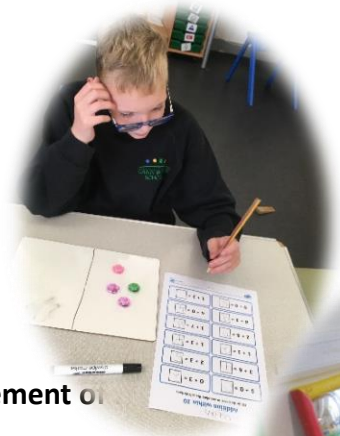
CANN BRIDGE SCHOOL

Maths Curriculum Policy






Statement of

Maths is integral to all aspects of life. It is important to equip learners with tools including reasoning, problem solving and the ability to think in abstract ways.

At Cann Bridge we believe it's important to promote positive attitudes towards maths and we are dedicated to providing learners with a well-rounded education. Our commitment to mathematics aligns with the national curriculum which focuses on our learners becoming fluent in the fundamentals of mathematics, be able to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or priest using mathematical language as well as solving problems by applying the mathematical skills to a variety of routine and non-routine problems.

Maths at Cann Bridge is adapted and scaffolded to meet the needs of all of our learners so that their full potential can be reached. It is important that mathematics is learner centred,

engaging and is developed through a broad and balanced curriculum which caters for all with a range of experiences in order to teach them necessary mathematical language and concepts in all areas of the curriculum. Each learner will be challenged to gain knowledge, skills and fluency along the four strands of mathematics (Number, Measure, Geometry and Statistics) at a developmental pace that suits them.

Implementation

At Cann Bridge school, maths is integrated into the curriculum through stand-alone lessons, continuous provision and cross curricular opportunities.

Our maths curriculums follows progression guidance based on Development Matters and the National Curriculum. The maths learning progression document ensures personalised support, challenges, and consideration of individual needs, promoting personal growth. The curriculum Rolling programme at Cann Bridge school ensures that learner's knowledge and skills in maths progress throughout their time here, providing continuity and structure. Teachers have flexibility in planning to meet the diverse needs of learners, tailoring lessons accordingly. The planning drive from the rolling programme informs both discrete teaching and continues provision, reinforcing and extending learning in maths. By providing a range of opportunities and provision for learners to apply their knowledge and skills, to help deepen their understanding of maths concepts

Impact

Through our maths curriculum, learners gain increased understanding and skills to support them in developing their independence for using functional maths in the community and recognising mathematical literacy.

We assess learners' progress using data-driven systems, enabling tailored teaching, learning and support to meet individual needs. Assessment data also helps track the effectiveness of our maths program using B Squared. This informs next progressive steps.

Monitoring, Evaluation, and Review

We ensure equal and appropriate access to the maths curriculum through ongoing monitoring, evaluation and review. The curriculum team leader for Understanding of the World conducts regular meetings with the Understanding of the World team, monitors learners learning and progress. The maths policy is reviewed yearly, and the action plan is updated accordingly.

Maths in EYFS

In EYFS, early mathematical development begins with foundational concepts that are essential for further learning. These initial skills go beyond numbers and arithmetic and involve cognitive abilities that form the basis for mathematical understanding.

These foundational concepts include:

- Attention: Being able to focus and concentrate is crucial for grasping mathematical concepts. Children need to pay attention to objects, patterns, and relationships to understand mathematical ideas.
- Object Permanence: This concept helps children understand that objects continue to exist even when they are out of sight. It forms the basis for understanding conservation of quantity, an important concept in math.
- Noticing Change and Movement: Observing changes in quantities, shapes, sizes, and movements helps children understand basic mathematical concepts such as addition, subtraction, geometry, and spatial reasoning.

Once these foundational cognitive skills are established, learners can then progress to early math skills that lay the groundwork for further mathematical learning. One crucial aspect is understanding the five number principles as well as subitising:

- Cardinality Principle: Understanding that the last number counted in a sequence represents the total number of objects in that set.
- The Stable Order Principle: This is the idea that the names of numbers should be said in the correct order, and that the order of those numbers will not change.
- One-to-One Correspondence Principle: This describes the necessity to count each item in a group only once. When we count, we assign one distinct name to each number.
- The Abstraction Principle: This is idea that we count everything in the same way, no matter what it is. Anything can be counted, from physical things to things that cannot be touched
- The Order Irrelevance Principle: This is the understanding that the order in which objects in a group are counted is not important. The number order does not change just because the counting order does.
- Subitising: Instantly recognising the number of objects in a small group without counting one by one.

Emphasising these principles helps lay a solid foundation for future mathematical learning, including arithmetic, problem-solving, algebra, and beyond. This approach ensures that learners develop a solid understanding of fundamental mathematical concepts from the very beginning, setting the stage for their ongoing mathematical journey.

Maths in Key Stage One

Building a solid foundation in mathematics during the early years is crucial for success in later stages, such as Key Stage 2 (typically for children aged 7-11). Key Stage 1, which precedes this

stage, focuses on reinforcing and expanding the fundamental math concepts while gradually introducing more complex ideas.

Embedding the prerequisite math skills in Key Stage 1 involves:

- Reinforcing Prerequisite Skills: Learners continue to enhance their understanding of basic mathematical concepts.
- Exploration and Application: Learners engage in hands-on activities, games, and practical exercises that allow them to apply their understanding of prerequisite math skills in various real-life contexts. This helps solidify their understanding and promotes critical thinking.
- Problem-solving: Encouraging learners to solve problems involving basic mathematical concepts helps them develop their reasoning skills and lays the groundwork for more complex problem-solving strategies in the future.

As learners progress towards Key Stage 2, particular emphasis on understanding the 5 number principles becomes crucial: The Cardinal Principle, The Stable Order principle, One-to-One Correspondence, The Order Irrelevance Principle, The Abstraction Principle, and as well as Subitising: Teachers focus on these principles to ensure learners have a strong grasp of fundamental number concepts. Engaging activities and exercises are designed to reinforce and deepen their understanding of these principles.

By mastering these principles in Key Stage 1, learners are better prepared for subject-specific learning in Key Stage 2. The aim is to ensure that learners enter Key Stage 2 with a confident and solid mathematical foundation, enabling them to tackle new challenges and concepts in the subject-specific curriculum with greater ease and understanding.

Maths in Key Stage Two

In Key Stage 2, there is a divergence in the educational approach between learners following the engagement curriculum and those on the subject-specific curriculum.

For learners on the engagement curriculum, the focus remains on the continuous development of foundational cognitive skills and the gradual progression of prerequisite math skills.

