

Mathematics – EYFS Progression.

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.

Nursery (six terms)

Number and Numerical Pattern	Shape, space and measure (not ELG)
Autumn 1	Chandlers Ridge Ready
<p>N-Uses some number names and number language within play</p> <p>SS&M-Talks about and explores 2-d shapes.</p> <p>SS&M- Chooses items based on their shape which are appropriate for the child's purpose</p> <p>P-Talk about and identifies the patterns around the</p>	<p>N- knows numbers of personal significance – I am 3</p> <p>NP- Enjoys joining in with simple counting songs and rhymes</p> <p>P-Children will be beginning to notice different patterns in my environment such as patterns on animals, their gloves or other items of clothing.</p>
Autumn 2	Chandlers Ridge Ready
<p>NP- Compares two small groups of up to five objects, saying when they're the same number of objects in each group, e.g. You've got two, I've got two. Same!</p> <p>NP- Enjoy counting verbally up to 5 and beginning to count beyond.</p> <p>SA- Using informal and mathematical language: Sides Corners Straight Flat Round</p> <p>P- Use informal language like 'pointy' spotty' 'blobs' Extend and create ABAB patterns, sticks, leaf, stick, leaf</p>	<p>Children join in with number rhymes/songs each day beginning to use fingers to support counting.</p> <p>Children can complete simple puzzles correctly fitting pieces in each hole turning until they fit.</p> <p>Children use a variety of shapes to create models and pictures, appropriately using shape for a purpose.</p>

	Children are building a more complex bank of words that they can use to describe patterns.
Spring 1	Chandlers Ridge Ready
<p>NP Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5,</p> <p>NP-Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers</p> <p>SSM– Begin to describe a sequence of events real or fictional using words such as first, then</p> <p>P- Notice and correct an error in repeating pattern.</p>	<p>Children enjoy playing with and counting a variety of objects, and enjoy counting along the number line.</p> <p>Children can identify repeated patterns and spot when an error has occurred.</p>
Spring 2	Chandlers Ridge School Ready
<p>N- Recite numbers past 5</p> <p>N- Fast recognition of up to 3 objects, without having to count them individually.</p> <p>N– Know that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle).</p> <p>SSM– Begin to describe a sequence of events real or fictional using words such as first, then</p> <p>SSM– Explores and adds to simple linear patterns of two or threes repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC)</p> <p>SSM– Recalls a sequence of events in everyday life and stories.</p>	<p>Children enjoy completing practical maths activities, adding, subtracting, matching, counting etc. They take pride in working out the correct answer and will use what they have learnt during their play.</p> <p>Children enjoy looking at numbers and using their fingers to represent each numeral.</p> <p>Children will be able to make numbers to 5 and be able to answer the question how many by counting out.</p> <p>Children enjoy creating repeated patterns on peg boards, cubes, or using natural objects and on simple computer games.</p> <p>Children have a good understanding of the Nursery routine and are able to sequence their Nursery day.</p>
Summer 1	Chandlers Ridge School Ready

<p>NP– Beginning to use understanding of number to solve problems in play and meaningful activities</p> <p>NP- Experiment with their own symbols and marks as well as numerals.</p> <p>NP – Compare quantities using language: ‘more than’, ‘fewer than’</p> <p>N – Recognise numbers 1,2,3</p> <p>SSAM- Attempts to create arches and enclosures when building, using trial and improvement.</p> <p>SSAM- Joins in with simple pattern in sounds, objects, games and stories dance and movement, predicting what comes next.</p> <p>SSAM– Describe a familiar route. Discuss routes and locations using words like ‘in front of’ and ‘behind’</p>	<p>Children begin to form numerals and marks to give meaning and show findings for a number problem.</p> <p>Children enjoy joining in with songs such as five little monkeys, five little ducks, five speckled frogs, and begin to understand what happens when one is taken away. They also begin to understand one more and can give one more than a given number during an activity.</p> <p>Children can fill containers full, half full, nearly empty and partly full to ensure they use the correct amount of ingredients when baking or making playdough.</p> <p>Children will be drawing maps and be able to join in games that require them to talk about or move an object into a given position. Children will be able to talk about things they see on their way to school.</p>
<p>Summer 2</p>	<p>Chandlers Ridge School Ready</p>
<p>NP– Beginning to use understanding of number to solve problems in play and meaningful activities</p> <p>N – Solve real world mathematical problems with numbers up to 5.</p> <p>N-Links numerals with amounts up to 5 and maybe beyond</p> <p>SSAM- Combine shapes to make new ones.</p>	<p>Children enjoy completing practical maths activities, adding, subtracting, matching, counting etc. They take pride in working out the correct answer and will use what they have learnt during their play.</p> <p>Children enjoy looking at numbers beyond 10, during the calendar and counting children in the class, some children begin to show an interest in larger numbers.</p> <p>Children can combine shapes to make more complex models and structures in their play.</p>

