Maths progression map:– subject-specific curriculum **Number:** addition & subtraction

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
Through a range of multi-sensory and play-based activities:- ♦ Make groups of objects ♦ Add objects to a group of objects ♦ Take objects away from a group of objects ♦ Change the amount in a group of objects	♦ Know that combining items/numbers equates to **putting them together/adding** and that the final amount is the **total** ♦ Know that removing items/numbers equates to **taking something away/subtracting** and that the final amount left is the total ♦ Know that adding an object or amount to a group will mean the total is **'more'** ♦ Know that taking an object or amount away will mean the total is **'less'** ♦ Combine objects when asked to **'add', 'put together'** or **'combine'** - show understanding of language related to addition ♦ Remove an object when asked to **'subtract'** or **'take away'** - show understanding of language related to subtraction ♦ Understand the terms **'how many altogether'** and **'how many left'**?	♦ Combine amounts accurately and understand that the final amount is the **'total'** ♦ Demonstrate combining a small amount of objects or a number (e.g. 5) in a range of ways (e.g. 2 and 3, 4 and 1 etc.) ♦ Recall and use these combinations in various contexts ♦ Be able to transfer addition/subtraction skills to a range of contexts and using a range of objects/ equipment e.g. money, fruit etc. ♦ Solve a range of real life problems (e.g. "I need 5 oranges but only have 3, **how many more** do I need?"), choosing the appropriate calculation to solve it ♦ Use a range of methods best suited to them, in order to add & subtract successfully e.g. practically, pictorially, written, numberline etc. ♦ Demonstrate an understanding of language relating to calculation and react/use appropriately ♦ Read, write & interpret mathematical statements involving the signs: + / - / = ♦ Find the difference between numbers

Maths progression map:– subject-specific curriculum **Number:** fractions/multiplication/division

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Observe how objects can multiply and respond to this e.g. watch as **more** biscuits are handed out at snack time and get another biscuit ♦ Begin to understand the term **'more'** and request **'more'** of something ♦ **Share** objects when playing ♦ Explore that items can be broken into different pieces e.g. lego	♦ Give 1 of 2, 2 of 2 etc. ♦ **Count** in and recall 2s ♦ Understand and use the term **'half'** when something is equally in 2 pieces/groups ♦ Make simple arrays and **patterns** e.g. 3 rows of 2 blocks	♦ Set a table appropriately for lunch ♦ Solve problems by counting in 2s,5s,10s e.g. being able to make number calculations quickly in different context through e.g. counting 5 stacks of 5 chairs ♦ Cut food into appropriate amounts e.g. cut an apple in **half**, slice a cake into 6 pieces ♦ Understand and use the correct vocabulary in context e.g. **half, quarter, share, divide, equal, how many, what's left** etc. ♦ Demonstrate an understanding of sharing items equally to ensure the

Maths progression map:– subject-specific curriculum **Statistics**

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Collect things and **look at**/observe the difference between them e.g. different **colour** leaves ♦ Explore that things can be different e.g. we are different heights, we have different coloured hair etc.	♦ Begin to use given charts to locate information ♦ Answer simple questions about observed differences e.g. “which leaf is **bigger**?” or “**how many** leaves are brown?” ♦ Begin to understand differences between people and objects e.g. “my favourite food is chips but my friend’s favourite food is crisps” ♦ Create pictograms and bar charts collectively	♦ Gather, interpret and compare **information** gathered and use accordingly ♦ Read and use a range **of data** handling tables e.g. **pictogram, carroll diagram, bar chart, tally chart** etc. ♦ Create own **data collection** grid ♦ Collect and represent **data** in an appropriate way ♦ Use **information** gathered in order to solve problems e.g. find out most popular snacks to serve at a class party ♦ Name different types of **charts** and **graphs**

