

Mathematics SOW
Autumn Term Overview

Track Back Mathematics – New Curriculum (2014)

Number – number and place value				
Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<ul style="list-style-type: none"> <input type="checkbox"/> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number <input type="checkbox"/> recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <input type="checkbox"/> compare and order numbers up to 1000 <input type="checkbox"/> identify, represent and estimate numbers using different representations <input type="checkbox"/> read and write numbers up to 1000 in numerals and in words <input type="checkbox"/> solve number problems and practical problems involving these ideas. 	<ul style="list-style-type: none"> <input type="checkbox"/> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward <input type="checkbox"/> recognise the place value of each digit in a two-digit number (tens, ones) <input type="checkbox"/> identify, represent and estimate numbers using different representations, including the number line <input type="checkbox"/> compare and order numbers from 0 up to 100; use <, > and = signs <input type="checkbox"/> read and write numbers to at least 100 in numerals and in words <input type="checkbox"/> use place value and number facts to solve problems. 	<ul style="list-style-type: none"> <input type="checkbox"/> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number <input type="checkbox"/> count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <input type="checkbox"/> given a number, identify one more and one less <input type="checkbox"/> identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <input type="checkbox"/> read and write numbers from 1 to 20 in numerals and words. 	<p>Extension</p> <ul style="list-style-type: none"> • Use ordinal numbers in different contexts • Recite number names in order from 0 to 10 • Use developing mathematical understanding, ideas, methods and counting to solve practical problems • Recognise numerals 0-9 reliably • Relate numerals 0–9 to set of objects • Begin to record numbers of objects initially by making marks, progressing to simple tallying and writing numbers to 10 • Have contact with numerals to 100 <p>P8</p> <ul style="list-style-type: none"> • Continue the rote count onwards from any given small number • Know the numbers 0–9 relate to different but constant sizes of sets of objects • Indicate first and last • Begin to use developing mathematical understanding, ideas, methods and counting to solve practical problems • In role-play and practical situations estimate a small number of everyday objects and check by counting • Start to record numbers of objects with tokens, marks, tallies and numerals (with inconsistencies) • Begin to recognise numerals 0–9 • Begin to relate numerals 0–9 to sets of objects • Write the numerals to 5 and copy write them to 10 • Have contact with numerals to 50 <p>P7</p> <ul style="list-style-type: none"> • Join in rote counting to 10, possibly in the context of a rhyme • Begin to understand that a number represents a constant number or amount • Begin to use developing mathematical understanding and counting to solve simple problems that they may encounter in play, games or other work • Recognise numerals 0–5 and to understand that each represents a constant number or amount • Use tallies or other marks to represent (record and remember) quantities • Copy numerals to 5 • Have contact with numerals to 20 	<p>P6</p> <ul style="list-style-type: none"> • Join in with new number songs, stories and games with some assistance or encouragement • Use practical methods to associate names and symbols with numbers • Use understanding of counting small amounts to solve simple problems practically • Use the understanding of ‘more’ • Encounter and explore numerals 0–9 and beyond 10 • Use practical methods to associate names and symbols with numbers • Have some recognition of numerals up to 5 • Realise that numerals/tallies/pictures can record the number of objects <p>P5</p> <ul style="list-style-type: none"> • Join in with familiar number songs, stories and games with some assistance or encouragement • Use emerging understanding of counting small amounts to solve simple problems practically • Demonstrate an awareness of contrasting quantities by making groups of objects with help • Realise numerals represent quantities • Use concrete resources (e.g. tokens) to record and remember quantities or make pictorial representations showing quantities of groups • In role-play and practical situations indicate the correct numeral from a choice of two <p>P4</p> <ul style="list-style-type: none"> • Show an interest in number activities and counting • Anticipates an event/action when taking part in a familiar a number activity • Gain experience of numerals in classroom and other activities • Puts marks or symbols alongside pictures when undertaking mathematical activities

Development Matters in the EYFS (40 – 60 months) Mathematics: Numbers

- Recognise some numerals of personal significance.
- Recognises numerals 1 to 5.
- Counts up to three or four objects by saying one number name for each item.
- Counts actions or objects which cannot be moved.
- Counts objects to 10, and beginning to count beyond 10.
- Counts out up to six objects from a larger group.
- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- Uses the language of 'more' and 'fewer' to compare two sets of objects.
- Finds the total number of items in two groups by counting all of them.
- Says the number that is one more than a given number.
- Finds one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- Records, using marks that they can interpret and explain.
- Begins to identify own mathematical problems based on own interests and fascinations.

Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Number – addition and subtraction

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<p><input type="checkbox"/> add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds <p><input type="checkbox"/> add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p><input type="checkbox"/> estimate the answer to a calculation and use inverse operations to check answers</p> <p><input type="checkbox"/> solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</p>	<p><input type="checkbox"/> solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods <p><input type="checkbox"/> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts to 100</p> <p><input type="checkbox"/> add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers <p><input type="checkbox"/> show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p><input type="checkbox"/> recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p><input type="checkbox"/> read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs</p> <p><input type="checkbox"/> represent and use number bonds and related subtraction facts within 20</p> <p><input type="checkbox"/> add and subtract one-digit and two-digit numbers to 20, including zero</p> <p><input type="checkbox"/> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.</p>	<p>Extension</p> <ul style="list-style-type: none"> • Count reliably up to 10 everyday objects giving just one number name to each object • Know that numbers identify how many objects are in a set • Match sets of objects to numerals that represent the number of objects • Estimate how many objects they can see and check by counting • Recognise small numbers of objects without counting • Use language such as more or less, to compare two numbers • Find one more or one less than a number from 1 to 10 • Begin to relate addition to combining two groups of objects, counting objects; extend to three groups of objects • Begin to relate addition to counting on • In practical activities and discussion begin to use the vocabulary involved in adding • Begin to relate subtraction to taking away • In practical activities and discussion begin to use the vocabulary involved in subtraction • Describe solutions to practical problems, drawing on experience, talking about their own ideas, methods and choices • Make simple estimates and predictions; for example the number of cubes that will fit in a box. <p>P8</p> <ul style="list-style-type: none"> • Count reliably to at least 5; begin to count up to 10 objects • Compare two given numbers of objects saying which is more and which is less • Recognise differences in quantity by comparing given sets of objects and saying which has more or less • Begin to use developing mathematical understanding, ideas, methods and counting to solve practical problems • In role-play and practical situations estimate a small number of everyday objects and check by counting <p>P7</p> <ul style="list-style-type: none"> • Count reliably at least 5 objects • Show a count up to 5 by a simple tally • Begin to recognise difference in quantities • Begin to use developing mathematical understanding and counting to solve simple problems that they may encounter in play, games or other work • Respond appropriately to key vocabulary and questions 	<p>P6</p> <ul style="list-style-type: none"> • Demonstrate an understanding of 1:1 correspondence in a range of contexts • Count reliably to 3 and make sets of up to 3 objects • Show awareness of the vocabulary 'more' and 'less' in practical situations • Demonstrate an understanding of the concept of more/ less/fewer • Use the understanding of 'more' • Use understanding of counting small amounts to solve simple problems practically <p>P5</p> <ul style="list-style-type: none"> • Use concrete resources (e.g. tokens) to record and remember quantities or make pictorial representations showing quantities of groups • Indicate 1 or 2 • Use emerging understanding of counting small amounts to solve simple problems practically • Demonstrate an awareness of contrasting quantities by making groups of objects with help <p>P4</p> <ul style="list-style-type: none"> • Take part in activities that are concerned with adding to or taking away from a group of objects • Be aware of cause and effect in familiar mathematical activities • Respond to the word 'more' and 'gone' • Begin to search for objects that have gone out of sight, hearing or touch, demonstrating the beginning of object permanence

Development Matters in the EYFS (40 – 60 months) Mathematics: Numbers

- Recognise some numerals of personal significance.
- Recognises numerals 1 to 5.
- Counts up to three or four objects by saying one number name for each item.
- Counts actions or objects which cannot be moved.
- Counts objects to 10, and beginning to count beyond 10.
- Counts out up to six objects from a larger group.
- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- **Uses the language of 'more' and 'fewer' to compare two sets of objects.**
- **Finds the total number of items in two groups by counting all of them.**
- **Says the number that is one more than a given number.**
- **Finds one more or one less from a group of up to five objects, then ten objects.**
- **In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.**
- Records, using marks that they can interpret and explain.
- Begins to identify own mathematical problems based on own interests and fascinations.

Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Geometry – properties of shapes

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<ul style="list-style-type: none"> <input type="checkbox"/> draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <input type="checkbox"/> recognise angles as a property of shape or a description of a turn <input type="checkbox"/> identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle <input type="checkbox"/> identify horizontal and vertical lines and pairs of perpendicular and parallel lines. 	<ul style="list-style-type: none"> <input type="checkbox"/> identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line <input type="checkbox"/> identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces <input type="checkbox"/> identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] <input type="checkbox"/> compare and sort common 2-D and 3-D shapes and everyday objects. 	<ul style="list-style-type: none"> <input type="checkbox"/> recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> <input type="checkbox"/> 2-D shapes [for example, rectangles (including squares), circles and triangles] <input type="checkbox"/> 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 	<p>Extension</p> <ul style="list-style-type: none"> • Use language such as 'circle' or 'bigger' to describe the shape and size of solids and flat shapes (in unprompted everyday talk) • Begin to name solids such as a cube, cone, sphere... and flat shapes such as a circle, triangle, square, rectangle... • Begin to recognise symmetrical patterns <p>P8</p> <ul style="list-style-type: none"> • Begin to use mathematical language such as 'circle' or 'bigger' to describe the shape and size of solids and flat shapes (when modelled by an adult) • Name a few 2D and 3D shapes • Notice similarities and differences between shapes • Have experience of making and seeing symmetrical patterns <p>P7</p> <ul style="list-style-type: none"> • Start to pick out named shapes from a collection 	<p>P6</p> <ul style="list-style-type: none"> • Explore 3D shapes <p>P5</p> <ul style="list-style-type: none"> • Search intentionally for objects in their usual places • Join in activities involving shapes and be aware of the names that describe them <p>P4</p> <ul style="list-style-type: none"> • Begin to search for objects that have gone out of sight hearing or touch, demonstrating the beginning of object permanence

Development Matters in the EYFS (40 – 60 months) Mathematics: Shape, space and measure

- **Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.**
- **Selects a particular named shape.**
- Can describe their relative position such as 'behind' or 'next to'.
- Orders two or three items by length or height.
- Orders two items by weight or capacity.
- **Uses familiar objects and common shapes to create and recreate patterns and build models.**
- Uses everyday language related to time.
- Beginning to use everyday language related to money.
- Orders and sequences familiar events.
- Measures short periods of time in simple ways.

Early Learning Goal

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. **They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.**

Statistics

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<ul style="list-style-type: none"> □ interpret and present data using bar charts, pictograms and tables □ solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. 	<ul style="list-style-type: none"> □ interpret and construct simple pictograms, tally charts, block diagrams and simple tables □ ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity □ ask and answer questions about totalling and comparing categorical data. 		<p>Extension</p> <ul style="list-style-type: none"> • Sort objects making choices and talking about and justifying decisions • Count how many objects share a common property • Sort familiar objects count how many objects share a common property, presenting results using pictures, drawings or numerals. • Answer straightforward questions interpreting a block graph and when asked, talk about their answer <p>P8</p> <ul style="list-style-type: none"> • Sort items into suggested categories (without a model) • Re-sort a sorted collection of objects by new criteria (suggested to them) • Collect and label groups of similar items • Describe the relationships of objects orally and through simple models, pictures and patterns. • Make a simple (i.e. not in blocks of 5) tally to count objects/people in 2/3 groups • Put adult prepared and pre-counted symbols in the correct column on a block graph • Answer straightforward questions interpreting a block graph they have helped to create <p>P7</p> <ul style="list-style-type: none"> • Sort items as instructed, following a model • Identify when an object is different and does not belong to a given category • Order things by a criteria – using trial and improvement – with assistance draw what they have done and know this is a record • Show a count of up to 5 by a simple tally • Place a single symbol in the correct column on a block graph • Answer a simple question about a block graph they have helped to create 	<p>P6</p> <ul style="list-style-type: none"> • Match objects and materials according to a given criteria relating to number/shape • Order things by a criteria according to model or picture • Take an active part in making a block graph <p>P5</p> <ul style="list-style-type: none"> • Begin to sort sets of objects according to a single attribute • With support, match objects and materials according to given criteria <p>P4</p> <ul style="list-style-type: none"> • Take part in activities that are concerned with the relationships between objects • Be aware of cause and effect in familiar mathematical activities • Anticipate, follow and join in matching activities when given a contextual clue