The emphasis is on nurturing fundamental cognitive abilities like attention, problem-solving, logical reasoning, spatial awareness, and other essential skills that underpin mathematical understanding. Learners continue to develop their math skills through various activities, games, and exercises tailored to their level, allowing them to reinforce and expand their understanding gradually.

On the other hand, learners following the subject-specific curriculum in Key Stage 2 engage in regular, discrete math lessons that align with the National Curriculum areas of Number, Measure, Geometry, and Statistics. The curriculum is designed to follow a 4-year rolling program, ensuring comprehensive coverage of the required curriculum content over the Key Stage.

This curriculum delves into specific mathematical concepts, progressively advancing from earlier stages into more complex topics within each domain (Number, Measure, Geometry, and Statistics). Lessons are structured to cover various mathematical skills, including arithmetic operations, fractions, measurement, shapes, and more.

The subject-specific curriculum aims to ensure a structured and systematic approach to mathematical learning, allowing learners to develop a deep understanding of mathematical concepts and skills as they move through Key Stage 2.

Both pathways (engagement and subject-specific) are designed to cater to the diverse needs and learning styles of students, ensuring that all learners receive appropriate support and instruction in mathematics, either through a focus on foundational skills or a more structured exploration of subject-specific content, enabling them to progress and achieve their full potential in mathematics.

Maths in Key Stage Three

In Key Stage 3, learners may still follow either a subject-specific curriculum or the engagement curriculum, depending on their individual learning needs and capabilities.

For learners following the subject-specific curriculum, mathematics continues to be taught as a standalone subject. It typically involves dedicated math lessons three times a week. These lessons are structured to cover a wide range of mathematical concepts and skills in line with the National Curriculum.

The curriculum in Key Stage 3 builds upon the foundations laid in Key Stage 2, diving deeper into more advanced topics within various mathematical elements. Lessons are designed to be comprehensive, allowing students to develop a better understanding of mathematical concepts.

For learners on the engagement curriculum, math continues to be integrated into various aspects of their learning. It might be delivered through play-based or sensory-led sessions, ensuring that mathematical concepts are introduced and reinforced in engaging and accessible ways that cater to individual learning styles.

The inclusion of streamed learning sessions in Key Stage 3 ensures that all learners have the best opportunity to access their math learning appropriately. These streamed sessions are be tailored to different ability levels, allowing for personalised support.

The Key Stage 3 curriculum typically follows a two-year rolling program. This structure ensures that the curriculum content is covered comprehensively over the span of Key Stage 3, providing students with the necessary exposure and practice to master the required mathematical skills and concepts.

Maths in Key Stage Four and Five

In Key Stage 4 and 5, the emphasis is placed on applying mathematical skills in real-life contexts, especially towards fostering independence and preparing learners for adult life. This includes:

- Real-life Application: Integrating mathematics into Work Related Learning and Functional activities allows learners to apply their mathematical skills in practical situations. This application-oriented approach enhances their understanding and demonstrates the relevance of math in everyday life.
- Focus on Financial Skills: Emphasising skills related to money and financial independence equips learners with essential capabilities for managing finances, budgeting, understanding transactions, and making informed financial decisions.

Cann Bridge recognises and supports learners who demonstrate an interest in mathematics ensures that they receive tailored instruction and opportunities to further develop their skills. This includes access to discrete math lessons, specialised learning materials, and accreditation pathways: entry level maths accreditation.

As well as continuous support in maintaining and advancing mathematical skills ensures that learners can reinforce their understanding and continue to progress, even if they have varied interests or strengths in mathematics.

Math skills integrated into various aspects of learning ensure a holistic approach, offering opportunities for learners to engage with math in different contexts.

Providing opportunities for learners to attain accreditations: NOCN Entry Level maths accreditation recognises their achievements and encourages ongoing learning and skill development.

By incorporating mathematics into functional activities and emphasising financial skills, learners gain practical experience and confidence in applying mathematical concepts to navigate real-life situations effectively. Simultaneously, offering tailored support ensures that each learner receives the necessary guidance to excel in mathematics.

This approach equips learners with crucial life skills, empowering them to navigate the complexities of adulthood and achieve greater independence.

White Rose Maths

Cann Bridge has chosen to follow the White Rose Maths scheme of work from Early Years Foundation Stage (EYFS) through to Key Stage 3. This decision is based on several key strengths of the White Rose Maths scheme:

- Small, Sequenced Steps: The scheme breaks down mathematical concepts into manageable, incremental steps, ensuring that learners can build a strong foundation before moving on to more complex topics.

- Specifically Structured Lessons: The lessons are designed with a clear structure, facilitating effective teaching and learning. Each lesson aims to build upon previous knowledge, reinforcing understanding and ensuring a coherent progression through the curriculum.

- Adaptability: The scheme is easily adaptable, allowing teachers to tailor lessons to meet the diverse needs of their learners. This flexibility ensures that all students, regardless of their starting points, can access and engage with the material.

- Precise Mathematical Vocabulary: Emphasis is placed on the use of precise mathematical vocabulary. This focus helps learners to develop a deep understanding of mathematical concepts and to communicate their reasoning clearly and accurately.

By implementing the White Rose Maths scheme, Cann Bridge aims to provide a high-quality mathematical education that supports all learners in developing their mathematical understanding and skills.

Accreditation and Assessment

At Cann Bridge School, we use B Squared Assessment Frameworks to track pupil progress across the school in all subjects. Our assessment policy provides detailed information on our approach to tracking and evaluating learners' progress.

Using B Squared allows us to effectively monitor and assess learners' Mathematical development, identifying any gaps in their learning and fundamental skills. This tracking system informs our planning process, enabling teachers to deliver appropriate lessons and provide learners with opportunities for development and progression.

By regularly assessing learners' progress in Mathematics, we ensure that our teaching aligns with their individual needs and enables them to make continuous improvements. This approach supports a comprehensive and tailored mathematic programme that promotes the development of understanding, use and application of their mathematical knowledge.

In Key Stage 4 and Key Stage 5, learners continue their progression in mathematics, building upon the foundational skills and concepts they have acquired in earlier stages. However, at this level, the focus shifts towards working towards NOCN Functional skills and Entry Level certificates, to formalise and recognise their mathematical achievements.

By working towards these accreditations, learners in Key Stage 4 and Key Stage 5 have the opportunity to demonstrate their mathematical competency and receive formal recognition for their achievements. This process not only validates their skills but also provides them with

tangible qualifications that can support their future academic or vocational pursuits, enhancing their prospects for higher education or employment.