Maths progression map:– subject-specific curriculum **Measurement:** Money

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Play with money ♦ Observe as others handle money and exchange items for money as part of play ♦ Begin simple exchanges for an item using appropriate communication strategies (e.g. PECS) through role play/snack time etc. ♦ Begin to use and understand vocabulary related to money e.g. **coins, pennies** etc.	♦ Begin to group/sort **coins** that are different e.g. by size or by colour ♦ Name and identify specific **coins** 1p, 2p, 5p & 10p ♦ Use **money** in a role play to exchange for items and explore making amounts using 1ps ♦ Understand and recall that the notion **'p'** represents **'pence'** ♦ Begin to demonstrate an understanding that amounts of coins (other than 1ps) are different to the value e.g. x3 10p coins = 30p and not 3p ♦ Begin to understand the value of **coins** up to 10p	♦ Read and understand **£** and **p** 'in' notation various contexts, within and outside of school ♦ Understand money is used in **exchange** for items and use money appropriately to pay for items when shopping ♦ Know and recognise all **coins** to £2.00 and **notes** ♦ Demonstrate a growing understanding of the value of **coins** ♦ Demonstrate a growing understanding that amounts of **coins** (other than 1ps) are different to the value e.g. x3 10p coins = 30p and not 3p ♦ Combine **coins** and make different amounts in a range of ways ♦ Solve money related problems through practical activities ♦ Use appropriate language relating to money e.g. coin names, **bank card**, **change** etc. ♦ Understand that **change** is often given after paying for an item with money ♦ Demonstrate awareness of other methods of paying for items e.g. **bank card**, **paypal** etc. ♦ Demonstrate awareness that money can be earnt for example through enterprise projects, jobs

Maths progression map:– subject-specific curriculum **Measurement:** Capacity

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Explore water and sand ♦ **Empty** and **fill** containers ♦ **Pour** out of/into containers ♦ Notice when a container is **full** or **empty** ♦ Notice and make use of capacity-based symbols in the environment, and respond to verbal cues from staff e.g. **'full'** and **'empty'** symbols	♦ Recognise more capacity-based terms e.g. **full/empty** and **more/less** ♦ Understand and correctly use a wider range of capacity-based terms e.g. **empty/full/half full** ♦ Investigate suitable containers ♦ Select appropriate containers to **fill** ♦ **Fill/empty** a container when asked ♦ Demonstrate filling a container **half full** or making **half empty**	♦ Pour drinks at snack/lunchtime with accuracy ♦ Use appropriate **containers** for the correct purpose e.g. colander for washing vegetables, container without holes for holding liquid ♦ Prepare and **measure** substances carefully and accurately in different contexts e.g. when baking ♦ Problem solve and **estimate** sensibly using knowledge of capacity e.g. is a teaspoon or jug best to use to fill a bucket? ♦ Using appropriate vocabulary for **capacity** in the correct contexts e.g. **measure, estimate, accuracy** ♦ Read **scales** on containers e.g. on a measuring jug

Maths progression map:– subject-specific curriculum **Measurement:** Time

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Experience **days of the week** as part of a practical activity (e.g. through song) ♦ Respond to routine – anticipate key activities in the day, notice and be aware of changes to routine ♦ Experience time related activities (e.g. a timed computer game, time spent on an activity indicated using a timer) ♦ Understand the terms **'now'** and **'next'** ♦ Make own choices about own routine ♦ Experience carrying out activities according to simple time-related vocabulary e.g. **fast / slow / go / stop / wait**	♦ Sequence/order familiar events and routines within school and home e.g. morning routine before school, lunchtime routine at school ♦ Sequence time in specific units e.g. the days of the week ♦ Show awareness of the passing of time through recalling something that happened in the recent past ♦ Know and recall the **days of the week in order** and know that each day is different e.g. weekends are different to week days ♦ Know that clocks in various forms are used to tell the passing of time e.g. visual timetable ♦ Use the terms **morning/afternoon** and **day/ night** when talking about their own day ♦ Understand the terms **'earlier'** and **'later'**	♦ Read time and understand how it relates to appropriate times of the day ♦ Read and understand time in order to self-regulate within own routine ♦ Be able to recognise and use appropriate vocabulary related to time e.g. **before, next, after, o'clock, hour, minute, half past** ♦ Sequence actions within everyday routines e.g. sandwich making, teeth brushing etc. ♦ Estimate appropriate timings for certain activities e.g. brush teeth for 2 minutes not 10 minutes ♦ Use time as a measure (sand timers, analogue, digital timers etc.) during practical activities e.g. during cooking ♦ Know the **months** and **seasons** of the year

