

**Coppice School**

**Maths Curriculum**

**Maths Curriculum Guidance**

**Intent –** *Why?*

*Within maths, we aim to provide our young people with the knowledge and skills to support their lives and independence.*

*We hope to embed an understanding of number through an engaging and sequential curriculum. As a school we will deliver a range of formal, practical and cross-curricular lessons to meet the individual needs of the child.*

**Implementation –** *How?*

*All students have a minimum of 3 Maths sessions a week where they will focus on the maths strands: Number; Shape, Space and Measure; Length, Height and Size; Weight and Volume; Time; Handling Data. Students will have a class focus on each strand in the maths curriculum it will also be cross curricular and skills will be developed through other curriculum areas. All students have the right to access the curriculum and lessons will be tailored to meet their individual needs. We believe in a great emphasis on number as it is the key pillar of Maths understanding.*

*As they move through the provision bands, pupils at Coppice will build on their knowledge and skills and deepen their understanding of the themselves and others around them.*

*We have a bespoke maths curriculum, which is differentiated and meaningful, which aims to support and challenge our students at a level which is right for them throughout their time at Coppice school. When students leave our school we want them to have skills and knowledge to help them be the best that they can be and as independent as possible.*

**Impact –** *What?*

*Students work within the progression band that best meets their needs. We realise that pupils will progress through these bands at different rates and may indeed remain within them for some time. A student may not be in the same progression band for each strand of maths. The progressions maps give a guide for each learner to ensure a broad and balanced curriculum. The curriculum’s emphasis on number will create a deeper understanding; providing a platform to reason and problem solve in all areas.*

*Each child will have a Maths target on our SMARTRUBRIC system which has been created based on the needs of the child, these targets will be broken into small manageable steps which will be tracked by the class teacher.*

**Curriculum Progression Map Information Guide**

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|  | **EYFS Month / SEND Stage** | **P levels** | **Band Information Source** |
|  | Stage 1 – 0-11 months | 1-3 | SEND Tapestry – Development matters  P Level statements and EQUALS |
|  | Stage 2 – 8-20 months  Stage 3 – 16-26 months (first half) | 4 | SEND Tapestry – Development matters  P Level statements and EQUALS |
| Level 1 | Stage 3 – 16-26 months (second half)  Stage 4 – 22-36 months | 5-6 | SEND Tapestry – Development matters  P Level statements and EQUALS |
| Level 2 |
| Level 1 | Stage 5 – 30-50 months  Stage 6 – 40-60+ months | 7-8 | SEND Tapestry – Development matters  P Level statements and EQUALS  Pre-Entry Level AQA Entry Level specification. |
| Level 2 |
|  | NC 1 – Entry level 1 | | ELG,  End of KS1 national curriculum expectations Year 1  Entry Level 1 descriptors AQA Entry Level specification |
|  | NC 2 / Entry Level 2 | | End of KS1 national curriculum expectations  Year 2  Entry 2 level descriptors AQA Entry Level specification |
|  | NC 3 / Entry Level 3 | | End of KS2 national curriculum expectations Year 3 / 4  Entry 3 level descriptors AQA Entry Level specification |
|  | Beyond NC3 / Level 1 AQA | | End of KS2 national curriculum expectations Year5/6  Level 1 AQA specification |

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| Formal Curriculum | Term | Week 1 | Week 2 | | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
| **Autumn** | Consolidation week | Number Systems | | | | Geometry | | Weight and Volume | | Number Systems | | Data handling | |
| Number Systems | | Geometry | | Weight and volume | | Number Systems | |
| **Spring** | Number Systems | | | | | Consolidation Week | Geometry | | | Number Systems | | Time | |
| Data Handling | | | | | Number Systems | | | Geometry | | Number Systems | |
| **Summer** | Number Systems | | Geometry | | | Weight & Volume | | Data handling | | Consolidations weeks and final assessments | | Transition Weeks  (Exploratory Maths) | |
| Time | | Number Systems | | | Geometry | | Weight & Volume | |

**Yearly Overviews**

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| **Primary Focus** | **This should be at the forefront of maths teaching for the allotted weeks. Children to focus on the objectives relative to their ability from progression maps.** |
| **Recap/Tinker Focus** | **Opportunity for children to revisit taught objectives to consolidate and secure understanding.** |
| **Consolidation weeks** | **Consolidation weeks used at teachers’ discretion. Opportunities for assessment, revisiting concepts, baseline assessments.** |
| **Exploratory** | **Used in transition to get an understanding of new children’s capabilities/output.** |

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| Semi-formal Curriculum | Term | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
| **Autumn** | Consolidation week | Number Systems | | | Geometry | | | Number Systems | | | Data handling | |
| Number Systems | | | Shape, Space, Measure | | | Number Systems | |
| **Spring** | Number Systems | | | | Consolidation Week | Geometry | | | Number Systems | | SSM – Time | |
| Data Handling | | | | Number Systems | | | Geometry | | Number Systems | |
| **Summer** | Number Systems | | | | Shape, Space, Measure – Weight & Volume | | Data handling | | Consolidations weeks and final assessments | | Transition Weeks  (Exploratory Maths) | |
| Time | | | | Number Systems | | Weight & Volume | |