Staff Training and Continued Professional Development

Continual Professional Development (CPD) in mathematics for teachers is a crucial aspect of maintaining and enhancing the quality of mathematic education.

Keeping Current with Educational Trends: The field of education, including mathematic instruction, is constantly evolving. CPD ensures that teachers stay up to date with the latest teaching methods, technologies, and best practices.

Enhancing Teaching Skills: CPD programs can help teachers improve their instructional strategies, classroom management techniques, and communication skills, all of which are essential for effective mathematics teaching.

Adapting to Changing Curriculum: Curriculum standards and educational requirements may change over time. Regular CPD allows teachers to adapt their teaching methods to align with the latest curriculum and assessment standards.

Addressing Learner Needs: Teachers encounter a diverse range of learners, each with unique learning needs. CPD can provide tools and strategies to address the needs of different learners, including those who require additional support or enrichment.

Audit and Accountability: Annual audits of teachers' knowledge and understanding of mathematics, followed by structured CPD, ensure accountability and quality assurance in mathematical education. This helps in maintaining high standards and can identify areas where improvement is needed.

Improved Learner Outcomes: Teachers who engage in ongoing CPD tend to be more effective in the classroom, which can lead to improved learner performance and outcomes in mathematics.

Incorporating regular audits and structured CPD plans for teachers in mathematics is a proactive approach to ensure that educators are equipped with the knowledge and skills necessary to provide high-quality mathematical education. It's an investment in both the teachers' professional development and the success of their students.

CANN BRIDGE SCHOOL

Maths Rolling Programme

Year group	Termly Topic					
	Autumn		Spring		Summer	
EYFS	Prerequisites to learning number Number principles Everyday mathematical experiences	Prerequisites to learning number Number principles Match, compare, sort	Prerequisites to learning number Number principles Measure and patterns	Prerequisites to learning number Number principles Shapes	Prerequisites to learning number Number principles Grouping and sharing	Prerequisites to learning number Number principles Shapes
KS1 Year 1	Measure	Number Principles	Shapes	Number Principles	Grouping and sharing	Number Principles
KS1 Year 2	Match, Compare, Sort	Number Principles	Measure and patterns	Number Principles	Shapes	Number Principles
KS2 Year 1	Number place value	Number addition and subtraction	Time	Number place value	Number addition and subtraction	Position and direction

KS2 Year 2	Number place value	Number addition and subtraction	Shape	Number place value	Number addition and subtraction	Measure: length and height
KS2 Year 3	Number place value	Number addition and subtraction	Time	Number place value	Number addition and subtraction	Money
KS2 Year 4	Number place value	Number addition and subtraction	Shape	Number place value	Number addition and subtraction	Measure: length and height
KS3 Year 1	Number place value	Number multiplication and division	Fractions	Money	Position and direction	Length and height
KS3 Year 2	Number place value	Number addition and subtraction	Time	Shape	Mass, capacity and temperature	Statistics
KS4 Year 1	Properties of Number/ Using Number/ 4 operations	Time: Timetables/Calendars	Measure: Money	Geometry: 2D and 3D Shapes	Measure: Length/ temperature	Statistics – Collecting & Recording Data
KS4 Year 2	Properties of Number/ Using Number/ 4 operations	Time: Clocks	Measure: Money	Geometry: Position and Direction	Measure: Capacity/ Weight	Number: Algebra
KS4 Year 3	Properties of Number/ Using Number/ 4 operations	Time: Problem Solving	Measure: Money	Geometry:	Number: Ratios/ fractions	Statistics – Data handling

KS5 Year 1	Properties of Number/ Using Number/ 4 operations	Time: Timetables/Calendars	Measure: Money	Geometry: 2D and 3D Shapes	Measure: Length/ temperature	Statistics – Collecting & Recording Data
KS5 Year 2	Properties of Number/ Using Number/ 4 operations	Time: Clocks	Measure: Money	Geometry: Position and Direction	Measure: Capacity/ Weight	Statistics – Data handling

Progression guidance for mathematics

Progression guidance is to be used to support with planning and assessment.

- **Prerequisite Maths Skills** (Number and place value, Addition and Subtraction, Multiplication and division, Shape and Space, Measure)
- **Number** (Place Value, Number facts, Addition and Subraction, Multiplication and Division, Fractions)
- **Geometry**
- **Measure** (Comparing and estimating, measuring and calculating, time, converting)
- **Statistics**
- **NOCN (Entry Level 1,2,3)**

Prerequisite Maths Skills: Number and Place Value

Pre1	Pre2	Pre3	Pre4	Pre5	Pre6
Attending	Notices changes in number or objects/ images	**1:1 Principle**	Counting to 5	Counting to 10	Counting to 20
Switching attention	Shows anticipation in number songs	**Staple Order Principle**	Comparing quantities of identical objects	Count/read/write any number forwards to 10	Read and write numbers to 20
Sustaining attention	Shows response to changing rhythms such as starting and stopping	**Cardinal Principle**	Comparing quanities of non-identical objects	Count/read/write any number backwards from 10	Count forwards and backwards to 20
Turn taking	Develops an awareness of number names through songs	**Abstraction Principle**		Count one more/less within 10	Find 1 more, 1 less to 20
Anticipation	Says or indicated some counting words randomly	**The Order Irrelevance Principle**		Comparing groups to 10	Partition tens and ones within 20
Perception and sensations	Develops an awareness of 1:1 corressonpence			Compare using equal, more/greater, less/fewer	Introduce < > and = symbols
Maipulation				Order groups of objects to 10	Compare numbers to 20
Placing, Grasping, Finger skills				Order numbers to 10	Order numbers to 20
Observing changes				Ordinal numbers	Order groups of objects to 20

Making choices and judgements				Use of numberlines	
Cause/Effect					
Persistence					

Prerequisite Maths Skills: Number Addition and Subtraction

Pre1	Pre2	Pre3	Pre4	Pre5	Pre6
Attending	Notices changes in number or objects/ images	**1:1 Principle**	Counting to 5	Counting to 10	Adding by counting on
Switching attention	Shows anticipation in number songs	**Staple Order Principle**	Finding one more within 5	Introducing zero	Taking away by counting back
Sustaining attention	Shows response to changing rhythms such as starting and stopping	**Cardinal Principle**	Finding one less within 5	Combine 2 groups to find the whole	Addition symbol (+)
Turn taking	Develops an awareness of number names through songs	**Abstraction Principle**	Number bonds to 5	Number bonds to 10	Taking away (how many left) by crossing out
Anticipation	Says or indicated some counting words randomly	**The Order Irrelevance Principle**			Subtraction symbol (-)
Perception and sensations	Develops an awareness of 1:1 corressonpence				
Maipulation					
Placing, Grasping, Finger skills					
Observing changes					