Maths progression map:– subject-specific curriculum **Measurement:** length/height/weight/mass

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Notice and respond to objects of different size (**height, width** and **length**) and weight ♦ Navigate around objects of different **width** and **length** ♦ Pick objects **'up'** and put them **'down'** again when asked or shown a symbol ♦ Show intrigue about how objects of different size and weight **move**, e.g. how a feather moves compared to a ball ♦ Stack objects	♦ Collect **'more than one'** of an object and anticipate the combined increase in weight ♦ Understand the terms **'big'** and **'small'** ♦ Group objects by the descriptors of **'big'** and **'small'** ♦ Use non-standard methods to measure things e.g. hand spans, footprints etc. ♦ Build a tower and notice the increase in height	♦ Understand the terms **'heavy'** and **'light'** ♦ Use more than one word for the same concept e.g. **big, large, huge** ♦ Use comparative terms such as **'bigger', 'smaller', 'taller'** and **'heavier'** to compare two or more objects ♦ Use standard tools and equipment to **measure** things e.g. **a ruler** (**cm**), a set of **scales** (**grams**) measuring jugs (**ml**) etc. ♦ Use estimation as a tool to solve problems relating to **height/weight/ mass/length**

Maths progression map:– subject-specific curriculum **Geometry:** properties of shape & pattern

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Explore & handle objects by **building** towers, **knocking down** towers, **fitting** objects **together**, **pulling** objects apart ♦ Observe how some objects **roll** ♦ **Roll** objects & explore how they move ♦ Respond to shape-based terminology e.g. 'where is the round shape?' and 'find me the box'... ♦ Explore making **patterns** and **pictures** from **2D shapes** ♦ **Trace** simple & large shapes ♦ Make **circular** shapes when drawing	♦ Find **2D** shapes on the **face** of **3D** objects ♦ Copy, continue & create **patterns** using real-life objects & using shapes ♦ Draw simple shapes ♦ **Describe** shapes using simple terms ♦ Sort shapes by **size** & **shape** ♦ Recognise & name **triangles, rectangles, squares** & **circles** from a group of shapes or pictures of the shapes ♦ Identity the number of sides and corners on **2D shapes** ♦ Begin to recognise & name some common **3D shapes** e.g. **cube, cuboid, sphere, cone** ♦ Explore and build with **common 3D shapes**	♦ Draw **2D shapes** & make **3D shapes** using modelling materials ♦ Identify **2D** shapes that can be found on the **face** of **3D** shapes and objects ♦ Identify the number of **faces, edges** and **vertices** on **3D shapes** ♦ Compare the **properties of** & **sort**, common **2D & 3D shapes** & everyday objects, including from pictures of shapes & objects ♦ Identify **lines of symmetry** in a **2D** shape ♦ **Tessellate** shapes using **2D** shapes ♦ Draw **lines** & shapes using a **straight edge** ♦ Create **repeating patterns** using simple **2D** and **3D** shapes

Maths progression map:– subject-specific curriculum **Geometry:** position & direction

Experience & Explore	Embed & Recall	Awareness & Application in real life contexts
♦ Experience, interact and respond to directional language such as **fast/slow, stop/start/go, forward/backward** through a range of practical activities in a variety of contexts ♦ Experience, interact and respond with activities involving the use of positional language e.g. **in, on, under, behind** in a variety of contexts ♦ Explore fitting shapes/objects within spaces e.g. shape sorter	♦ Begin to use and follow **positional** language in practical activities, in a range of contexts ♦ Begin to use and follow **directional** language in practical activities in a range of contexts ♦ Know that a moveable object's **direction and position** can be changed ♦ Programme (or move) a toy to go **forwards or backwards, turn left or right** ♦ Demonstrate **positioning or rotating** an object to fit a given space e.g. a jigsaw piece	♦ Understand and use the terms **left** and **right** when making a **turn** e.g. during PE or programming a beebot ♦ Demonstrate awareness of the term '**right angle'** ♦ Make **full, half** and **quarter** turns in practical activities ♦ Rotate **2D** and **3D shapes** into different **orientations** ♦ Understand, use and follow **positional and directional language,** in order to give and follow instructions and directions in a range of practical and real life contexts ♦ Use a simple grid **(coordinates)** to find a shape/item