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|  | **Pre-Formal Curriculum** | **Informal Curriculum** | |
|  | P1-P3 | P4 | Y Level 1 - P5 |
| Number |  | Pupils show interest in number activities and counting. | Pupils respond to and join in with familiar number rhymes, stories, songs and games. They can indicate one or two, for example, by using their fingers or sounds. They demonstrate that they are aware of contrasting quantities, for example one or lots, by making groups of objects with help. |
| Geometry  Length, size and height. |  | Pupils begin to search for objects that have gone out of sight, touch or hearing, demonstrating the beginning of object permanence. They demonstrate interest in position and the relationship between objects.  They demonstrate interest in the relationship between objects. For example joining in with stacking cups or building towers. | Pupils search intentionally for objects in their usual place for example going to the maths shelf for the box of shapes. They compare the overall size of 1 object. They compare the overall size of 1 object with that of another where there is a marked difference. They find big and small objects on request. They explore the position of objects.  They compare the overall size of one object with that of another, where there is a marked difference, for example compare the cup from a dolls house with a breakfast cup and find which is bigger. Find big and small objects on request. |
| Time |  | They experience carrying out activities according to simple time vocabulary ‘fast / slow, go / stop / wait’, with adult support. | Experiences carrying out activities for a length of time measured by standard /non standard measures. |
| Weight and volume. |  | Demonstrates early understanding of volume when there is a clear contrast e.g. chooses full glass of preferred drink. • Demonstrates early understanding of weight e.g. braces self to lift heavy item | They compare the overall weight / volume |
| Handling Data |  | Pupils show awareness in changes in shape, position and quantity. | Pupil begins to sort sets of objects according to a single attribute and demonstrates an awareness of contrasting quantities by making groups of objects with help. |

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| **Semi-formal Curriculum** | | | |
|  | Y Level 2- P6 | B Level 1- P7 | B Level 2 - P8 |
| Number | Pupils demonstrate their understanding of 1:1 correspondence in a range of contexts. Pupils join in rote counting up to five and use numbers to five in familiar games and activities. They count reliably to three and make sets of up to three objects. They demonstrate an understanding of the concept more / fewer. They use 1p coins for items up to 5p, for example in shopping games. They join in with new number rhymes, songs, stories and games with some assistance or encouragement. | Pupils join in rote counting to 10. They can count at least 5 objects reliably. They begin to recognise numerals from 1 - 5 and to understand that each represents a constant number or amount. They respond appropriately to key vocabulary and questions for example ‘How many?’ Pupils begin to recognise differences in quantity for example in comparing given sets of objects and saying which has more and which has less, the bigger group and the smaller group. In practical situations they respond to ‘add one’ and ‘take one’ | Pupils join in with rote counting to beyond ten. They continue the rote count onwards  from a given small number. They begin to count up to ten objects. They compare two given numbers of objects saying which is more and which is less. They begin to recognize numerals from 1 to 9 and relate them to sets of objects. In practical situations they add one to or take one away from a number of objects. They begin to use ordinal numbers (first, second or third) when describing the position of objects, people or events.  Pupils estimate a small number and check by counting. |
| Geometry  Length, size and height. | Pupils search for objects not found in their usual place demonstrating their understanding of object permanence. They compare the overall size of one object with that of another where the difference is not great. They manipulate 3 dimensional shapes. They use vocabulary such as more and less in practical situations.  They compare the overall size of one object with that of another where the difference is not great, for example they find the bigger of two Russian Dolls. | Pupils begin to respond to forwards and backwards. They start to pick out named shapes from a collection. They use familiar words when they compare sizes and quantities and describe position.  They use familiar words when they compare sizes. | Pupils compare, directly, two lengths or heights where the difference is marked and can indicate ‘the long one’. They show awareness of time, through some familiarity with names of the days of the week and significant times in their day such as mealtimes and bed times. They begin to use mathematical language such as straight, circle larger to describe the shape and size of solids and flat shapes. They describe shapes in simple models, pictures and patterns.  Pupils compare, directly, two lengths or heights where the difference is marked and can indicate the long one or the tall one. |
| Time | Joins in sequencing symbols / photos in time order. | Begins to use non-standard measures of time e.g. hand claps. | Pupils construct with 3-D shapes and make arrangements and patterns of 2-D shapes.  They recognize and name some familiar 2-D shapes such as circle, triangle and square.  They match and sort these shapes in activities. They are beginning to use their knowledge  of shape to describe the properties of everyday objects, for example, number of corners  and sides and to compare them by size. They use everyday language to describe position,  for example, ‘between’, ‘in front of ’, ‘in the middle’ and to compare two quantities, for  example, ‘shorter’, ‘heavier’ |
| Weight and volume | They compare overall weight / volume e.g. find the ‘heavy / light, full / empty’ | They use familiar words when they compare weight / volume. | They compare directly two weights / volumes. |
| Handling Data | Pupil sorts objects and materials according to a given criteria. They begin to identify when an object is different and does not belong to given categories. | Pupil completes a range of classification activities using a given criteria. They identify when an object is different and does not belong to a given familiar category. | Pupil begins to use developing mathematical understanding of counting to solve simple problems they may encounter in play, games or other work. They begin to make estimates. |