Making choices and judgements					
Cause/Effect					
Persistence					

Prerequisite Maths Skills: Number and Multiplication

Pre1	Pre2	Pre3	Pre4	Pre5	Pre6
Attending	Notices changes in number or objects/ images	**1:1 Principle**	Doubling numbers	Sharing numbers	Being to count in 2s
Switching attention	Shows anticipation in number songs	**Staple Order Principle**			Being to count in 5s
Sustaining attention	Shows response to changing rhythms such as starting and stopping	**Cardinal Principle**			Being to count in 10s
Turn taking	Develops an awareness of number names through songs	**Abstraction Principle**			Make equal groups
Anticipation	Says or indicated some counting words randomly	**The Order Irrelevance Principle**			Add equal groups
Perception and sensations	Develops an awareness of 1:1 corressonpence				Make arrays
Maipulation					Make doubles
Placing, Grasping, Finger skills					Make equal groups by sharing

Observing changes					
Making choices and judgements					
Cause/Effect					
Persistence					

Prerequisite Maths Skills: Fractions

Pre1	Pre2	Pre3	Pre4	Pre5	Pre6
Attending	Notices changes in number or objects/ images	**1:1 Principle**	Havling	Odd and even numbers	Find half of an object or shape
Switching attention	Shows anticipation in number songs	**Staple Order Principle**			Find half of an amount
Sustaining attention	Shows response to changing rhythms such as starting and stopping	**Cardinal Principle**			Find a quarter of a shape or object
Turn taking	Develops an awareness of number names through songs	**Abstraction Principle**			Find a quarter of a shape or object
Anticipation	Says or indicated some counting words randomly	**The Order Irrelevance Principle**			
Perception and sensations	Develops an awareness of 1:1 corressonpence				
Maipulation					

Placing, Grasping, Finger skills					
Observing changes					
Making choices and judgements					
Cause/Effect					
Persistence					

Prerequistie skills in Geometry

Pre1	Pre2	Pre3	Pre4	Pre5	Pre6
Opportunities to explore spaces (open and closed spaces)	Shows repsonse to objects of different size	Recognises common 2D shapes	Categorises objects according to their properties such as shape or size	Begins to talk/communicate about the shapes of everyday objects e.g. round and tall	**SPACTIAL AWARENESS** (including ecploring postional language)
Opportunities to explore objects	Fills or empties contrainers with support	Explores form of objects	Notices simple shapes and patterns in pictures	Uses shapes appropriately for tasks	Recognise and name 2D shapes
Opportunities to explore their own body and movements	Reaches to touch and begins to explore big and small objects	Enjoys filling and emptying containers	Uses preferred mode of communication to indicate big or small	Shows awareness of similarities of shapes in the environment	Sort 2D shapes
Opportunities to play	Recognises bif things and small thing in meaningful contexts	Eye/hand points to direct the actions of another to attempt to put shaoes into matching space	Begins to use the language of size	Shows an interest in shape and space by playing with shapes or making arrangements with objects	Recognise and name 3D shapes
		Moves blocks/ objects with purpose		Shows an interest in shapes in the environment	Sort 3D shapes

		Uses blocks to create their own simple structures and arrangements		Extends or creats a simple repeated pattern	Make simple patterns
		Attempts, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles		Shows an interest in shape by sustained contruction activity or talking about shapes or arrangements	Explore more complex patterns
		Explore objects of different sizes, weights and lengths		Use positional langauge in preferred mode of communication	Describe turns
					Describe position with objects
					Describe position with self

Prerequesite Skills in Measure

Pre1	Pre2	Pre3	Pre4	Pre5	Pre6
Opportunities to explore spaces (open and closed spaces)	Shows response to objects of different size	Moves blocks/objects with purpose	Using language of size	Begins to talk/ communicate about the shapes of every day objects (tall, round)	Explore length, capacity, height, distance, weight and capactity
		Explores objects of different sies, weights and lengths	Beginning to categorise objects according to their properties such as size or shape		
Opportunities to explore objects	Reaches to touch and beings to explore big and small objects	Uses blocks to create their own simple strctures and arrangements	Simple positional language (big and small/ full and empty)	Begins to talk/ communicate about the properties of object (heavy, long)	Order by length, capacity, height, distance and weight

Opportunities to explore their own body and movements	Recognises big and small things in meaningful contexts	Enjoys filling and emptying containers	Compare objects of different length, weight and size.	Uses money language in activities	Counts coins
Opportunities to play	Fills or empties containers with appropriate support	Notcies full or emty using perferred mode of communcation	Makes exchanges	Becomes familiar with names of the days of the week	Recognises coins and notes
	Interacting with others	Makes a choice	Turn taking	Explore simples measure of time e.g. sand timers	Order and sequence familiar events
		Finding perferences			
	Copying and mimicking behaviours	Communicating to introduce session/direct actions	Starting and finishing		Measure short periods of time
	Awareness of daily routines, such as getting up, mealtimes, nappy time and bed time	Understanding that things might be starting now	Using and understanding simple time language (now and then)		
		Responding to unplanned event			
	Anticipate meaningful events in response to object/song of reference	Correctly identifies object/song of reference for part of the school day	Fimilar with routines and times of day		
		Associates a sequence of actions with daily routines			

Number: Place Value

1	2	3	4	5	6
Count within 100, forwards and backwards, starting with any number.		Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.	Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).

	Recognise the place value of each digit in two-digit numbers and compose and decompose two-digit numbers using standard and nonstandard partitioning.	Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning	Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning	Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning	Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning
Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =	Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10	Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each	Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each	Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts
		Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts	Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts	Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts	Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts
				Convert between units of measure, including using common decimals and fractions	

Number Facts

1	2	3	4	5	6
Develop fluency in addition and subtraction facts within 10	Secure fluency in addition and subtraction facts within 10, through continued practice	Secure fluency in addition and subtraction facts that bridge 10, through continued practice			
Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count		Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these	Recall multiplication and division facts up to 12x12, and recognise products in multiplication tables as	Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	

forwards and backwards through the odd numbers		multiplication tables as multiples of the corresponding number	multiples of the corresponding number		
			Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.		
		Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10)	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth)	

Number: Addition and Subrtaction

1	2	3	4	5	6
Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.	Add and subtract across 10	Calculate complements to 100.			Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number)

Read, write, and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?".	Add and subtract up to three-digit numbers using columnar methods			Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding
	Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.	Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction			Solve problems involving ratio relationships.
	Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers				Solve problems with 2 unknowns.

