## Maths Progression Skills/knowledge for Foundation Stage 2021

| Counting Includes verbal rote counting and object counting | Cardinality Last number counted represents how many are in the set | Subitising and Number conservation/Composition <br> Visual recognition of quantity of items (without counting one by one) and part-part-whole relationships | Comparing <br> Comparison of quantities by identifying more and less | Addition and subtraction and Composition | Multiplying and Dividing \& Fractions |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I am beginning to be aware of numbers. <br> B25 R2 Number. May be aware of number names through their enjoyment of action rhymes and songs that relate to numbers. <br> DM Birth to 3. Take part in finger rhymes with numbers. <br> I am interested in counting words and can be a number chanter. <br> B25 R3 Counting. Says some counting words. <br> I am beginning to count in sequence and may use my finger to tap or point to count out objects. <br> B25 R3 Counting. May engage in counting-like behaviour, making sounds and pointing or | I can give you the correct number of items to $3 / 5$ if you ask me. B25 R4 Cardinality. In everyday situations, takes or gives two or three objects from a group. <br> I can count out up to 3 fingers by opening them one by one slowly. <br> I can count out up to 5 fingers by counting them one by one. <br> B25 R4 Cardinality. <br> Beginning to count on their fingers. <br> DM $3 \& 4$ Yrs Show 'finger numbers' up to 5. <br> I understand that the last number counted is the total amount in the group. (Check this with | I can observe and track an item and have a sense of many items. <br> I have a good number sense of 1 and two items. B25 R3 Cardinality. Uses number words <br> like one or two and sometimes responds accurately when asked to give one or two things. <br> I can recognise and make collections of 1 to 3 objects through matching activities. I may not be able to verbalise the words 1 to 3 yet. <br> I have a number sense of 1 to 3 objects or an amount in a picture/on a card and can verbalise this. <br> B25 R5 Cardinality Subitises one, two and | I am beginning to differentiate between amounts. <br> B25 R1 number. <br> Reacts to obvious changes of amount when those amounts are significant (more than double). <br> DM Birth to 3. React to changes of amount in a group of up to three items. <br> I can put objects, words or actions into one to one, or many to one correspondence, such as in matching activities. I may not know the number words yet. <br> I can understand and use the words more or lots. | I understand that a few or many objects can be grouped together as a whole. (Can see red and blue bricks separately but sees them as a collective of bricks.) <br> I understand partwhole and can give you a part of a whole amount if you ask me to give you one. <br> I recognise when something has been removed. <br> B25 R2 Number Looks for things which have moved out of sight. <br> I can add a small amount of items | I can share out a small amount of objects sometimes equally. <br> I can share out a small amount of items equally between two or three people or toys giving one at a time to each. <br> I can divide a larger amount of objects. <br> I can see arrays in photographs and work out the whole or total. <br> I can equipartition a paper 'cake' or playdough food to share with a friend. |

[^0]saying some numbers in DM Birth to 3 Develop counting like behaviour such as making sounds, pointing or saying some numbers in sequence. DM Birth to 3 Count in everyday contexts, sometimes skipping numbers - 1-2-3-5.

## I am beginning to

 understand one to one correspondence whilst counting objects in a line or moving objects. B25 R5 Counting. Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5.DM 3\&4 Yrs Say one number for each item in order: 1,2,3,4,5.

I can use counting as part of my everyday play.
B25 R5 Counting. Uses some number names and number language within play, and may show fascination with large numbers.
give me one, give me two and do not stop the child if they continue to count.)

B25 R5 Cardinality. Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle).
DM 3\&4 Yrs Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').

I can count out up to 10 items accurately.
B25 R6 Cardinality. Counts out up to 10 objects from a larger group.

I am beginning to notice numerals in my environment. B25 R4 Cardinality Beginning to notice numerals (number symbols).
three objects (without counting).
DM 3\&4 Yrs Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').

## I can perceptually

recognise items to 5
B25 R6 Cardinality.
Engages in subitising numbers to four and maybe five.
DM Rec Subitise.
I can separate a group of items in different ways and realise the total is still the same. I can do this to

## 3 and then to 5.

B25 R5 Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.

I can conceptually subitise an amount to 5 and work out different combinations of parts to get a whole.
B25 R5 Composition.
Through play and exploration, beginning to learn that numbers are

B25 R3 Comparison.
Responds to words like lots or more.