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| **Formal Curriculum** | | | |
|  | **NC 1/EL1** | **NC2/EL2** | **NC3/EL3** |
| Number | Pupils read most numbers up to 10 in familiar contexts. They make attempts to record numbers up to 10. In practical situations they begin to use the vocabulary involved in adding and subtracting and demonstrate an understanding of addition as the combining of two or more groups of objects and subtraction as the taking away of objects from a group. | Pupils count, read and order numbers (including using ordinal numbers) up to 10 in a range of settings. They write numerals up to 10 with increasing accuracy. Using numbers up to 10, they solve problems involving addition or subtraction, including comparing two sets to find a numerical difference. | Pupils count, read and order numbers from 0 to 20. They record numbers from 0 to 10 and associate these with the number of objects they have counted. Pupils recognise 0 as ‘none’ and ‘zero’ in stories and rhymes and when counting and ordering. They understand the operations of addition and subtraction and use the related vocabulary. They add and subtract numbers when solving problems involving up to 10 objects in a range of contexts. |
| Geometry  Length, size and height. | Pupils construct with 3-D shapes and make arrangements and patterns of 2-D shapes. They recognize and name some familiar 2-D shapes such as circle, triangle and square. They match and sort these shapes in activities. They are beginning to use their knowledge  of shape to describe the properties of everyday objects, for example, number of corners and sides and to compare them by size. They use everyday language to describe position,  for example, ‘between’, ‘in front of ’, ‘in the middle’ and to compare two quantities, for example, ‘shorter’, ‘heavier’.  Pupils construct with 3-D shapes and make arrangements and patterns of 2-D shapes. They recognize and name some familiar 2-D shapes such as circle, triangle and square. They match and sort these shapes in activities. They are beginning to use their knowledge  of shape to describe the properties of everyday objects, for example, number of corners and sides and to compare them by size. They use everyday language to describe position, for example, ‘between’, ‘in front of ’, ‘in the middle’ and to compare two quantities, for  example, ‘shorter’, ‘heavier’. | Pupils work with, recognize and name common 3-D shapes, for example, cube and cylinder and 2-D shapes, for example, circle, triangle, rectangle, square. They describe the basic properties of these shapes and make simple comparisons between them using terms such as ‘larger’, ‘smaller’, ‘curved’ and ‘straight’. They recognize terms describing position such as ‘behind’, ‘in front of ’ and ‘on top’. They measure and order more than two objects (by length, mass or weight and capacity), using direct comparison. They order everyday events logically and begin to use the vocabulary of time.  Pupils work with, recognize and name common 3-D shapes, for example, cube and cylinder and 2-D shapes, for example, circle, triangle, rectangle, square. They describe the basic properties of these shapes and make simple comparisons between them using terms such as ‘larger’, ‘smaller’, ‘curved’ and ‘straight’. They recognize terms describing position such as ‘behind’, ‘in front of ’ and ‘on top’. They measure and order more than two objects (by length, mass or weight and capacity), using direct comparison. They order everyday events logically and begin to use the vocabulary of time. | Pupils sort and describe 3-D and 2-D shapes in terms of their properties and positions. They compare two lengths, masses / weights or capacities by direct comparison. They continue and create simple spatial patterns, for example, red cylinder, blue cube, red cylinder.... They recognize simple directional symbols such as arrows.  Pupils sort and describe 3-D and 2-D shapes in terms of their properties and positions. They compare two lengths, masses / weights or capacities by direct comparison. They continue and create simple spatial patterns, for example, red cylinder, blue cube, red cylinder.... They recognize simple directional symbols such as arrows. |
| Time | Pupils construct with 3-D shapes and make arrangements and patterns of 2-D shapes. They recognize and name some familiar 2-D shapes such as circle, triangle and square. They match and sort these shapes in activities. They are beginning to use their knowledge of shape to describe the properties of everyday objects, for example, number of corners and sides and to compare them by size. They use everyday language to describe position, for example, ‘between’, ‘in front of ’, ‘in the middle’ and to compare two quantities, for example, ‘shorter’, ‘heavier’. | Pupils work with, recognize and name common 3-D shapes, for example, cube and cylinder and 2-D shapes, for example, circle, triangle, rectangle, square. They describe the basic properties of these shapes and make simple comparisons between them using terms such as ‘larger’, ‘smaller’, ‘curved’ and ‘straight’. They recognize terms describing position such as ‘behind’, ‘in front of ’ and ‘on top’. They measure and order more than two objects (by length, mass or weight and capacity), using direct comparison. They order everyday events logically and begin to use the vocabulary of time. | Pupils sort and describe 3-D and 2-D shapes in terms of their properties and positions.  They compare two lengths, masses / weights or capacities by direct comparison. They continue and create simple spatial patterns, for example, red cylinder, blue cube, red cylinder.... They recognize simple directional symbols such as arrows |
| Weight and volume | Pupils construct with 3-D shapes and make arrangements and patterns of 2-D shapes. They recognize and name some familiar 2-D shapes such as circle, triangle and square. They match and sort these shapes in activities. They are beginning to use their knowledge of shape to describe the properties of everyday objects, for example, number of corners and sides and to compare them by size. They use everyday language to describe position, for example, ‘between’, ‘in front of ’, ‘in the middle’ and to compare two quantities, for example, ‘shorter’, ‘heavier’. | Pupils work with, recognize and name common 3-D shapes, for example, cube and cylinder and 2-D shapes, for example, circle, triangle, rectangle, square. They describe the basic properties of these shapes and make simple comparisons between them using terms such as ‘larger’, ‘smaller’, ‘curved’ and ‘straight’. They recognize terms describing position such as ‘behind’, ‘in front of ’ and ‘on top’. They measure and order more than two objects (by length, mass or weight and capacity), using direct comparison. They order everyday events logically and begin to use the vocabulary of time | Pupils sort and describe 3-D and 2-D shapes in terms of their properties and positions. They compare two lengths, masses / weights or capacities by direct comparison. They continue and create simple spatial patterns, for example, red cylinder, blue cube, red cylinder.... They recognize simple directional symbols such as arrows. |
| Handling Data | Pupils use mathematics as an integral part of classroom activities. They represent their work with objects or pictures and discuss it. |  |  |