Number: Multiplication and division

1	2	3	4	5	6
	Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division.	Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a	Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times	For year 6, MD ready-to-progress criteria are combined with AS ready-to-progress criteria (please see above).

			number 10 or 100 times the size.	the size, or 1 tenth or 1 hundredth times the size.	
	Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division).		Manipulate multiplication and division equations and understand and apply the commutative property of multiplication.	Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	
			Understand and apply the distributive property of multiplication.	Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	
				Divide a number with up to 4 digits by a one-digit number using a formal written method and interpret remainders appropriately for the context.	

Number:Fraction

1	2	3	4	5	6
		Interpret and write proper fractions to represent 1 or several parts of a whole			Recognise when fractions can be simplified and use common factors to simplify fractions.

		that is divided into equal parts.			
		Find unit fractions of quantities using known division facts (multiplication tables fluency).		Find non-unit fractions of quantities.	Express fractions in a common denomination and use this to compare fractions that are similar in value.
		Reason about the location of any fraction within 1 in the linear number system.	Reason about the location of mixed numbers in the linear number system.		Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.
			Convert mixed numbers to improper fractions and vice versa.	Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	
		Add and subtract fractions with the same denominator, within 1.	Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	Recall decimal fraction equivalents for ½, ¼, 1/5 and 1/10, and for multiples of these proper fractions.	

Geometry

Measure: Comnparing and estimating

1	2	3	4	5	6
Compare, describe, and solve practical problems for: * Lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * Capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * Time [e.g. quicker, slower, earlier, later]	Compare and order lengths, mass, volume/capacity and record the results using >, < and =		Estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)	Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes (also included in measuring) Estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water)	Calculate, estimate, and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3), and extending to other units such as mm3 and km3.
Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday,	Compare and sequence intervals of time	Compare durations of events, for example to calculate the time taken by particular events or tasks			

tomorrow, morning, afternoon, and evening]					
		Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon, and midnight (appears also in Telling the Time)			

Measure: Measuring and Calculating

1	2	3	4	5	6
Measure and begin to record the following: * Lengths and heights * mass/weight * Capacity and volume * **Time** (hours, minutes, seconds**)**	Choose and use appropriate standard units to estimate and measure **length/height** in any direction (m/cm); **mass** (kg/g); **temperature** (°C); **capacity** (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Measure, compare, add and subtract: **lengths** (m/cm/mm); **mass** (kg/g); **volume/capacity** (l/ml)	Estimate, compare and calculate **different measures,** including **money in pounds and pence** (appears also in Comparing)	Use all four operations to solve problems involving measure (e.g. **length, mass, volume, money**) using decimal notation including scaling.	Solve problems involving the calculation and conversion of **units of measure**, using decimal notation up to three decimal places where appropriate (appears also in Converting)
		Measure the **perimeter** of simple 2-D shapes	Measure and calculate the **perimeter** of a rectilinear figure (including squares) in centimetres and metres	Measure and calculate the **perimeter** of composite rectilinear shapes in centimetres and metres	Recognise that shapes with the same areas can have different **perimeters** and vice versa
Recognise and know the value of different denominations of **coins and notes**	Recognise and use symbols for pounds **(£) and pence (p)**; combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money **Solve simple problems** in a practical context involving addition and subtraction of money of the same unit, including giving change	Add and subtract amounts of **money** to give change, using both £ and p in practical contexts			

			Find the area of rectilinear shapes by counting squares	Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes *recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)* (copied from Multiplication and Division)	Calculate the area of parallelograms and triangles
					Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [e.g. mm3 and km3].
					Recognise when it is possible to use formulae for area and volume of shapes

Measure: Time

1	2	3	4	5	6
Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)		
Recognise and use language relating to dates, including days of the week, weeks, months and years	Know the number of minutes in an hour and the number of hours in a day. (appears also in Converting)	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Comparing and Estimating)			
			Solve problems involving converting from hours to minutes; minutes to	Solve problems involving converting from hours to minutes; minutes to	

			seconds; years to months; weeks to days (appears also in Converting)	seconds; years to months; weeks to days (appears also in Converting)	

Measure: Converting

1	2	3	4	5	6
	Know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)	Know the number of seconds in a minute and the number of days in each month, year and leap year	Convert between different units of measure (e.g. kilometre to metre; hour to minute)	Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
			Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)	Solve problems involving converting between units of time	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Measuring and Calculating)
			Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days	Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	Convert between miles and kilometres

			(appears also in Telling the Time)		

Geometry: Property of Shape: Identifying shapes and their properties

1	2	3	4	5	6
Recognise and name common 2-D and 3-D shapes, including: * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes),	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line		Identify lines of symmetry in 2-D shapes presented in different orientations	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	Recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing)
	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces				Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
	Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]				

Geometry: Property of Shape: Drawing and Constructing

1	2	3	4	5	6
		Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Complete a simple symmetric figure with respect to a specific line of symmetry	Draw given angles, and measure them in degrees (o)	Draw 2-D shapes using given dimensions and angles
					Recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties)

Geometry: Property of Shape: Comparing and Classifying

1	2	3	4	5	6
	Compare and sort common 2-D and 3-D shapes and everyday objects		Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Use the 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	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

Geometry: Property of Shape: Angle

1	2	3	4	5	6
		Recognise angles as a property of shape or a description of a turn		Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	
		Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and	Identify acute and obtuse angles and compare and order angles up to two right angles by size	Identify: * angles at a point and one whole turn (total 360o)	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

		four a complete turn; identify whether angles are greater than or less than a right angle		* angles at a point on a straight line and ½ a turn (total 180o) * other multiples of 90o	
		Identify horizontal and vertical lines and pairs of perpendicular and parallel lines			

Geometry: Position and Direction and Movement

1	2	3	4	5	6
Describe position, direction and movement, including half, quarter and three-quarter turns.	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)		Describe positions on a 2-D grid as coordinates in the first quadrant	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	Describe positions on the full coordinate grid (all four quadrants)

			Describe movements between positions as translations of a given unit to the left/right and up/down		Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
			Plot specified points and draw sides to complete a given polygon		
	Order and arrange combinations of mathematical objects in patterns and sequences				

Statistics: Interpreting, Constructing and Presenting Data

1	2	3	4	5	6
	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	Interpret and present data using bar charts, pictograms and tables	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	Complete, read and interpret information in tables, including timetables	Interpret and construct pie charts and line graphs and use these to solve problems
	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				

Statistics: Solving Problems

1	2	3	4	5	6
		Solve one-step and two-step questions [e.g. 'How many more?' and 'How	Solve comparison, sum and difference problems using information presented	Solve comparison, sum and difference problems using information presented in a line graph	Calculate and interpret the mean as an average

		many fewer?’] using information presented in scaled bar charts and pictograms and tables.	in bar charts, pictograms, tables and other graphs.		