I can visually estimate who has more or less or the same and may subitise. Later on, I may count to compare.
DM Birth to 3
Compare amounts, saying 'lots', 'more' or 'same'.
25 R4 Comparison.
Beginning to compare and recognise changes in numbers of things, using words
like more, lots or same
DM 3\&4 Yrs Compare quantities using language: 'more than', 'fewer than'

## I am beginning to

perceptually compare or match small amount of similar or dissimilar collections (I may count or subitise these).
B25 R5 Comparison. Compares two small groups of up to five
together and show understanding with a matching corresponding amount even though I may not be able to verbalise this.

I understand the whole is bigger than the parts but may not give an accurate answer to begin with, I just recognise that it is a bigger number.

I can solve practical and real-world mathematical problems through play and using objects such as 'part part whole' and separating with objects.
B25 R5 Composition. Beginning to use understanding of number to solve practical problems in play and meaningful activities.
DM $3 \& 4$ Yrs Solve real world mathematical

I can recognise what is and what is not a half.

I can divide a playdough pizza into different parts and talk about it.

## H.Dean

Taken from Birth to 5 Matters New for 2021 B25 (NB Age bands referred to as 'ranges' hence R 1,2 etc)
Development Matters Revised for 2021 DM and Learning Trajectories (reworded into I can statements).

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[^1]| Spatial awareness | Sh | Pattern | Measures |
| :---: | :---: | :---: | :---: |
| I can explore the space around me. <br> B25 R1 Explores space when they are free to move, roll and stretch. <br> B25 R1 Developing an awareness of their own bodies, that their body has different parts and where these are in relation to each other. <br> B25 R2 Explores space around them and engages with position and direction, such as pointing to where they would like to go. <br> B25 R3 Investigates fitting themselves inside and moving through spaces. <br> DM Birth to $3_{3}$ Climb and squeezing selves into different types of spaces. B25 R4 Moves their bodies and toys around objects and explores fitting into spaces. <br> I enjoy filling and emptying a variety of containers. <br> B25 R3 Enjoys filling and emptying containers. <br> I can follow and use positional language. <br> B25 R4 Responds to some spatial and positional language. <br> DM $3 \& 4$ Yrs Understands position through words alone - for example, "The bag is under the table," - with no pointing. | I can perceive the shape and size of objects and begin matching and exploring. <br> B25 R1 Beginning to put objects inside others and take them out again. <br> DM Birth to 3 Combine objects like stacking blocks and cups. Put objects inside others and take them out again. B25 R2 Stacks objects using flat surfaces. <br> I can compose shapes with anticipation and fit pieces into the same shaped 'hole' such as an inset puzzle. <br> B25 R2 Attempts, sometimes successfully, to match shapes with spaces on inset puzzles. <br> DM Birth to 3 Complete inset puzzles. <br> B25 R3 Pushes objects through different shaped holes and attempts to fit shapes into spaces on inset boards or puzzles. <br> I can use the actual shape or substitute it with smaller and different shapes. <br> B25 R3 Beginning to select a shape for a specific space. <br> B25 R4 Chooses puzzle pieces and tries to fit them in. <br> I can build and play with shapes. I can make shape pictures. At first these will be simple and then they will become more complex. <br> B25 R3 Enjoys using blocks to create their own simple structures and arrangements. | I am showing awareness of and beginning to anticipate patterns even if I cannot verbalise it. <br> B25 R1 Shows interest in patterned songs, rhymes and movements. <br> B25 R1 Experiences patterned objects and images. <br> B25 R1 Begins to predict what happens next in predictable situations. <br> B25 R2 Joins in with repeated actions in songs and stories. <br> B25 R2 Initiates and continues repeated actions. <br> B25 R3 Becoming familiar with patterns in daily routines. <br> B25 R3 Joins in with and predicts what comes next in a familiar story or rhyme. <br> B25 R3 Beginning to arrange items in their own patterns, e.g. lining up toys. <br> DM Birth to 3 Notice patterns and arrange things in patterns. <br> DM 3 \& 4 Yrs Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc. | I can recognise similarities and differences in sizes, lengths, heights, widths, weight and capacity. I can compare them as I order and/or build and play. I can learn to use language that relates to them. <br> B25 R1 Responds to size, reacting to very big or very small items that they see or try to pick up. <br> B25 R2 Shows an interest in objects of contrasting sizes in meaningful contexts. <br> B25 R3 Shows an interest in size and weight. <br> DM Birth to 3 Compare sizes, weights etc. using gesture and language 'bigger/ little/smaller', 'high/low', 'tall', 'heavy'. <br> B25 R2 Shows an interest in emptying containers. <br> B25 R3 Explores capacity by selecting, filling and emptying containers e.g. fitting toys in a pram. <br> B25 R4 Explores differences in size, length, weight and capacity. <br> DM $3 \& 4$ Yrs Make comparisons between objects relating to size, length, weight and capacity. <br> $\mathrm{B}_{25} \mathrm{R}_{5}$ In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items. <br> B25 R6 Enjoys tackling problems involving prediction and discussion of |

[^2]B25 R5 Responds to and uses language of position and direction.