**Progression Maps**

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| **Mathematics**  *Number* | | | | | | | **Linking Documents** | | | |
| **IMPACT** | **Informal Curriculum -** Develop my number skills and realise what help I need to ask for in solving a problem or situation. Develop an emerging understanding of number. | | | Semi-Formal Curriculum - Develop my number skills so that I know which equipment I need to use and how to use it in everyday situations that involve number. Develop my number skills so that I can confidently use numbers in real life situations. | | | Formal Curriculum: Promote independence and support our learners to find their rightful place in society. Develop my number skills so that I am able to carry out maths in everyday situations. | | | |
| **P1-P3** | | **P4** | **Y Level 1 - P5** | **Y Level 2- P6** | **B Level 1 P7** | **B Level 2- P8** | **NC 1/EL1** | **NC2/EL2** | **NC3/EL3** | **L1+** |
| **Pre-Formal**  **Curriculum** | | **Informal Curriculum Pathway** | | **Semi-Formal Curriculum Pathway** | | | **Formal Curriculum Pathway** | | | |
| shift visual attention by looking from one object to another.  use face or body to react spontaneously to patterns and rhythms: for example sounds, or lights on and off.  tolerate interacting with an adult to play finger rhymes or rhythmic tapping  respond to repeated patterns of sounds; for example, peekaboo, theme tunes or resonance board.  notice changes in number of objects/images or sounds in group of up to 3.  track people or objects as they move or make sounds  copy actions such as banging on table or clapping  fully prompted touch objects as they are being counted  show interest in hand tapped numbers  begins to be aware that an object still exists when out of sight | | • Pupils join in with familiar number rhymes and songs  • Pupil experiences 1:1 correspondence in everyday situations  • Pupil touches objects one at a time as adult counts  • Pupil indicates which group contains one.  • Pupil indicates which group contains ‘lots’ ( more than one)  • With help pupil makes sets with one and with lots of objects.  • Pupil uses number names in everyday situations  • Pupil indicates one object.  • Pupil indicates 2 objects.  • Pupil experiences handing over money in payment for something with full adult prompts. | • Pupil demonstrates an understanding of 1:1 correspondence in everyday situations  • Pupil participates in number activities reciting numbers one to five  • Pupil creates sets to three  • Pupil counts five objects by touching one at a time, arranged in a line and randomly – including 1p coins  • Pupil demonstrates an understanding of the concept of more / less  • Pupil demonstrates an awareness of none / zero / nothing / nil.  • Pupil matches an identical coin from a selection.  • Pupil can indicate one to five using fingers | • Pupil joins in rote counting to ten  • Pupil makes an identical set of numbers to 5  • Pupil can compare sets to identify more/less bigger group / smaller group  • Pupil makes sets up to 5 on request  • Pupil begins to recognise numerals 1 – 3  • Pupil can count objects reliably up to 5  • Pupil ‘purchases’ an item in value up to 5p by counting out in 1p coins  • Pupil can match sets of numerals 0 –5  • Pupil responds to key vocabulary e.g. number, how many, count, same number as etc.  • In practical situations, pupil responds to ‘add one’ ‘take one’ | • Pupil joins in rote counting beyond 10  • Pupil writes numerals 0 – 5 with some inaccuracies  • Pupil begins to count objects to 10 including objects placed randomly  • Pupil can count and recognise numerals 0 – 10  • Pupil begins to label sets with numerals 0 – 10  • Pupil recognises that the number of objects in a set is not affected by their size or position  • With an adult prompt, pupil can combine two small sets and count the total  • With an adult, pupil can take away a number of objects from a set and count the remainder  • Pupil estimates a small number and checks by counting  • Pupil begins to use ordinal numbers e.g. 1st 2nd 3rd | • Pupil counts objects reliably to 10 including objects placed randomly.  • Reads most numbers to 10  • Pupil sequences numerals 0 – 10  • Pupil labels sets with numerals 0 – 10  • Pupil begins to record numbers to 10  • Pupil begins to use the vocabulary “add” and “take away” in practical situations  • Pupil combines 2 sets and counts the total  • Pupil subtracts from a set and counts the remainder. | identify place value for tens and units (TU).  order whole numbers (for numbers up to at least 10)  match numbers written in words with the numbers written in digit form.  have an understanding of ordinal numbers.  know the number bonds up to 10.  know the numbers one more and one less.  read and write numbers from 1-20 in numerals and words.  count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.  count, read and write numbers to 100 in numerals.  count in multiples of 2’s, 5’s and 10’s.  given a number, identify 1 more and one less.  identify and represent numbers using objects and pictures including a number line.  use the language of: equal to, more than, less than (fewer), most, least.  recognise errors in counting patterns.  recognise 1p, 2p and 5p coins.  give an equivalent of 5p.  begin to give an equivalent amount to 10p.  identify numbers in all familiar environments e.g. clock, telephone, shop.  begin to know the doubles of numbers up to 10 | count in steps of 2,3 and 5 from 0, and in 10s from any number forward and backward.  recognise the place value of each digit in a two-digit number (10s, 1s)  identify, represent and estimate numbers using different representations, including the number line.  identify place value for hundreds, tens and units (HTU).  compare and order numbers from 0 to 100; use <, > and = signs.  read and write numbers to at least 100 in numerals and words.  use place value and number facts to solve problems.  be aware of odd and even numbers.  compare two given numbers.  identify all number facts up to 20.  round numbers up to a 100 to the nearest 10.  recognise all coins up to 20p.  recognise all coins up to 50p.  give an equivalent amount up to 20p.  give an equivalent amount up to 50p.  identify number facts to 50.  know halves and doubles to 20.  use money to give change from 20p.  count in 100s up to a 1000.  identify one more and one less up to a 100.  sequence any numbers up to a 100.  use coins to make a total shopping bills. | count from 0 in multiples of 4, 8, 50 and 100 more or less than a given number  count in multiples of 6, 7, 9, 25 and 1000  find 1000 more or less from a given number  be secure in a place value in each digit of a 3-digit number.  recognise the place value of each digit in a 4-digit number (Th H TU)  compare and order numbers up to 1000.  round any number up to the nearest 10, 100 or a 1000.    begin to know numbers beyond 1000.  read and write numbers up to 1000 in numerals and words.  count backwards through 0 including negative numbers.  solve number and practical problems that involve all of the above with increasingly large positive numbers.  read Roman numerals.  begin to know fractions.  know whole numbers as a percentage.  begin to understand decimal points.  know the value of each digit in a decimal number.  sequence decimal numbers.  relate percentage, decimals and fractions.  order fractions by size.  recall times table’s facts for 2, 3, 4, 5, 6, 7, 8, 9 and 10.  arrange negative and positive numbers in an order of value. | read, write order and compare numbers to 10 000 000 and determine the value of each digit.  count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.  round any whole number to a required degree of accuracy.  use negative numbers in context, and calculate intervals across 0.  Identify the place value in large, whole numbers.  use their number knowledge in context, including measure.  recognise and describe any number sequence, find the term to term rule.  find a fraction of a number.  find a percentage of a number.  Estimate large quantities appropriately.  count on or back extending in negative numbers.  read, write, order and compare decimals up to three decimal places.  read, write, order and compare percentage in whole numbers.  solve practical problems that relate to all of the above. |