Reception

Early Learning Goal: Mathematics: Number

<p>R- By the end of the Autumn Term children should be able to...</p> <ul style="list-style-type: none"> • Count 5 objects • Know that anything can be counted (to 5) claps, drum beats... • Subitise to 5 - dots on a die, Numicom piece, ten-frame • Count an irregular arrangement to 5 • Say when a group has more/fewer with numbers 1 to 5 • Recognize and name numbers 1 to 5 – in correct order and not in order • Match numeral to quantity to 5 • Display an understanding of the composition of numbers to 5 • Begin to find total of 2 groups of objects up to 5 • Understand that zero means nothing. 	<p>Chandlers Ridge Ready</p> <ul style="list-style-type: none"> • Know numbers of personal significance (age, birthday, house number etc.) • Use vocabulary related to number: more than, less than, fewer than, greater than, equals, the same as. • Count and compare small sets • Begin to estimate
<p>R= By the end of the Spring term children should be able to...</p> <ul style="list-style-type: none"> • Recognise and read numbers to 8 including when not in order with the aid of a number line, picture clues • Count up to 8 objects • Know that anything can be counted e.g. claps, drum beats... to 8 • Count an irregular arrangement to 8 • Match numeral to quantity to 8 • Display an understanding of the composition of numbers to 8 • Becoming more confident with the part whole model for numbers to 8 • Solve addition and subtraction calculations to 8 - practically and visually • Find 1 more and 1 less using numbers to 8 • Quick mental recall - (fingers to help) 	<ul style="list-style-type: none"> • Begin to look at 9 and 10 • Begin to count upto 10 objects • Match numeral to 10 objects • Begin to subitize upto 10 • Begin to form numbers up to 10 • Begin to read numbers in the environment.

R+ By the end of the Summer term children should be able to...

- Recognise and read numbers to 10 – including when not in order and show that they understand the relationship between them
- Display a deep understanding of the composition of numbers to 10
- Accurate 1:1 correspondence to 10 using concrete apparatus
- Confidently count to 10
- Subitise to 10
- Match numeral to quantity up to 10 – inc. out of sequence
- Understand 1 more and 1 less for numbers to 10 (NP)
- Mentally recall number bonds to 5 without apparatus/ begin recall to 10
- Calculate addition bonds and subtraction facts to/within 10 using apparatus and/or number line if needed
- Know that addition and subtraction are related (NP)
- Mentally, quickly recall some doubles to 5 (ie. double 1, 2, 3, 4, 5) (NP)
- Mentally, begin to quickly recall half of 2,4,6, 8, and 10 (NP)
- Know that doubling and halving are related (inverse operation)
- Subitise to 5 – dots on a dice, Numicom piece, ten-frame, pebbles, etc,
- To recognise symbols in maths - + =

- Use numbers and symbols to record their work
- Automatic recall of number facts to 5 and some facts to 10
- Explore number composition of numbers beyond 10
- Count accurately beyond 10
- Use number lines/tracks, real-life objects and manipulatives should be used routinely to support scaffolding and modelling.
- Vocabulary should be consistent and reinforced

Early Learning Goal: Mathematics | Number

Children at the expected level of development will:

Have a deep understanding of number 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.

Early Learning Goal: Mathematics | Numerical Patterns

R- By the end of the Autumn Term children should be able to...

- Count by rote forwards and backwards to 10 – visual aid
- Hold fingers up correctly for each number to 5
- Count on and back in 1s from any number to 10 – visual aid and fingers