Spring Term Overview

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Number – number and place value				
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use <, > and = signs <input type="checkbox"/> read and write numbers to at least 100 in numerals and in words <input type="checkbox"/> use place value and number facts to solve problems. 	<ul style="list-style-type: none"> <input type="checkbox"/> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number <input type="checkbox"/> count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <input type="checkbox"/> given a number, identify one more and one less <input type="checkbox"/> identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <input type="checkbox"/> read and write numbers from 1 to 20 in numerals and words. 	<p>Extension</p> <ul style="list-style-type: none"> • Use ordinal numbers in different contexts • Recite number names in order from 0 to 10 • Use developing mathematical understanding, ideas, methods and counting to solve practical problems • Recognise numerals 0-9 reliably • Relate numerals 0–9 to set of objects • Begin to record numbers of objects initially by making marks, progressing to simple tallying and writing numbers to 10 • Have contact with numerals to 100 <p>P8</p> <ul style="list-style-type: none"> • Continue the rote count onwards from any given small number • Know the numbers 0–9 relate to different but constant sizes of sets of objects • Indicate first and last • Begin to use developing mathematical understanding, ideas, methods and counting to solve practical problems • In role-play and practical situations estimate a small number of everyday objects and check by counting • Start to record numbers of objects with tokens, marks, tallies and numerals (with inconsistencies) • Begin to recognise numerals 0–9 • Begin to relate numerals 0–9 to sets of objects • Write the numerals to 5 and copy write them to 10 • Have contact with numerals to 50 <p>P7</p> <ul style="list-style-type: none"> • Join in rote counting to 10, possibly in the context of a rhyme • Begin to understand that a number represents a constant number or amount • Begin to use developing mathematical understanding and counting to solve simple problems that they may encounter in play, games or other work • Recognise numerals 0–5 and to understand that each represents a constant number or amount • Use tallies or other marks to represent (record and remember) quantities • Copy numerals to 5 • Have contact with numerals to 20 	<p>P6</p> <ul style="list-style-type: none"> • Join in with new number songs, stories and games with some assistance or encouragement • Use practical methods to associate names and symbols with numbers • Use understanding of counting small amounts to solve simple problems practically • Use the understanding of 'more' • Encounter and explore numerals 0–9 and beyond 10 • Use practical methods to associate names and symbols with numbers • Have some recognition of numerals up to 5 • Realise that numerals/tallies/pictures can record the number of objects <p>P5</p> <ul style="list-style-type: none"> • Join in with familiar number songs, stories and games with some assistance or encouragement • Use emerging understanding of counting small amounts to solve simple problems practically • Demonstrate an awareness of contrasting quantities by making groups of objects with help • Realise numerals represent quantities • Use concrete resources (e.g. tokens) to record and remember quantities or make pictorial representations showing quantities of groups • In role-play and practical situations indicate the correct numeral from a choice of two <p>P4</p> <ul style="list-style-type: none"> • Show an interest in number activities and counting • Anticipates an event/action when taking part in a familiar a number activity • Gain experience of numerals in classroom and other activities • Puts marks or symbols alongside pictures when undertaking mathematical activities

Development Matters in the EYFS (40 – 60 months) Mathematics: Numbers

- Recognise some numerals of personal significance.
- Recognises numerals 1 to 5.
- Counts up to three or four objects by saying one number name for each item.
- Counts actions or objects which cannot be moved.
- Counts objects to 10, and beginning to count beyond 10.
- Counts out up to six objects from a larger group.
- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- Uses the language of 'more' and 'fewer' to compare two sets of objects.
- Finds the total number of items in two groups by counting all of them.
- Says the number that is one more than a given number.
- Finds one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- Records, using marks that they can interpret and explain.
- Begins to identify own mathematical problems based on own interests and fascinations.

Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Number – multiplication and division

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<p>□ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>□ write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods</p> <p>□ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</p>	<p>□ recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>□ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</p> <p>□ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>□ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</p>	<p>□ solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</p>	<p>Extension</p> <ul style="list-style-type: none"> • Try to share objects and quantities equally <p>P8</p> <ul style="list-style-type: none"> • Understand that to share equally between a number of people you have to cut the object into that number of pieces • Understand the notion of sharing equally between a number of people <p>P7</p> <ul style="list-style-type: none"> • Understand that to share between 2 people you have to cut an object into 2 two equal pieces • Understand the notion of sharing between a number of people 	<p>P6</p> <ul style="list-style-type: none"> • In role-play and practical situations share small amounts equally <p>P5</p> <ul style="list-style-type: none"> • In role-play and practical situations be part of sharing a single object and small quantities <p>P4</p> <ul style="list-style-type: none"> • When an object is being shared, anticipate getting a part