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| **Mathematics**  *Geometry* | | | | | | | **Linking Documents** | | | |
| **IMPACT** | **Informal Curriculum** Will explore objects related to measure will begin to notice change. Some intentional movements to cause an effect. Will match items and begin to sort based on classifications. | | | **Semi-Formal Curriculum:**  Shows an interest in shape and space using objects purposefully. Will recognise differences and use the mathematical language to describe and compare things. Begin to use positional language. | | | **Formal Curriculum:** Can read, write and measure items using the correct measurement to solve everyday problems. Will correctly use estimation in relation to shape and space. | | | |
| **P1-P3** | | **P4** | **Y Level 1- P5** | **Y level 2- P6** | **B Level 1 - P7** | **B Level 2 - P8** | **NC 1/EL1** | **NC2/EL2** | **NC3/EL3** | **L1+** |
| **Pre Formal**  **Curriculum** | | **Informal Curriculum Pathway** | | **Semi-Formal Curriculum Pathway** | | | **Formal Curriculum Pathway** | | | |
| Accepts coactive exploration of objects.  Tolerates sensory exploration of tactile materials with support.  Explores objects of varying sizes, weights and shapes using a range of senses, e.g. looking, mouthing.  Explores objects by handling.  React to a variety of shapes, weights, volumes or speeds.  Tolerate interacting with an adult to play; for example, posting, tower building, filling and emptying  Engages with objects; for example, by holding and exploring them or watching closely as an adult helps them to explore. | | • Pupil searches for and finds objects in their usual place or when they have moved out of sight.    • Pupil can post items according to their shape by trial and error.  • Pupil combines objects to make simple constructions  • Pupil experiences 2D shapes in a range of practical situations.  • Pupil experiences 3D shapes in a range of practical situations  • Distinguishes between two objects of vastly differing sizes, i.e. a dolls shoe and an adult’s shoe.    • Explores items with marked difference in length.  • Select big and little objects on request.  • Selects appropriately sized objects for familiar tasks, i.e. stirring your tea with a tea spoon rather than a tablespoon. • Select an object that is the ‘same size’. | • Pupil can match 2D and 3D shapes  • Pupil matches 2D shapes to their outline  • Pupil manipulates 3D shapes  • Pupil begins to respond to instructions containing positional words, signs or symbols – in, on, over, under, inside, outside, top, bottom.  • Pupil begins to respond to instructions containing direction and movement words, signs, or symbols – forwards, backwards, up, down, sideways.  • Select an object that is the ‘same size’.  • Select bigger and smaller of two objects where the difference is not great.  • Begin to order objects of differing sizes, i.e. nesting containers.  • Begin to order objects of differing lengths.  • Begin to order objects of differing heights. | • Pupils respond to instructions containing movement and direction words, signs or symbols – forwards, backwards, sideways, up, down.  • Pupil responds to instructions containing positional language – over, under, top, bottom, side, in, outside, inside, in front, behind, next to.  • Pupils begin to pick out named shapes from a collection.    • With adult prompts pupils begin to explore the properties of 2D and 3D shapes eg corners, straight, flat, curved, solid.    • Pupils begin to use familiar words, signs or symbols to describe position.  • Uses familiar words to describe the size of objects, i.e. big and small.  • On request makes an object bigger, smaller, longer, and shorter.  • Experiences estimating area, i.e. which piece of paper will cover this object? | • Pupil can name the 2D shapes square, circle, triangle, and rectangle.  • Pupil can name the 3D shapes cube, sphere, cone, cuboid.  • Pupil begins to describe the properties of shapes eg flat, curved, solid.  • Pupil can copy and draw simple 2D shapes.  • Pupil can copy and draw the faces of simple 3D shapes  • Pupil begins to identify shapes in the environment / real life activities eg my plate is round.  • Uses common vocabulary i.e. too big, too small and ‘fits’.  • Begins to use non-standard units to measure length and height.  • Communicates which of two objects is longest/shortest, biggest/smallest.  • Communicates which object is the tallest/shortest. | • Pupil builds using 3D shapes  • Pupil creates pattern / pictures using 2D shapes  • Pupil names circle, squares and triangles  • Pupil counts the number of corners, sides and faces of everyday objects.  • Pupil identifies simple 2D shapes in the environment eg “The CD is a circle”  • Pupil identifies and describes 3D shapes in the environment eg “The washing machine is a cuboid with circle door”  • Pupil uses vocabulary “in, on, under” to describe position  • Pupil uses vocabulary “between, in front of, in the middle, next to” to describe position  • Compares two everyday objects by size, length and height ie uses vocabulary bigger, smaller, the same.  .  • Begins to order objects by size, length, height using direct comparison | Handle 2d and 3d shapes in different orientations / sizes and relate everyday objects fluently.  Identify and recognise common 2-D shapes, including circle, rectangle (including square) and triangle  Recognise that not all rectangles, triangles, cuboids and pyramids are not always similar to each other.  Identify and recognise common 3-D shapes, including cube,  Use everyday language to compare and sort 2D and 3D shapes. | Read and write names for shapes.  Handle 2d and 3d shapes and identify properties including the number of sides and line of symmetry.  Recognise and name 2-D shapes, including pentagons and hexagons  …recognise  Name 3-D shapes, including cylinders, cuboids, pyramids and spheres  Identify and describe the properties of a 2d shape, including the number of sides, and line symmetry in a vertical line.  Identify and describe properties of 3d shapes, including the number of edges, vertices and faces.  Identify 2d shapes on the surface of a 3d surface.  Compare and sort common 2d and 3d shapes and everyday objects.  Sort 2D and 3D shapes giving reasons for sorting. | Draw 2d shapes.  Make 3d shapes using modelling materials and recognise 3d shapes in different orientations and describe them.  Recognise angles as a property of shape or a description of a turn.  Identify right angles.  Recognise that 2 right angles make a half a turn and four a complete turn.  Identify whether angles are greater than or less than a right angle.  Identify acute and obtuse angles.  Compare and order acute and obtuse angles up to two right angles by size.  Identify lines of symmetry in 2d shapes presented in different orientations.  Complete a simple symmetric figure with respect to a specific line of symmetry.  Identify horizontal and vertical lines  Identify pairs of perpendicular and parallel lines.  Identify symmetrical and non-symmetrical polygron and polyhedral.  Describe the properties of 2D and 3D shapes using accurate language. | Draw 2d shapes using given dimensions and angles.  Recognise, describe and build 3d shapes.  Make 3d shape nets  Identify 3d shapes, including cubes and other cuboids from 2d representations.  Use properties of rectangles to deduce related facts and find missing lengths and angles.  Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.  Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.  Draw given angles, and measure them in degrees.  Identify angles at a point and one whole turn 360\*  Identify angles at a point on a straight line and half a turn 180\*  Identify other multiples of 90\*  Illustrate and name parts of a circle radius, circumference and know that the diameter is twice the radius.  Compare and classify geometric shapes based on their properties and sizes to find unknown angles.  Draw and label a pair of axes in all four quadrants with equal scaling. |