Algebra: Equations

1	2	3	4	5	6

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and ***missing number problems*** *such as* *7 = □ - 9* (copied from Addition and Subtraction)	*Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and* ***missing number*** *problems.* (copied from Addition and Subtraction)	Solve problems, *including* ***missing number*** *problems, using number facts, place value, and more complex addition and subtraction.* (copied from Addition and Subtraction) *Solve problems, including* ***missing number*** *problems, involving multiplication and division, including integer scaling* (copied from Multiplication and Division)		*Use the properties of rectangles to deduce related facts and find* ***missing lengths and angles*** (copied from Geometry: Properties of Shapes)	Express missing number problems algebraically
	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (copied from Addition and Subtraction)				Find pairs of numbers that satisfy number sentences involving two unknowns
Represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction)					Enumerate all possibilities of combinations of two variables

Algebra: Formule

1	2	3	4	5	6
			Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. *(Copied from NSG measurement)*		Use simple formulae *Recognise when it is possible to use **formulae** for area and volume of shapes* (copied from Measurement)

Algebra: Sequences

1	2	3	4	5	6
Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement)	*Compare and sequence intervals of time* (copied from Measurement) *Order and arrange combinations of mathematical objects in patterns* (copied from Geometry: position and direction)				Generate and describe linear number sequences

NOCN entry-level certificates

	Entry level I	Entry level II	Entry level III
Planning to Improve Performance in Mathematics	Recognise, from given material, three of his/her strengths in mathematics.	Indicate strengths in mathematics	Identify three strengths in mathematics.
		Identify an area to develop in mathematics skills.	Identify two priority areas for self improvement.
	Choose, from given material, one priority area for self-improvement in mathematics.	Identify one priority area for development to progress in mathematics.	Identify targets, which will help to improve performance in the priority areas.
		Indicate steps to achieve that target.	Identify how these targets might be achieved.
	Recognise, from given material, one target which will help to improve his/her performance in mathematics.	State when the target will be achieved.	Identify by when these targets might be achieved.
		Indicate how she/he will know the target is achieved.	
	Communicate the target and how it might be achieved.		
Addition	Identify words used for addition	Identify words used for addition	Decide when to use addition in at least teo different practical situations.
	Identify symbols used for addition.		
	Match sums in words to number sentences.	Identify symbols used for addition	Present results in context.
	Add objects to total up to 20.		
	Add single digit numbers to total up to 20.	Write number sentences for addition.	Decide when to use a combination of addition and subtraction in at least 2 different practical situations
	Make addition sentences with numbers and symbols to total up to 20.	Add two digit whole numbers with totals up to 200 using different methods	
	Use a calculator to add single digit numbers to total up to 20.	Use a calculator to add double digit numbers to total up to 200.	Present resilts in context.

	Use a calculator to check answers are correct for additions that total up to 20.	Use a calculator to show the answers for addition are correct.	
	Match equivalent additions that total up to 20	Approximate by rounding to the nearest 10, and use rounded numbers to check answers	
	Use addition in practical situations where the answer totals up to 20.	Use + and = in practical situations to solve problems.	
Handling Data	Select information from lists	Extract information from tables	Extract information from: a) Tables b) Diagrams c) Simple charts
	Check items against a short list.	extract information from the lists	Interpret information from: a) Tables b) Diagrams c) Simple charts d) Simple line graphs
	Sort objects using a single given criterion.	extract information from diagrams	Identify categories on a bar chart or pictogram
	Give a reason for using specific criteria for sorting objects	Extract information from block graphs	Use a bar chart, line graph or pictogram to read the frequencies of categories.
	Sort a set of objects using different single criteria in turn.	Make numerical comparisons from block graphs	Make comparisons between categories using a bar chart, line graph or pictogram.
	Give a reason for using different criteria for sorting objects.	sort a set of objects using two criteria	Identify categories for different collections of data.
	Classify objects using a single given criterion.	Give reasons for using specific criteria for sorting	Collect data in a tally chart.
	Give a reason for using specific criteria for sorting objects.	Collect numerical information	Translate the tally into a frequency table by totally the tallies.

	Classify a set of objects using different single criteria in turn.	Organise information into categories	Display data collected in a table, char chart, line graph or pictogram.
	Give a reason for using different criteria for classifying objects	Record information	Display given data sets in different ways.
	Identify ways that information can be represented	Represent information as a: a) simple table b) simple bar chart c) diagram d) list	
	Represent data in different ways, including simple bar charts, diagrams, and tally charts.		
Number	Count forward from 1 to 20 in order	Count 1 to 100 in order	Read whole nuumbers up to 1000 in digit form.
	Count on from any number up to 20.	Count items up to 100	Read number names of whole numbers up to 1000.
	Count items up to 20, recognising that if they are rearranged they are still the same number	read number names 1 to 200	Record whole numbers up to 1000 in digit form.
	Count back from 20 to 1.	Write number names 1 to 200	
	Count back to 1 from any number up to 20.	read numbers 1 to 200 in digital form	Record number names of whole numbers up to 1000.
	Write number names 0 to 20.	write numbers 1 to 200 in digital form	
	Read numbers from 0 to 20 in digit form	match numbers 0 to 200 in digits to number words 0 to 200	Arrange whole numbers up to 1000 in numerical order.
	Read number names from 0 to 20.	Identify units and tens and hundreds in three digit numbers	
	Match numbers in words and digit form up to 20.	identify zero as placeholder in three digit numbers	Idfentify hundreds, tens and units placce value.
	Arrange digits in order of size 0 to 20.	arrange numbers in order of size up to 200	