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- Counts objects to 10, and beginning to count beyond 10.
- Counts out up to six objects from a larger group.
- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- Uses the language of 'more' and 'fewer' to compare two sets of objects.
- Finds the total number of items in two groups by counting all of them.
- Says the number that is one more than a given number.
- Finds one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- Records, using marks that they can interpret and explain.
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Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. **They solve problems, including doubling, halving and sharing.**

Number – Fractions

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<p><input type="checkbox"/> count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10</p> <p><input type="checkbox"/> recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p><input type="checkbox"/> recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p><input type="checkbox"/> recognise and show, using diagrams, equivalent fractions with small denominators</p> <p><input type="checkbox"/> add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]</p> <p><input type="checkbox"/> compare and order unit fractions, and fractions with the same denominators</p> <p><input type="checkbox"/> solve problems that involve all of the above.</p>	<p><input type="checkbox"/> recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity</p> <p><input type="checkbox"/> write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$</p>	<p><input type="checkbox"/> recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p><input type="checkbox"/> recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p>	<p>Extension</p> <ul style="list-style-type: none"> • Try to share objects and quantities equally <p>P8</p> <ul style="list-style-type: none"> • Understand that to share equally between a number of people you have to cut the object into that number of pieces • Understand the notion of sharing equally between a number of people <p>P7</p> <ul style="list-style-type: none"> • Understand that to share between 2 people you have to cut an object into 2 two equal pieces • Understand the notion of sharing between a number of people 	<p>P6</p> <ul style="list-style-type: none"> • In role-play and practical situations share small amounts equally • In role-play and practical situations share a single object <p>P5</p> <ul style="list-style-type: none"> • In role-play and practical situations be part of sharing a single object and small quantities <p>P4</p> <ul style="list-style-type: none"> • When an object is being shared, anticipate getting a part

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- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- Uses the language of 'more' and 'fewer' to compare two sets of objects.
- Finds the total number of items in two groups by counting all of them.
- Says the number that is one more than a given number.
- Finds one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
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Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. **They solve problems, including doubling, halving and sharing.**

Measurement –Capacity

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<p>□ measure, compare, add and subtract: volume/capacity (l/ml)</p>	<p>□ choose and use appropriate standard units to estimate and measure capacity (litres/ml) to the nearest appropriate unit, measuring vessels</p> <p>□ compare and order /capacity and record the results using >, < and =</p>	<p>□ compare, describe and solve practical problems for: - capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</p>	<p>Extension</p> <ul style="list-style-type: none"> • Use developing mathematical ideas and methods to solve and describe practical problems involving capacity in a real or role-play context. • Begin to understand and use the language of measures in practical contexts • Use the language of measures to compare capacity of 2 or more objects in practical contexts <p>P8</p> <ul style="list-style-type: none"> • Chooses appropriate standard and non-standard measuring equipment from a selection of 2 or 3 items • Begin to use developing mathematical understanding and counting to solve simple problems involving capacity that they may encounter in play, games or other work. • In role-play and practical situations estimate to compare two or three objects • Begin to use in practical contexts some vocabulary related to measures • Order 2 items by their capacity. • Compare directly two objects • Use familiar words to describe measures in practical contexts. <p>P7</p> <ul style="list-style-type: none"> • Respond appropriately to key vocabulary and questions • Uses standard and non-standard measuring equipment with adult assistance • Begin to use developing mathematical understanding involving capacity to solve simple problems that they may encounter in play, games or other work • Use familiar words to compare sizes and quantities. 	<p>P6</p> <ul style="list-style-type: none"> • Have experience of using a range of standard and non standard measuring equipment • Copy simple patterns or sequences. • Gain understanding of concepts of, capacity through practical activities • Show awareness of the vocabulary ‘more’ and ‘less’ in practical situations • Compare the overall capacity of one object with another when the difference is not great . • Match objects and materials according to a given criteria relating to capacity <p>P5</p> <ul style="list-style-type: none"> • Experience exchanging coins in exchange for items in a practical context • Have experience of using a range of standard and non standard measuring equipment • Gain understanding of capacity through practical activities and through problem solving with an adult/peer.. • Compare the overall capacity of one object with another when there is a marked difference in size. • Join in with solving problems involving fitting quantities into different containers <p>P4</p> <ul style="list-style-type: none"> • Be aware of cause and effect in familiar mathematical activities • Have experience of using a range of standard and non standard measuring equipment • Take part in activities that are concerned with the relationships between objects. • Through exploration, gain awareness of differences in capacity

Development Matters in the EYFS (40 – 60 months) Mathematics: Shape, space and measure

• Orders two items by capacity.