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| **Mathematics**  *Weight and Volume* | | | | | | | **Linking Documents** | | | |
| **IMPACT** | Informal Curriculum: Will explore objects related to weight and volume and begin to notice change. Some intentional movements to cause an effect. Will match items and begin to sort based on classifications. | | | Semi-Formal Curriculum: Will recognise differences and use the mathematical language to describe and compare weight and volume. | | | Formal Curriculum: Can read, write and measure items using the correct measurement to measure to solve everyday weight and volume problems. | | | |
| **P1-P3** | | **P4** | **Y Level 1- P5** | **Y Level 2 - P6** | **B Level 1- P7** | **B Level 2 - P8** | **NC 1/EL1** | **NC2/EL2** | **NC3/EL3** | **L1+** |
| **Pre-Formal**  **Curriculum**  **Pathway** | | **Informal Curriculum Pathway** | | **Semi-Formal Curriculum Pathway** | | | **Formal Curriculum Pathway** | | | |
|  | | • Explores filling and emptying a variety of containers with a range materials.  • Explores a range of objects / materials with clear contrast in weight.  • Demonstrates early understanding of volume when there is a clear contrast e.g. chooses full glass of preferred drink.  • Demonstrates early understanding of weight e.g. braces self to lift heavy item. | • Explores making weight ‘heavier / lighter’ and attends to adult modelling vocabulary.  • Explores making volumes ‘more and less’ and ‘full / empty’ and attends to adult modelling vocabulary.  • Selects the ‘heavy / light’, ‘full / empty’  • Selects items of approximately ‘the same’ weight.  • Selects items of approximately ‘the same’ volume.  • Compares 2 different weights using balance scales with adult support. | • Experiences using standard / non-standard measures of volume with adult support – scoopfuls, spoonful’s, cupful’s etc.  • Compares contrasting weights and describes as “heavy / light / the same”  • Compares contrasting volumes and describes as “full / empty / the same” | • Uses standard measures / non-standard measures of volume – scoop fulls / cup fulls etc.  • Uses a range of apparatus to measure weight with adult support.  • Uses a range of apparatus to measure volume with adult support. | • Compares the capacity of two containers using vocabulary of volume more, less, the same.  • Compares weight of two objects ie uses vocabulary heavier, lighter, the same  • Begins to order objects by weight using direct comparison  • Begins to order by volume using direct comparison | Describe measures of weight (heavy / light, heavier than /lighter than.  Make comparisons between measures of weight (heavy / light, heavier than /lighter than.  Solve problems between measures of weight (heavy / light, heavier than /lighter than.  Describe, compare and solve problems relating to mass / weight.  Take part in practical activities that involve measuring using standard scales with support  Record weight and mass measurements.  Describe and make comparisons in words between measures of capacity and volume (full/empty, more than, less than, half, half full, quarter)  Compare in words between measures of capacity | Choose and use standard units to estimate mass (kg/g)  Choose and use standard units to measure mass (Kg/g) using scales.  Choose and use standard units to estimate mass using measuring vessels such as spoons / cups etc…  Compare weights and record results using < > =  Order weights and record results using < > =  Choose and use standard units to estimate capacity (ml/l) using appropriate measuring vessels.  Compare and order volume and capacity and record results using < > =  Order volume and capacity and record results using < > = | Measure and compare mass (kg/g)  Add and subtract mass.  Measure volume / capacity in lm/l  Compare volume / capacity in ml/l  Add and subtract volume / capacity in ml/l | Use all four operations to solve problems involving weight / Mass.  Use, read, write and convert between standard units converting measurements of Mass – up to 3 decimal places.  Convert between units of capacity in the same  System  Use, read, write and convert measurements including volume from a smaller to a larger measurement up to 3 decimal places.  Recognise when it is possible to use a formulae for volume.  Calculate, estimate and compare volume of cubes and cuboids using m3 cm3 mm3 and km3  Estimate volume using 1cm3 cubes, and capacity with water.  Use all four operations to solve problems relating to volume up to 3 decimal places.  Convert between metric measures litre and millilitre. |

