

East Lothian 'CFE Numeracy and Mathematic' Framework

Experiences and Outcomes	Time	Measurement	Patterns & Relationships
On track P2	<ul style="list-style-type: none"> I can name the months of the year I can name and describe the seasons I can describe when key events take place during the year, for example, birthdays Christmas etc. Within a calendar month I can find and place key events e.g. Christmas, Hallowe'en ,birthday I can tell the time to half hour intervals using analogue and digital 12 hour clocks I can use a sand timer to measure the duration of an activity I can write the short date and the long date 	<ul style="list-style-type: none"> I can make estimates of height, length, weight and capacity for everyday objects using appropriate non - standard units I can recognise the need for a standard unit of measure I can use metre sticks, cubes and balances to measure and compare height, length and weight of everyday objects I can explore and compare the amount a variety of containers can hold e.g. jugs, bottles, cups I can describe or explain what is meant by the term Area I can explore the area of different objects by drawing round them and discuss what I find I can compare and order the area of different shapes using non - standard units 	<ul style="list-style-type: none"> Using 3 variables I can continue and create a more complex repeated pattern I can read and continue a number pattern in 2s in a forward and backward sequence within my number range I can describe patterns in number sequences within my number range up to 120 using number squares and number lines I can explain the rule used to continue the pattern e.g. counting in jumps
On track in P3	<ul style="list-style-type: none"> I can sequence the months of the year in the correct order and link to the seasons I can read and use a calendar to plan events throughout the year I can say how many seconds are in a minute I can say how many minutes are in 1 hour I can tell the time to fifteen minute intervals using analogue and digital 12 hour clocks I can explain what is meant by am and pm I can read and interpret a simple 12 hour timetable I can select and use relevant timers for activities in real life contexts I can estimate the duration of an activity using unit measures of seconds, minutes and hours 	<ul style="list-style-type: none"> I can demonstrate that there are 100cm in a metre I can use appropriate instruments to record measurements of length, height, weight and capacity using correct units: cm, m, g, kg, ml, l I can make simple conversions e.g. cm into m I can identify the key markers on a measuring device e.g. scales, tape measures, measuring jugs I can recognise and explain why different shapes can have the same area (conservation of area) I can estimate and measure the area of a shape using squares 	<ul style="list-style-type: none"> Using three variables I can create and explain a repeated pattern I can read, continue and describe a number pattern in 2s and 3s in a forward and backward sequence within my number range I can describe patterns in number sequences within my number range using number squares and number lines I can explain the rule used to continue the pattern e.g. adding, subtracting,
On track in P4	<ul style="list-style-type: none"> I can say how many hours in a day, days in each month and weeks and days in a year I can read and interpret a variety of calendars and 12 hour time tables to plan events and calculate durations I can tell the time to five minute (or smaller) intervals using analogue and digital 12 hour clocks. I can record times in am and pm and can identify 24 hour notation in real life examples I can estimate the duration of an activity using unit measures of seconds, minutes and hours and compare estimates with actual measurements 	<ul style="list-style-type: none"> I can demonstrate that there are 1000ml in a litre I can demonstrate 1000g in a kilogram I can accurately use a range of appropriate instruments to record measurements of length, height, mass, weight and capacity using correct units: mm, cm, m, g, kg, ml, l, comparing measurements to estimates I can apply knowledge of fractions to read a variety of scales e.g. halves and quarters I can discuss the relationship between units of measure and make conversions using metre/cm kilogram/gram, litre/millilitre I can estimate and measure an area of a shape using squares and half squares I can create different shapes with the same given area to the nearest half square (applying the conservation of area) 	<ul style="list-style-type: none"> I can create and describe more complex patterns and sequences e.g. by rotating a shape I can read, continue and describe a number pattern in 2s, 3s ,5s and 10s in a forward and backward sequence within my number range I can explain the rule used to continue the pattern e.g. adding, subtracting, doubling, halving and known multiples