Early Learning Goal

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Geometry – position and direction

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
	<ul style="list-style-type: none"> □ order and arrange combinations of mathematical objects in patterns and sequences □ use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise). 	<ul style="list-style-type: none"> □ describe position, direction and movement, including whole, half, quarter and three-quarter turns. 	<p>Extension</p> <ul style="list-style-type: none"> • Talk about, recognise and recreate simple patterns • Use familiar objects and common shapes to copy and create simple patterns and models • Use a variety of objects to make models, pictures and patterns, and describe them • Use everyday vocabulary to describe position, direction, movement and turn <p>P8</p> <ul style="list-style-type: none"> • Describe the relationships of objects in simple models, picture and patterns • Gain experience of instructions involving the idea of turn • Encounter a wide variety of everyday words to describe position, direction and movement. <p>P7</p> <ul style="list-style-type: none"> • Add one or two objects to a pattern begun by an adult. • Copy a model made by an adult • Experience the notion of turn • Respond to instructions that contain familiar words to describe position 	<p>P6</p> <ul style="list-style-type: none"> • Copy simple patterns or sequences • Begin to combine shapes to make models • Copy simple models by responding to directions to position pieces • Encounter and explore changes of position and orientation of themselves and objects • Show understanding of words, signs and symbols which describe positions <p>P5</p> <ul style="list-style-type: none"> • With support match objects or pictures • Encounter and initiate changes of position and orientation of themselves and objects <p>P4</p> <ul style="list-style-type: none"> • Show awareness of changes in shape, position or quantity • Encounter and notice changes of orientation of themselves and objects

Development Matters in the EYFS (40 – 60 months) Mathematics: Shape, space and measure

- Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.
- Selects a particular named shape.
- **Can describe their relative position such as 'behind' or 'next to'.**
- Orders two or three items by length or height.
- Orders two items by weight or capacity.
- **Uses familiar objects and common shapes to create and recreate patterns and build models.**
- Uses everyday language related to time.
- Beginning to use everyday language related to money.
- Orders and sequences familiar events.
- Measures short periods of time in simple ways.

Early Learning Goal

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. **They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them**