I can remember and talk about routes, viewpoints and maps. B25 R4 Begins to remember their way around familiar environments.
DM $3 \& 4$ Yrs Describe a familiar route.
DM $3 \& 4$ Yrs Discuss routes and locations, using words like 'in front of' and 'behind'.
B25 R4 Explores how things look from different viewpoints including things that are near or far away. B25 R6 Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints
B25 R6 May enjoy making simple maps of familiar and imaginative environments, with landmarks.

I can use spacial awareness when creating shape pictures or

## structures.

B25 R5 Predicts, moves and rotates objects to fit the space or create the shape they would like.
B25 R6 Investigates turning and flipping objects in order to make shapes fit and create models

DM Birth to 3 Build with a range of resources.

5 R4 Makes simple constructions. $\mathrm{R}_{5}$ Chooses items based on their shape which are appropriate for the child's purpose.
DM 3 \& 4 Yrs Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.
B25 R5 Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes.
DM $3 \& 4$ Yrs Combine shapes to make new ones - an arch, a bigger triangle etc. B25 R5 Attempts to create arches and enclosures when building, using trial and improvement to select blocks.
B25 R6 Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes.
DM Rec Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
B25 R6 Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build.

I can match shapes that are identical or have a different orientation or that are the same shape but a different size. I can find 2D and 3D shapes in my environment.
B25 R1 Explores differently sized and shaped objects.

R4 Joins in and anticipates repeated sound and action patterns.

B25 R4 Is interested in what happens next using the pattern of everyday routines. DM $3 \&_{4}$ Yrs Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

I can fix/fill in, duplicate/copy and extend a simple AB pattern.
B25 R5 Creates their own spatial patterns showing some organisation or regularity. DM $3 \&_{4}$ Yrs Extend and create ABAB patterns - stick, leaf, stick, leaf.
DM $3 \&_{4}$ Yrs Notice and correct an error in a repeating pattern.

I can recognise, describe, and build repeating patterns, including AB but also patterns with core units such as $A A B, A B C$, and $A A B C$
B25 R5 Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC).
$\mathrm{B}_{25} \mathrm{R}_{5}$ Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next.
B25 R6 Spots patterns in the environment, beginning to identify the pattern "rule"
B25 R6 Chooses familiar objects to create and recreate repeating patterns beyond
comparisons of length, weight or capacity, paying attention to fairness and accuracy.
DM Rec Compare length, weight and capacity.
B25 R6 Becomes familiar with measuring tools in everyday experiences and play

I can talk about routines. I can learn to use the language of time.
B25 R2 Gets to know and enjoys daily routine.
B25 R3 Beginning to understand that things might happen now or at another time, in routines.
B25 R4 Beginning to understand some talk about immediate past and future B25 R4 Beginning to anticipate times of the day such as mealtimes or home time.
B25 R5 Recalls a sequence of events in everyday life and stories.
B25 R6 Is increasingly able to order and sequence events using everyday language related to time
B25 R6 Beginning to experience measuring time with timers and calendars.

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predicting and visualising how they will look (spatial reasoning).
DM Rec Select, rotate and manipulate shapes in order to develop spatial reasoning skills.

B25 R2 Responds to changes of shape. B25 R4 Recognises that two objects have the same shape. (Congruence)

I can recognise and name typical shapes and later recognise less typical shapes. I can also distinguish between 2D and 3D shapes.
I will begin to identify properties such as sides.
I may say an angle is a pointy corner before learning that it is called an 'angle' or a vertex or several vertices. I can talk about shape faces and count them accurately.
B25 R5 Responds to both informal language and common shape names. DM $3 \&_{4}$ Yrs Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.

B25 R5 Shows awareness of shape similarities and differences between objects.
B25 R6 Uses informal language and analogies, (e.g. heart-shaped and handshaped leaves), as well as mathematical terms to describe shapes.

I can apply the term 'angle' (point where two rays or lines meet/join) to different objects in my environment such as a bent arm or a pair of scissors.
$A B$ patterns and begins to identify the unit of repeat
DM Rec Continue, copy and create repeating patterns.

I can recognise a core unit of a pattern and then translate the pattern into new media e.g. from bricks to matchsticks.

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