	Identify when a number is lower or higher than another, using numbers up to 20.	identify odd and even numbers up to 100	Count up to 1000 in: a) Twos b) Fives c) Tens
	Compare numbers 0 to 20 as being more than or less than another	count on in tens up to 200 starting from any two digit number	
	Identify ordinal numbers up to 20.	compare size of numbers up to 200	Count up to 1000 in 100s
		Approximate answers by rounding up or down to the nearest 10	Round whole numbers up to 1000 to the nearest 10.
			Round whole numbers up to 1000 to the nearest 100.
			Use rounded numbers to check results by approximation.
			Use numbers in two different everyday situations.
Subtraction	Identify words used for subtraction.	Identify words used to subtraction	Decide when to use subtraction in at least two different practical situations.
	Identify symbols used for subtraction.	identify symbols used for subtraction	Present results in context.
	Match subtraction sums in words to number sentences.	Write number sentences for subtraction.	Decide when to use a combination of addition and subraction in at least two different practical situations.
	Subtract objects from numbers up to 20.	Subtract one digit numbers from two digit whole numbers.	Present results in context.
	Subtract numbers from numbers up to 20.	Subtract two digit whole numbers from to digit whole numbers.	
	Make subtraction sentences with numbers and symbols.	Use a calculator show the answers to subtraction calculations are correct.	
	Use a calculator to subtract numbers from numbers up to 20.	Approximate by rounding to the nearest 10, and used Calculator check the answers.	

	Use a calculator to check answers to subtractions are correct where the highest number is 20 or less.	Use - and = in practical situations to solve their problems.	
	Use subtraction in practical situations where the highest number is 20 or less.		
Understanding measures	Identify familiar objects in terms of size.	**Capacity**	**Distance and length**
	State whether a familiar object is bigger or smaller than another.	Estimate using non-standard measures of capacity.	Identify the units for measuring disntances.
	Use mathematical vocabulary to state the: a) Length of familiar objects b) Width of familiar objects c) Height of familiar objects.	Estimate capacity of containers in whole litres.	Read distances on road signs.
	Compare familiar objects using specific vocabulary related to: a) Length b) Width c) Height.	Identify units of capacity including litres a millilitres.	Estimate disntance in miles when following and giving directions.
	Identify familiar objects in terms of weight.	Read capacity of containers in litres and millilitres.	Read lengths in decimal notation using metric measurements, including mm,cm,m,km.
	Use the vocabulary of weight to identify familiar objects.	Measure capacity of containers in whole litres a millilitres.	Recognise in practical contexts the equivalencies: a) 100cm=1m b) 10mm = 1cm c) 1000m=1km d) 50cm-0.5m (using 0 as a place hollder)

	Compare familiar objects of different sizes in terms of weight.	Record capacity of containers in whole litres and millilitres.	Select units of length to measure in everday situations.
	Compare familiar objects of the same size in terms of weight.	Compare estimated capacity of containers to actual capacity of containers using: A) non-standard measures B) itres and millilitres	Select intruments to measure items in practical situations.
	Use the vocabulary of capacity to identify familiar objects	**Length**	Measure items using labelled divisions on measuring instruments.
	Compare familiar objects in terms of capacity.	Estimate the length of objects using non-standard measures of length.	Measure items using unlabelled divisions on measuring instruments.
		Estimate the length of objects and whole metres and whole centimetres.	Record lengths in decimal notation using metric measurements.
		Identify units of length.	Order lengths using decimal notation uo to 2 decimal places.
		Read length in: a) Millimetres b) Centimetres c) Metres d) kilometres	Estimate lengths to a reasonable degree of accuracy in everyday situations.
		Record the length of objects using: A) Millimetres B) Centimetres C) Metres D) kilometres	**Weight and Capacity**

		Compare estimated length of different objects to actual length of objects.	Read capacity in decimal notation using metric measurements.
		Compare lengths of familiar objects using measurements to 1 Decimal place E.G 1 .5 m or 2.5 cm	Record capactiy in decimal notation using metric measurements.
		Weight	Identify that 1000ml is 1 litre.
		Identify units of weight, including grams and kilograms.	Select units of capactity for everyday items.
		Estimate weights of items to be more or less than a kilogram.	Measure the capactiy of containers by filling containers of unknown capacity using containers of known capacity.
		Estimate weights of objects to the nearest kilogram.	Identify the capacity of containers by reading labelled divisions on a measuring jug.
		Identify items to weigh in kilograms and items to weigh in grams.	Estimate the capactiy of containers.
		Read weight in kilograms and grams to the nearest label division.	Compare estimated and actual capacities of containers.
		Weigh items using kilograms and grams as units of measurement.	Read weights in decimal notation using metric measurements.
		Identify kilogram divisions when weighing items using Scales.	Record weights in decimal notation using metric measurements.
		Record the weights of items in kilograms and grams.	Read a weighing scale to labelled divisions.
		Compare estimated weights to actual weights to the nearest kilogram or the nearest gram.	Read a weighing sccale to unlabelled divisions.

			Select metric units of weight for everyday items.
			Order weights in decimal notation up to 2 decimal places.
			Estimate the weight of everyday items in decimal notation using metric measurements
			Compare estimated and actual weights in decimal notation using metric measurements.
Understanding shape and space	Identify regular 2D shapes.	List 2D shapes, including Pentagon hexagon cylinder.	Identify 2D shapes by: a) Number and length of sides b) Number of equal sides c) Number of angles, including right angles, in 3D shapes d) Lines of symmetry
	Identify regular 3D shapes	State the properties of 2D shapes.	Identify angles, including right angles, in 3D shapes
	Name 2D shapes, including circle, rectangle, square and triangle.	List 3D shapes, including cuboid, pyramid and sphere.	Use the properties of 2D and 3D shapes to colve practical everyday problems.
	Name 3D shapes including cube.	State the properties of 3D shapes.	
	Sort a set of 2D and 3D shapes of different sizes.	Identify 2D and 3D shapes and practical contexts.	
	Use positional language in familiar contexts.	Demonstrate use of positional language by giving directions, including between, inside, outside, middle, below, on top, forwards and backwards.	
	Read numbers up to the number 20 in everyday contexts		

Using mathematics in everyday contexts	Write numbers up to the number 20 in everyday contexts		
	Compare numbers up to the number 20 in everyday contexts.		
	Use numbers up to the number 20 in everyday situations		
	Use coins and notes involving numbers up to 20 in everyday contexts		
	Use the language and concept of o' clock in everyday contexts		
	Read 12-hour digital clocks in hours		
	Read analogue clocks in hours		
	Use addition of numbers up to 20 in everyday contexts.		
	Use subtraction involving numbers up to 20 in everyday contexts.		
Money and time	Identify 1p, 2p, 5p and 10p coins.	**Money**	**Money**
	Identify £1 and £2 coins and £5, £10 and £20 notes	Identify coins.	Add up to 3 amounts of money in decimal notation showing the working out.
	Identify the symbols 'p' and '£' in practical contexts.	Identify notes up to £20.	Add up to 3 amounts of money in decimal notation using a calculator.
	Choose coins to total up to 10p in different ways	Choose coins to make amounts of money up to 1 pound in different ways.	Subtract amounts of money in decimal notation shown working out.
	Choose pound coins and notes to total to £20 in different ways.	Choose coins and notes to make amounts of money up to £200 total	Subtract amounts of money in decimal notation using a calculator.
	Identify the relative value of coins up to 20p.	Calculate the cost of more than one item independence in familiar contexts .	Read and record prices in decimal notations in practical situations.