Summer Term Overview

Track Back Mathematics – New Curriculum (2014)				
Number – number and place value				
Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<ul style="list-style-type: none"> <input type="checkbox"/> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number <input type="checkbox"/> recognise the place value of each digit in a three-digit number (hundreds, tens, ones) <input type="checkbox"/> compare and order numbers up to 1000 <input type="checkbox"/> identify, represent and estimate numbers using different representations <input type="checkbox"/> read and write numbers up to 1000 in numerals and in words <input type="checkbox"/> solve number problems and practical problems involving these ideas. 	<ul style="list-style-type: none"> <input type="checkbox"/> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward <input type="checkbox"/> recognise the place value of each digit in a two-digit number (tens, ones) <input type="checkbox"/> identify, represent and estimate numbers using different representations, including the number line <input type="checkbox"/> compare and order numbers from 0 up to 100; use <, > and = signs <input type="checkbox"/> read and write numbers to at least 100 in numerals and in words <input type="checkbox"/> use place value and number facts to solve problems. 	<ul style="list-style-type: none"> <input type="checkbox"/> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number <input type="checkbox"/> count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens <input type="checkbox"/> given a number, identify one more and one less <input type="checkbox"/> identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least <input type="checkbox"/> read and write numbers from 1 to 20 in numerals and words. 	<p>Extension</p> <ul style="list-style-type: none"> • Use ordinal numbers in different contexts • Recite number names in order from 0 to 10 • Use developing mathematical understanding, ideas, methods and counting to solve practical problems • Recognise numerals 0-9 reliably • Relate numerals 0–9 to set of objects • Begin to record numbers of objects initially by making marks, progressing to simple tallying and writing numbers to 10 • Have contact with numerals to 100 <p>P8</p> <ul style="list-style-type: none"> • Continue the rote count onwards from any given small number • Know the numbers 0–9 relate to different but constant sizes of sets of objects • Indicate first and last • Begin to use developing mathematical understanding, ideas, methods and counting to solve practical problems • In role-play and practical situations estimate a small number of everyday objects and check by counting • Start to record numbers of objects with tokens, marks, tallies and numerals (with inconsistencies) • Begin to recognise numerals 0–9 • Begin to relate numerals 0–9 to sets of objects • Write the numerals to 5 and copy write them to 10 • Have contact with numerals to 50 <p>P7</p> <ul style="list-style-type: none"> • Join in rote counting to 10, possibly in the context of a rhyme • Begin to understand that a number represents a constant number or amount • Begin to use developing mathematical understanding and counting to solve simple problems that they may encounter in play, games or other work • Recognise numerals 0–5 and to understand that each represents a constant number or amount • Use tallies or other marks to represent (record and remember) quantities • Copy numerals to 5 • Have contact with numerals to 20 	<p>P6</p> <ul style="list-style-type: none"> • Join in with new number songs, stories and games with some assistance or encouragement • Use practical methods to associate names and symbols with numbers • Use understanding of counting small amounts to solve simple problems practically • Use the understanding of 'more' • Encounter and explore numerals 0–9 and beyond 10 • Use practical methods to associate names and symbols with numbers • Have some recognition of numerals up to 5 • Realise that numerals/tallies/pictures can record the number of objects <p>P5</p> <ul style="list-style-type: none"> • Join in with familiar number songs, stories and games with some assistance or encouragement • Use emerging understanding of counting small amounts to solve simple problems practically • Demonstrate an awareness of contrasting quantities by making groups of objects with help • Realise numerals represent quantities • Use concrete resources (e.g. tokens) to record and remember quantities or make pictorial representations showing quantities of groups • In role-play and practical situations indicate the correct numeral from a choice of two <p>P4</p> <ul style="list-style-type: none"> • Show an interest in number activities and counting • Anticipates an event/action when taking part in a familiar a number activity • Gain experience of numerals in classroom and other activities • Puts marks or symbols alongside pictures when undertaking mathematical activities

Development Matters in the EYFS (40 – 60 months) Mathematics: Numbers

- Recognise some numerals of personal significance.
- Recognises numerals 1 to 5.
- Counts up to three or four objects by saying one number name for each item.
- Counts actions or objects which cannot be moved.
- Counts objects to 10, and beginning to count beyond 10.
- Counts out up to six objects from a larger group.
- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- Uses the language of 'more' and 'fewer' to compare two sets of objects.
- Finds the total number of items in two groups by counting all of them.
- Says the number that is one more than a given number.
- Finds one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- Records, using marks that they can interpret and explain.
- Begins to identify own mathematical problems based on own interests and fascinations.

Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Measurement – Money, length, time and mass/weight