East Lothian 'CFE Numeracy and Mathematic' Framework

<p>National Benchmarks</p>	<ul style="list-style-type: none"> • Tells the time using half past, quarter past and quarter to using analogue and digital 12 hour clocks. • Records 12 hour times using am and pm and is able to identify 24 hour notation, for example, on a mobile phone or computer. • Records the date in a variety of ways, using words and numbers. • Uses and interprets a variety of calendars and 12 hour timetables to plan key events. • Knows the number of seconds in a minute, minutes in an hour, hours in a day, days in each month, weeks and days in a year. • Orders the months of the year and relates these to the appropriate seasons. • Selects and uses appropriate timers for specific purposes. 	<ul style="list-style-type: none"> • Uses knowledge of everyday objects to provide reasonable estimates of length, height, mass and capacity. • Makes accurate use of a range of instruments including rulers, metre sticks, digital scales and measuring jugs when measuring lengths, heights, mass and capacities using the most appropriate instrument for the task. • Records measurements of length, height, mass and capacity to the nearest standard unit, for example, millimetres (mm), centimetres (cm), grams (g), kilograms (kg), millilitres (ml), litres (l). • Compares measures with estimates. • Uses knowledge of relationships between units of measure to make simple conversions, for example, 1 m 58 cm = 158 cm. • Reads a variety of scales on measuring devices including those with simple fractions, for example, litre. • Uses square grids to estimate then measure the areas of a variety of simple 2D shapes to the nearest half square. • Creates shapes with a given area to the nearest half square using square tiles or grids. • Recognises that different shapes can have the same area (conservation of area). 	<ul style="list-style-type: none"> • Counts forwards and backwards in 2s, 5s and 10s from any whole number up to 1000. • Describes patterns in number, for example, in the multiplication tables and hundred square. • Continues and creates repeating patterns involving shapes, pictures and symbols. • Describes, continues and creates number patterns using addition, subtraction, doubling, halving, counting in jumps (skip counting) and known multiples.
-----------------------------------	--	---	---

East Lothian 'CFE Numeracy and Mathematic' Framework

Experience and Outcomes	2D Shape and 3D Objects	Angle, Symmetry and Transformation	Data and Analysis
<p>On track in P2</p>	<p>I have explored simple 3D objects and 2D shapes and can identify, name and describe their features using appropriate vocabulary. MTH 1-16a</p> <p>I can explore and discuss how and why different shapes fit together and create a tiling pattern with them. MTH 1-16b</p>	<p>I can describe, follow and record routes and journeys using signs, words and angles associated with direction and turning. MTH 1-17a</p> <p>I have developed an awareness of where grid reference systems are used in everyday contexts and can use them to locate and describe position MTH 1-18a</p> <p>I have explored symmetry in my own and the wider environment and can create and recognise symmetrical pictures, patterns and shapes. MTH 1-19a</p>	<p>I have explored a variety of ways in which data is presented and can ask and answer questions about the information it contains. MNU 1-20a</p> <p>I have used a range of ways to collect information and can sort it in a logical, organised and imaginative way using my own and others' criteria. MNU 1-20b</p> <p>Using technology and other methods, I can display data simply, clearly and accurately by creating tables, charts and diagrams, using simple labelling and scale. MNU 1-21a</p>
<p>On track in P3</p>	<ul style="list-style-type: none"> I can name and identify 2D shapes, such as, square, rectangle, triangle, circle I can use appropriate language to describe 2D shapes such as side and corner I can identify a tiling pattern in the environment I can name and identify 3D objects, such as, cube, cuboid, sphere, cylinder and cone I can use appropriate language to describe 3D objects, such as, faces, edges, corners I can name and identify 2D shapes within 3D objects I can group 2D shapes and 3D objects from a collection of different orientations and sizes 	<ul style="list-style-type: none"> I can use and explain directional vocabulary to follow or give instructions, forwards, backwards, left turn, right turn e.g. using Bee-bots, Terry Turtle I can identify the 4 main compass points north, south, east and west I can identify right angles in the environment and in well-known 2D shapes I can locate an object on a map using simple grid references I can recognise and discuss symmetrical patterns, pictures in shape, nature and wider environment I can identify a line of symmetry in patterns, pictures, nature and 2D shape I can create more complex symmetrical pictures and designs eg using pegboards, completing a symmetrical picture 	<ul style="list-style-type: none"> I can ask and answer questions to interpret information from a variety of sources e.g. pictograms, charts and bar graphs I can use appropriate vocabulary to describe and interpret information e.g. more than, less than, altogether I can explain how information gathering can be useful in our daily lives e.g. What to sell in Healthy Tuck Shop I can use different ways to collect data such as surveys and tally charts within my number range I can display information using different methods including pictograms, block graphs and appropriate technology I can include a title
<p>On track in P4</p>	<ul style="list-style-type: none"> I can name and identify 2D shapes, such as, square, rectangle, triangle, circle, pentagon, hexagon I can use appropriate language to describe 2D shapes such as side, corner and angle I can create or continue a tiling pattern using 2D shapes I can identify which shapes do and do not tile I can name and identify 3D objects, such as, cube, cuboid, sphere, cylinder, pyramids, cone I can use appropriate language to describe 3D objects, such as, faces, edges, corners, base I can name and identify 2D shapes within 3D objects I can group 2D shapes and 3D objects from a collection of different orientations and sizes 	<ul style="list-style-type: none"> I can use and explain directional vocabulary to follow or give instructions, forwards, backwards, left turn, right turn full turn, half turn, quarter turn clockwise, anticlockwise, right angle I can describe the angles in degrees associated with these turns, e.g. half turn = 180° I can use directional vocabulary associated with angles measured in degrees e.g. turn 90° anti clockwise I can identify the 8 main compass points north, south, east and west and relate these to the appropriate angles I can apply my understanding of compass points to describe the relative position of two objects I can identify when and why a grid reference is used I can describe, plot and use accurate grid references demonstrating knowledge of vertical and horizontal location I can recognise and describe shapes, pictures and patterns with more than one line of symmetry I can create symmetrical pictures using more than one line of symmetry 	<ul style="list-style-type: none"> I can ask and answer questions to interpret information from a variety of sources e.g. charts, diagrams, bar graphs and tables I can use appropriate vocabulary to describe and interpret information e.g. more than, less than, altogether I can use different ways to collect data such as questionnaires and group tallies within my number range I can display information using different methods including bar graphs, tables, Carroll diagrams, Venn diagrams and appropriate technology I can include a suitable title and simple labelling on both axes and appropriate scale where one value unit represents more than one data value in graphs