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| **Mathematics**  *Time* | | | | | | | **Linking Documents** | | | |
| **IMPACT** | Informal Curriculum: Associates simple time vocabulary with parts of the day. | | | Semi-Formal: Is beginning to show an awareness of time and will show an understanding of telling the time in o’clock and half past. | | | Formal Curriculum: Can tell the time in digital and analogue and convert between the two. | | | |
| **P1-P3** | | **P4** | **P5** | **P6** | **P7** | **P8** | **NC 1/EL1** | **NC2/EL2** | **NC3/EL3** | **L1+** |
| **Pre-Formal**  **Curriculum** | | **Informal Curriculum Pathway** | | **Semi-Formal Curriculum Pathway** | | | **Formal Curriculum Pathway** | | | |
|  | | • They experience carrying out activities according to simple time vocabulary ‘fast / slow, go / stop / wait’, with adult support. | • Responds to simple time vocabulary to indicate time of day i.e. lunch time, home time, and bed time.  • Responds to vocabulary to control events in time i.e. ‘go / stop/ wait’.  • Responds to vocabulary to describe speed i.e. ‘fast / quick / slow’.  • Experiences carrying out activities for a length of time measured by standard /nonstandard measures.  • Selects items / pictures / photos relating to specific times of day e.g. night time / morning / lunch time. | • Responds to vocabulary ‘before / after / next / last’.  • Use time vocabulary to indicate time of day i.e. lunch time, home time, and bed time.  • Use vocabulary to control events in time i.e. ‘go / stop/ wait’.  • Uses vocabulary to describe speed i.e. ‘fast / quick / slow’.  • Joins in sequencing symbols / photos in time order. | • Begins to use non-standard measures of time e.g. hand claps.  • Use time related vocabulary i.e. ‘today, yesterday, tomorrow, morning, evening’.  • Begins to use the days of the week.  • Begins to associate specific times to specific events. | • Uses simple time vocabulary eg play time, dinner time, home time.  • Begins to sequence photographs / pictures in time order  • Carries out activities for a measured length of time with adult support ie how many beads can be threaded( using a sand timer). | Compare time (quicker, slower, earlier, later)  Describe time (quicker, slower, earlier, later)  Solve practical problems involving time (quicker, slower, earlier, later)  Measure time in seconds.  Measure time in minutes.  Measure time in hours.  Sequence events in chronological order using before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening e.g. daily timetable.  Recognise parts of their routine e.g. lunchtime, home time, playtime.  Recognise language relating to dates, including days of the week, weeks, months and years.  Use language relating to dates, including days of the week, weeks, months and years.  Tell the time to the hour and half past the hour.  Draw the hands on a clock face to represent the hour and half past the hour. | Know the number of hours in a day and weeks in a year; be able to name and sequence  Compare and sequence intervals of time.  Tell the time to five minutes, including quarter past / to the hour.  Draw the hands on a clock face to show the above times.  Know the number of minutes in an hour and the number of hours in a day.  Name and order seasons of the year and identify festivals associated with them. | Convert between hour to minute  Read analogue and digital time using roman numerals I to XII, 12 and 24hour clocks  Write analogue and digital time 12 and 24hour clocks  Convert time between analogue and digital time 12 and 24hour clocks  Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.  Estimate and read time with increasing accuracy.  Use vocabulary such as o’clock, a.m./p.m., morning, noon and midnight.  Know the number of seconds in a minute and the number of days in each month, year and leap year.  Compare duration of events (e.g. time to complete a task or events)  Read the times correctly using a timetable and plan their journey effectively.  Read opening times for various facilities such as shops, leisure facilities and restaurants. Plan their visit effectively allowing enough time for their stay. | Solve problems relating to units of time.  See handling data. |