Year 3	Year 2	Year 1	P level 7–8 + Extension	P level 4-6
<p><input type="checkbox"/> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume</p> <p><input type="checkbox"/> measure the perimeter of simple 2-D shapes</p> <p><input type="checkbox"/> add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p><input type="checkbox"/> tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p><input type="checkbox"/> estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</p> <p><input type="checkbox"/> know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p><input type="checkbox"/> compare durations of events [for example to calculate the time taken by particular events or tasks].</p>	<p><input type="checkbox"/> choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p> <p><input type="checkbox"/> compare and order lengths, mass, volume and record the results using >, < and =</p> <p><input type="checkbox"/> recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</p> <p><input type="checkbox"/> find different combinations of coins that equal the same amounts of money</p> <p><input type="checkbox"/> solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p><input type="checkbox"/> compare and sequence intervals of time</p> <p><input type="checkbox"/> tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock</p>	<p><input type="checkbox"/> compare, describe and solve practical problems for:</p> <p>- lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</p> <p>- mass/weight [for example, heavy/light, heavier than, lighter than]</p> <p>- time [for example, quicker, slower, earlier, later]</p> <p><input type="checkbox"/> measure and begin to record the following:</p> <p>- lengths and heights</p> <p>- mass/weight</p> <p>- time (hours, minutes, seconds)</p> <p><input type="checkbox"/> recognise and know the value of different denominations of coins and notes</p> <p><input type="checkbox"/> sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</p> <p><input type="checkbox"/> recognise and use language relating to dates, including days of the week, weeks, months and years</p>	<p>Extension</p> <ul style="list-style-type: none"> • Begin to understand and use the vocabulary related to money • Describe solutions to practical problems, drawing on experience, talking about their own ideas, methods and choices • Make simple estimates and predictions • Chooses appropriate standard and non-standard measuring equipment from a selection to help them answer a question • With help use a variety of resources to solve simple measure problems and talk about their choices and solutions. • Use developing mathematical ideas and methods to solve and describe practical problems involving length mass / time / money in a real or role-play context. • Begin to understand and use the language of measures in practical contexts • Use the language of measures to compare the length mass of 2 or more objects in practical contexts • Understand and use the language of time • Begin to recognise o'clock on a clock face • Sequence familiar events in their day. • Match key personal events, e.g. Christmas and swimming in the sea, to the named seasons. • Compare how long it takes to do things using a simple timer <p>P8</p> <ul style="list-style-type: none"> • Begin to use developing mathematical understanding and counting to solve simple problems involving coins that they may encounter in play, games or other work • Chooses appropriate standard and non-standard measuring equipment from a selection of 2 or 3 items • Begin to use developing mathematical understanding and counting to solve simple problems involving length / mass that they may encounter in play, games or other work. • Describe the relationships of objects orally and through pictures and patterns. • In role-play and practical situations estimate to compare two or three objects • Begin to use in practical contexts some vocabulary related to measures • Order 2 items by their length mass. • Compare directly two objects • Use familiar words to describe measures in practical contexts. • Begin to be aware of and repeat the language of time • Recognise order in the day through ordering of significant events. • Links significant personal events to the passing of time. • Associate familiar activities and experiences to seasonal changes. • Understand different coins have different values. 	<p>P6</p> <ul style="list-style-type: none"> • Begin to understand that different coins are used in 'real life' giving and receiving activities • Have experience of using a range of standard and non standard measuring equipment • Copy simple patterns or sequences. • Gain understanding of concepts of length and mass through practical activities • Order things by a criteria according to model or picture • Show awareness of the vocabulary 'more' and 'less' in practical situations • Compare the overall length mass of one object with another when the difference is not great • Respond to some words, signs or symbols related to time. • Participate in the sequencing of pictures of two daily events. • Match objects and materials according to a given criteria relating to length, capacity, mass, time • Begin to be aware of the language of time used in everyday routines <p>P5</p> <ul style="list-style-type: none"> • Experience exchanging coins in exchange for items in a practical context • Have experience of using a range of standard and non standard measuring equipment • Gain understanding of length / capacity / mass / time through practical activities and through problem solving with an adult/peer. • Find 'big' and 'small' objects on request. • Compare the overall length mass / time of one object with another when there is a marked difference in size. • Encounter the vocabulary of time through daily discussions of days of the week and timetabled events for the day. • Join in with solving problems involving fitting quantities into different containers • Join in with solving problems involving weighing and comparing the mass of different size and shape objects • Join in with solving problems involving comparing different sized objects <p>P4</p> <ul style="list-style-type: none"> • Be aware of cause and effect in familiar mathematical activities • Have experience of using a range of standard and non standard measuring equipment • Take part in activities that are concerned with the relationships between objects. • Through exploration, gain awareness of differences in length / capacity / mass • Through exploration, gain awareness of differences in time

	<p>face to show these times</p> <ul style="list-style-type: none"> □ know the number of minutes in an hour and the number of hours in a day. 	<ul style="list-style-type: none"> □ tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. 	<p>P7</p> <ul style="list-style-type: none"> • Respond appropriately to key vocabulary and questions • Begin to understand coins have different values • Use 1p coins for items up to 5p and 10p • Uses standard and non-standard measuring equipment with adult assistance • Begin to use developing mathematical understanding involving length, capacity and mass to solve simple problems that they may encounter in play, games or other work • Use familiar words to compare sizes and quantities. • Develop awareness of time through discussion about daily and weekly events and when they happen. 	
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Development Matters in the EYFS (40 – 60 months) Mathematics: Shape, space and measure

- Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.
- Selects a particular named shape.
- Can describe their relative position such as 'behind' or 'next to'.
- **Orders two or three items by length or height.**
- **Orders two items by weight or capacity.**
- Uses familiar objects and common shapes to create and recreate patterns and build models.
- **Uses everyday language related to time.**
- **Beginning to use everyday language related to money.**
- **Orders and sequences familiar events.**
- **Measures short periods of time in simple ways.**

Early Learning Goal

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.