East Lothian 'CFE Numeracy and Mathematic' Framework

<p>National Benchmarks</p>	<ul style="list-style-type: none"> Names, identifies and classifies a range of simple 2D shapes and 3D objects and recognises these shapes in different orientations and sizes. Uses mathematical language to describe the properties of a range of common 2D shapes and 3D objects including, for example, side, face, edge, corner, base and angle. Identifies 2D shapes within 3D objects and recognises 3D objects from 2D drawings. Identifies examples of tiling in the environment and applies knowledge of the features of 2D shapes to create tiling patterns incorporating at least two different shapes. 	<ul style="list-style-type: none"> Uses technology and other methods to describe, follow and record directions using words associated with angles, directions and turns including, full turn, half turn, quarter turn, clockwise, anticlockwise, right turn, left turn, right angle. Knows that a right angle is 90°. Knows and uses the compass points, North, South, East and West. Identify where and why grid reference are used. Describes, plots and uses accurate grid references demonstrating knowledge of the horizontal and vertical location Identifies symmetry in patterns, pictures, nature and 2D shapes. Creates symmetrical pictures and designs with more than one line of symmetry 	<ul style="list-style-type: none"> Asks and answers questions to extract key information from a variety of data sets including charts, diagrams, bar graphs and tables. Uses this to inform choices and decisions. Selects and uses the most appropriate way to gather and sort data for a given purpose, justifying choice of method, for example, a survey, questionnaire or group tallies. Uses a variety of different methods, including the use of digital technologies, to display data, for example, as block graphs, bar graphs, tables, Carroll diagrams and Venn diagrams. Includes a suitable title, simple labelling on both axes and an appropriate scale where one unit represents more than one data value in graphs.
-----------------------------------	---	---	--