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| **Mathematics**  *Handling Data* | | | | | | | **Linking Documents** | | | |
| **IMPACT** | Informal Curriculum:Statistics are not covered until learners are accessing the green provision band. | | | Semi-Formal: Read an interpret information from data. Will ask and answer simple questions and draw comparisons. | | | Formal Curriculum: Organise and represent data in the most appropriate way. Can organise and interpret information and represent data in different ways. Will solve problems and calculate averages. | | | |
| **P1-P3** | | **P4** | **P5** | **P6** | **P7** | **P8** | **NC 1/EL1** | **NC2/EL2** | **NC3/EL3** | **L1+** |
| **Pre-Formal**  **Curriculum** | | **Informal Curriculum Pathway** | | **Semi-Formal Curriculum Pathway** | | | **Formal Curriculum Pathway** | | | |
|  | | • To demonstrate that they understand the functional use of objects consistently.  • To make functional pairs of objects e.g cup and saucer.  • To match identical objects/pictures and respond to the vocabulary ‘same as’  • To select an object from a range to match a given category or function.  • To group or sort familiar objects to a single attribute.  • To indicate which group contains lots i.e more than 1.  • To order objects into rows so that they can be compared/quantified.  • As an adult counts the pupil touches objects one at a time. | • To match the same or similar objects to pictures.  • To recognise that a symbol can be associated to an event.  • To identify the main attribute of objects and uses this to make simple sets.  • To sort objects/pictures into two sets and to given criteria.  • To indicate an object that is different within a given set.  • To sort objects/pictures by association using clear categories.  • To match one object to one picture to record simple sets to the value of 5.  • To collect tokens to keep track of an event or game.  • To use their fingers to denote/tally small amounts to the value of 5. | • To identify 2 different attributes on a given object or picture i.e the cup is yellow  • To sort objects/pictures by 2 given criterion  • To identify the object that does not belong to a named category.  • To give simple reasons for the placement of objects / pictures to categories  • To begin to record simple sorting activities or data e.g circle sets, charts.  • To begin to collect information through purposeful enquires that can be recorded (with adult support)  • To demonstrate an understanding of more / fewer when comparing sets of objects / pictures | • To collect or record data in pictorial/representational form e.g. tally marks, symbols, and count the data (value to 10).  • To record simple sorting activities using pictorial representation on simple diagrams e.g. Venn, Carroll.  • To organise/record pictorial data on simple charts/tables where one symbol represents one unit e.g pictograms/block graphs.  • To begin to respond to information that is clearly recorded (pictorial information)  • To communicate about their work and interpret the data collected e.g indicate which set has more/less or most.  • To begin to make simple estimates/predictions before collecting data e.g. ‘will most pupils like orange/blackcurrant squash?’ | • To begin to understand the use of lists (pictorial) within practical contexts e.g shopping. (ref. NNS Framework Y1 Page 90).  • To begin to understand the use of sorting/sets within practical contexts e.g sorting a set of spoons to eat pudding, a set of colour crayons etc.  • To begin to use the collecting and organising of information to solve simple problems. (ref. NNS Framework Y1 Page 90).  • To begin to identify the number values to 10 that are used to label charts/tables.  • To respond to the information, they have collected by answering simple questions. | … read numerical information from lists.  …make a relevant pictogram using pictures of objects  …sort and classify objects using a single criterion  … read and draw simple charts and diagrams, including a tally chart, block diagram/graph. | …extract information from lists, tables, diagrams and bar charts  … make numerical comparisons from bar charts  … sort and classify objects using two criteria  …interpret and construct simple pictograms,  …interpret and construct tally charts.  …interpret and construct, block diagrams.  …interpret and construct charts.  … ask and answer simple questions about totalling and comparing categorical data. | … extract information from lists, tables, diagrams and charts and create frequency tables.  …interpret information, to make comparisons and record changes, from different formats, including bar charts and simple line graphs.  … organise and represent information in appropriate ways, including tables, diagrams, simple line graphs and bar charts.  …solve one-step and two step questions (for example how many more how many fewer) using information in charts, pictograms and tables. | …solve comparison, sum and difference problems using information presented in a line graph.  …complete, read and interpret information in tables including timetables.  …interpret and construct pie-charts and line graphs and use these to solve problems.  …calculate and interpret the mean as an average.  .. extract information from packaging and use this information to complete a practical task such as cooking, gardening and washing clothes  …interpret information, to make comparisons and use the information to plan in a practical way, such as reading the weather temperature, precipitation % and select the appropriate clothing  …group discrete data and represent grouped data graphically  …represent discrete data in tables, diagrams and charts including pie charts, bar  charts and line graphs |