Chandlers Ridge Ready

- Begin to count aloud to 20 – forwards

<ul style="list-style-type: none"> • Find the number before and after numbers to 5 • Chant rhymes involving numbers e.g. 1, 2 buckle my shoe... 	
<p>R= By the end of the Spring term children should be able to...</p> <ul style="list-style-type: none"> • Count in 1s forwards to 20 • Count forwards in 1s from any number (to 20) – visual aid • Count back in 1s from 20– visual aid • Say the number before and after to 8 - visual aid • Compare a variety of quantities up to 5 (N) • Use the vocabulary more, most, greater, fewer, less than and equals(N) • Explore odd and even numbers to 8 using Numicon and objects, recognising and discussing the patterns • Begin to understand that addition and subtraction are related (N) • Find doubles to 5 using concrete aid or fingers (N) • Find half of numbers 2,4,6,8 - concrete (N) 	<ul style="list-style-type: none"> • Begin to rote count aloud to 20 forwards and backwards
<p>R+ By the end of the Summer term children should be able to...</p> <ul style="list-style-type: none"> • Count by rote from 0 forwards to 20 and beyond • Compare and order a variety of quantities up to 10 (N) • Use the vocabulary more, most, greater fewer, less than etc. up to 10 (N) • Identifies odd and even numbers to 10 represented by structures e.g. sort Numicon <p>Early Learning Goal: Mathematics : Numerical Patterns</p> <ul style="list-style-type: none"> • Be able to verbally count beyond 20, recognising the patterns 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 odd and even numbers, double facts and how quantities can be distributed equally 	<ul style="list-style-type: none"> • Begin to count aloud to past 20 • Recognise larger numbers in everyday situations

Early Learning Goal: Mathematics | Numerical Patterns

Children at the expected level of development will:

Be able to verbally count beyond 20, recognising the patterns 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 odd and even numbers, double facts and how quantities can be distributed equally

No ELG Mathematics: Shape, Space and Measure

R- By the end of the Autumn Term children should be able to...

Measures

- Enjoys tackling problems involving prediction and discussion of comparisons of length
- Becomes familiar with measuring tools in everyday experiences and play
- Is increasingly able to order and sequence events using everyday language related to time

Spatial Awareness

- Uses spatial language, including following and giving directions, using relative terms
- Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes

Comparing size, mass & capacity

- Use language such as big, little, small, long, short, heavy light.

Shapes

- Be able to name simple 2D shapes
- Be able to describe shapes – no. of sides, curved, round, flat etc.

Positional language

- Begin to use positional language in, on top, next to, over, around, through
- Use and understand positional language in their play and when following instructions

Time

- Begin to use language day, night, before, after, today, tomorrow
- Begin to measure for example 3 sleeps till my birthday or 2 min timer for brushing teeth

R= By the end of the Spring term children should be able to...

Time

- Use language now, before, later, soon

<p>Time</p> <ul style="list-style-type: none"> • Becomes familiar with measuring tools in everyday experiences and play • Is increasingly able to order and sequence events using everyday language related to time <p>Measures</p> <ul style="list-style-type: none"> • Enjoys tackling problems involving prediction and discussion of comparisons of length, mass, capacity and height <p>Spatial Awareness</p> <ul style="list-style-type: none"> • Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe 2D and 3D shapes • Begin to become aware of some properties of shape, 'this is like a brick I can stack it'. • Begin to make simple models and pictures selecting blocks/shapes needed 	<ul style="list-style-type: none"> • Recognise some events happen the same day each week. E.G. PE is on a Wednesday, and use and understand words today, tomorrow, yesterday. • Talk about events they are looking forward to (holidays or birthdays) • Know timers such as a stop watch can measure things in short periods e.g. how many jumps in 30 seconds, to know some things take a long time such as a plant growing <p>Comparing Mass</p> <ul style="list-style-type: none"> • Be able to hold objects and compare heavy, light • Begin to use language heavy, heavier, light, lighter <p>Comparing Capacity</p> <ul style="list-style-type: none"> • Be able to explore capacity using sand water etc. • Use language full, empty, half, nearly <p>Length, height</p> <ul style="list-style-type: none"> • Begin to use language to describe an object • Make comparison between objects eg tallest, shortest, longest • Begin to use language taller, shorter, wider, longer <p>3D shape and pattern</p> <ul style="list-style-type: none"> • Explore similarities and difference, begin to name grouping, sorting, stack and roll. • Pattern copy and repeat explore their own pattern AAB,ABB ETC
<p>R+ By the end of the Summer term children should be able to...</p> <p>Spatial Awareness</p>	<p>Spatial reasoning</p> <ul style="list-style-type: none"> • 2D and 3D shapes - match, rotate and manipulate shapes

- Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints
- May enjoy making simple maps of familiar and imaginative environments, with landmarks

Shape

- Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes
- Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build

- Complete simple jigsaws and shapes puzzles by manipulating and rotating pieces
- Match shapes on picture boards
- Use positional language to describe where shapes are in relation to each other
- Use a programmable robot to consolidate positional language.

Compose and decompose shapes

- Understand shapes can be combined and separated to make new shapes
- Visualize, build and mapping shapes
- Can make models, maps from real life or stories by visualising where objects and shapes should be
- Use gesture and positional language to explain their understanding

Money

- Pay for things in the role play shop
- Know that we can use money to pay for things
- Use language coins, money, pence, change, how much?
- Use different prices “that’s 10p please etc