East Lothian 'CFE Numeracy and Mathematic' Framework

Experiences and Outcomes	Expressions and Equations	Ideas of Uncertainty and Chance	Mathematics – It's impact on the world, past, present and future
On track in P2	<p>I can compare, describe and show number relationships, using appropriate vocabulary and the symbols for equals, not equal to, less than and greater than. MTH 1-15A</p> <p>When a picture or symbol is used to replace a number in a number statement, I can find its value using my knowledge of number facts and explain my thinking to others. MTH 1-15B</p> <p>Within my number range</p> <ul style="list-style-type: none"> I can compare numbers and explain their relationship using the terms 'equal to', 'less than' and 'greater than' e.g. $2+3$ is equal to $3+2$, 3 is less than 5, 9 is greater than 7 I can compare numbers and explain their relationship using the symbol = e.g. $4+2 = 2+4$ I can apply understanding of the equals sign as a balance, and knowledge of number facts, to solve simple addition and subtraction and problems where a picture symbol is used to represent a number, e.g. $12 - \Delta = 9$ or $\Delta + 6 = 12$ 	<p>I can use appropriate vocabulary to describe the likelihood of events occurring, using the knowledge and experiences of myself and others to guide me. MNU 1-22a</p> <ul style="list-style-type: none"> I can use mathematical vocabulary to describe the likelihood of events occurring in everyday situations e.g. likely and unlikely 	<p>I can have discussed the important part that numbers play in the world and explored a variety of systems that have been used by civilisations throughout history to record numbers. MNU 1-12a</p> <ul style="list-style-type: none"> I can explain and give examples of the importance of numbers in my world e.g. money, telling the time, weighing ingredients
On track in P3	<p>Within my number range</p> <ul style="list-style-type: none"> I can compare numbers and explain their relationship using the terms 'equal to', 'less than', 'greater than' e.g. $1/3$ is not equal to $2/4$ I can compare numbers and explain their relationship using the symbols = < > e.g. $1/2$ of $20 \neq 5$ I can apply understanding of the equals sign as a balance, and knowledge of number facts, to solve simple algebraic problems using addition and subtraction where a picture symbol is used to represent a number, e.g. $10 + \Delta = 17$, $20 - \Delta = 15$ 	<ul style="list-style-type: none"> I can use mathematical vocabulary to describe the likelihood of events occurring in everyday situations including; likely / unlikely, certain / uncertain, possible / impossible I can make predictions about of the likelihood of everyday events occurring 	<ul style="list-style-type: none"> I can explain how numbers are used in learning, life and work e.g. working in a bank, retail etc. Having investigated a number system from history I can give examples of how numbers can be represented in different ways e.g. Roman Numerals
On track in P4	<p>Within my number range</p> <ul style="list-style-type: none"> I can understand and accurately use the terms "equal to", "not equal to", "less than", "greater than" and the related symbols ($= \neq < >$) when comparing sets of quantities? e.g. $3+4 < 3+6$ I can apply understanding of the equals sign as a balance, and knowledge of number facts, to solve simple algebraic problems using addition, subtraction, multiplication and division where a picture symbol is used to represent a number, e.g. $\Delta \times 6 = 12$, $18 \div \Delta = 6$ 	<ul style="list-style-type: none"> I can use mathematical vocabulary to appropriately describe the likelihood of events occurring in everyday situations including; likely / unlikely, certain / uncertain, never, possible / impossible, fair / unfair I can interpret data gathered through everyday experiences to make reasonable predictions about of the likelihood of an event occurring I can use dice, coins etc. to discuss the chance of sides/numbers appearing 	<ul style="list-style-type: none"> I have investigated and can share my understanding of a variety of number systems used throughout history e.g. list similarities and differences between different number systems
National Benchmarks	<ul style="list-style-type: none"> Understands and accurately use the terms equal to, not equal to, less than, greater than, and the related symbols when comparing sets of quantities. Applies understanding of the equals sign as a balance, and knowledge of number facts, to solve simple algebraic problems where a picture or symbol is used to represent a number, for example, $\blacklozenge + 17 = 30$ and $\blacklozenge \times 6 = 30$. 	<ul style="list-style-type: none"> Uses mathematical vocabulary appropriately to describe the likelihood of events occurring in everyday situations, for example, probable, likely/unlikely, certain/uncertain, never, possible/impossible, fair/unfair. Interprets data gathered through everyday experiences to make reasonable predictions of the likelihood of an event occurring. 	<ul style="list-style-type: none"> Investigates and shares understanding of the importance of numbers in learning, life and work. Investigates and shares understanding of a variety of number systems used throughout history.

East Lothian 'CFE Numeracy and Mathematic' Framework

	<p>Money</p> <p>I can use money to pay for items and can work out how much change I should receive. MNU 1-09a</p> <p>I have investigated how different combinations of coins and notes can be used to pay for goods or be given in change. MNU 1-09b</p>
On track in P2	<ul style="list-style-type: none"> • I can identify and name coin and notes, and place them in order of value up to £20. • I can use coins up to 20p to buy and sell items • I can use a variety of strategies to work out the change needed up to 20p e.g. count on from, count back to
On track in P3	<ul style="list-style-type: none"> • I can read amounts up to £5; use a decimal point to separate £ and p • I can use different combinations of coins and notes to make the same total within £5 • I can use a variety of coin combinations to pay for items and give change up to £1 • Within my knowledge of grouping and sharing in 2s and 3s I can apply knowledge of the four operations to mental and written money problems up to £1
On track in P4	<ul style="list-style-type: none"> • I can record and convert £ to p and vice versa up to £20. • I can pay for goods using different combinations of coins and notes and give change up to £20. • Within my knowledge of grouping and sharing in 2s, 3s, 5s and 10s I can apply knowledge of the four operations to mental and written money problems up to £20 in a variety of contexts. • I can show an awareness of paying for goods using cards and digital technology.
National Benchmarks	<ul style="list-style-type: none"> • Identifies and uses all coins and notes up to at least £20 and explores different ways of making the same total. • Records amounts accurately in different ways using the correct notation e.g. 149p = £1.49 and 7p = £0.07 • Uses a variety of coin and note combinations, to pay for items and give change within £10. • Applies mental agility number skills to calculate the total spent in a shopping situation and is able to calculate change. • Demonstrates awareness of how goods can be paid for using cards and digital technology.