	Identify the relative value of coins and notes up to £20.	Calculate the cost of more than one item in whole pounds in familiar contexts.	Compare prices in decimal notation into practical situations.
	Relate familiar daily events to parts of the day.	Calculate the change from given amounts in p.	Calculate using money in pounds and pence in at least two different practical situations.
	Tell the time in o' clock times.	Calculate the change from given amounts in whole pounds.	Check answers using different methods, including approximation by rounding to the nearest 1 pound or 10p.
	Relate o'clock times of familiar events to parts of the day	**Time and temperature**	**Time, position and direction**
	List the days of the week.	Read dates written in different formats in familiar contexts.	Tell the time in five-minute intervals on analogue clocks.
	Order the days of the week	Record dates in different formats.	Tell the time in 5 minute intervals on 24-hour digital clocks.
	List the months of the year.	Know the number of weeks in a year.	Tel the time in 5 minute intervals using am and pm.
	Order and sequence the months of the year.	Know the number of hours in the day stop	Record the time in 5 minute intervals using am and pm.
	Relate familiar events to the seasons of the year.	Recognise the months of the year in words and their abbreviated form.	Use the time in two different everyday situations.
	Order the seasons of the year.	Identify the months and then numbered sequence.	Use compass firections to indicate position and direction in practical contexts.
		Identify times on an analogue clock: a) quarter past the hour b) have past the hour c) quarter to the hour	Use full/ half/ quarter turns to describe position and direction in practical contexts.
		Identify times on a 24-hour digital clock: a) Quarter past the hour b) half past the hour	

		c) quarter to the hour	
		Identify units used for measuring temperature.	
		Compare temperatures in everyday situations.	
Fractions		identify the word half	Identify and record common unit fractions as part of the whole divided into equal parts, with the denominator indicating the number of equal parts.
		identify the symbol for half.	Identify and record common non-unit fractions as serveral equal parts of a whole, eith the number of parts indicated by the numerator.
		Write the word for half.	Identify equivalent fractions for common fractions, including thrids, quarters, fifths and tenths.
		Write the symbol for half.	Identify a fraction where the numerator and deniminator are equivalent to a whole one.
		identify the word quarter.	Use common fractions in two different everyday situations.
		identify the symbol for quarter.	
		Write the word for quarter.	
		Write the symbol for quarter.	
		identify the word tenth.	
		identify the symbol for tenth.	
		Write the word for tenth.	
		Write the symbol for tenth.	

		Identify that two halves make one whole. Identify that four quarters make one whole. Identify that 10 tenths make one whole. Identify that two quarters and one half are equivalent. Identify that 5/10 make ½. Identify that one half is more than one quarter and 1/10 is less than one quarter. Sort items into equal groups to find half a collection of items. Find half of shapes by dividing into two equal parts. Sort items into four equal groups to find 1/4 of a collection of items. Find 1/4 of the shape by dividing into four equal parts. Sort items into 10 equal groups to find 1/10 of a collection of items. Recognise 1/10 of the shape divided into 10 equal parts.	
Multiplication		Identify words use for multiplication.	Recall multiplication facts for: a) 2 times tables b) 3 times tables c) 4 times tables d) 5 times tables e) 10 times tables f) 12 times tables

		Write calculations using the symbol For Multiplication.	Identify two digit and three digit multiples of: a) 2 b) 5 c) 10 d) 50 e) 100
		Multiply whole numbers in the range 0x0 to 12x12.	Multiply 2 digit whole numbers by a single and a double digit showing the working out.
		Use a calculator to multiply whole numbers up to 12.	Multiply two digit while numbers by a single and double digit using a calculator.
		Use a calculator to show the answers for multiplication are correct.	Use different strategies for multiplication.
		Approximate by rounding to the nearest town, and used to check answers.	Identiy where multiplication can be used in different practical situations.
		Use x and = in practical situations to solve given problems.	Use multiplications in at least two different practical situations.
			Present results in context.
			Check answers using a different method, such as inverse calculation.
			Use rounded numbers to check results by approximation.
Division		identify words used for a division.	Divide three digit numbers by single and double digit while numbers using repeated subtraction, expressing any remainder.
		Write calculations using the symbol for division.	Divide 3 digit whole numbers by single and double digits by identifying multiples of: a) 2 b) 3

			c) 4 d) 5 e) 10
		Divide whole numbers up to 200 by single digit numbers and express remainders.	Divide 3 digit whole numbers by single and double digits by identifying multiples of 6,7,8 and 9 using multiplication tables or number squares.
		Use a calculator divide whole numbers up to 200 by single digit numbers, without remainders.	Divide 3 digit whole numbers by single and double digits using a calculator, understanding why some divisions do not give a whole number answer.
		Use a calculator to show answers for division sums are correct.	Use division in everyday context.
		Approximate by rounding to the nearest 10, and used to check answers with no remainders.	Present results and interpret remainders in context.
		Use ÷ and = In practical situations to solve given problems.	Check answers using a different method, such as inverse calculation.
			Use rounded numbers to check results by approximation.
Understanding decimals		Read numbers with 1 Decimal place.	Read numbers with two decimal places.
		Write numbers with one decimal places.	Write numbers with two decimal places.
		A range, in order size, numbers with 1 Decimal place.	Arrange, in order of size, numbers with two decimal places.
		Identify place value in numbers with 1 Decimal place.	Continues a sequence of numbers with decimals up to 2 decimal places.
		Identify the purpose of the decimal point.	Identify place value in numbers with 2 decimal places.

		Measure the length of an object e.g. using a 30cm ruler to measure the width of a page (e.g. 8.5cm)	Identify the purpose of the decimal point.
			Measure the lenfth of an object to two decimal places e.g. using a metre rule to measure objects to the nearest cm.
			Calculate with money, using pounds and pence.