

Requirements for Communication

Across the curriculum, at a level appropriate to their ability, pupils should be enabled to develop skills in:

Talking and Listening

Pupils should be enabled to:

- listen to and take part in discussions, explanations, role-plays and presentations;
- contribute comments, ask questions and respond to others' points of view;
- communicate information, ideas, opinions, feelings and imaginings, using an expanding vocabulary;
- structure talk so that ideas can be understood by others;
- speak clearly and adapt ways of speaking to audience and situation;
- use non-verbal methods to express ideas and engage with the listener.

Reading

Pupils should be enabled to:

- read a range of texts* for information, ideas and enjoyment;
- use a range of strategies to read with increasing independence;
- find, select and use information from a range of sources;
- understand and explore ideas, events and features in texts*;
- use evidence from texts* to explain opinions.

Writing

Pupils should be enabled to:

- talk about, plan and edit work;
- communicate information, meaning, feelings, imaginings and ideas in a clear and organised way;
- develop, express and present ideas in a variety of forms and formats, using traditional and digital resources, for different audiences and purposes;
- write with increasing accuracy and proficiency.

Draft Levels of Progression in COMMUNICATION

The colours used in this document provide a means by which progression in the requirements may be tracked across the levels.

Level 1	Level 2	Level 3	Level 4
In familiar situations, when listening to and responding to a range of stimuli, pupils can...	In familiar situations, when listening to and responding to a range of stimuli, pupils can...	In a range of situations and for a variety of audiences and purposes, pupils can...	In a range of contexts taking account of a variety of purposes and different audiences, pupils can...
<ul style="list-style-type: none"> listen for information; take on the role of someone else in play; understand short explanations and simple discussions; follow short, straightforward instructions; 	<ul style="list-style-type: none"> identify the main points of conversations and explanations; take part in role-play interacting with others; listen to and carry out a sequence of instructions; 	<ul style="list-style-type: none"> listen for specific information; adopt a role; 	<ul style="list-style-type: none"> listen attentively; develop a role;
<ul style="list-style-type: none"> ask and answer questions for specific information; 	<ul style="list-style-type: none"> follow discussions, make contributions and observe conventions of conversation; ask and respond to questions in order to develop understanding; 	<ul style="list-style-type: none"> follow the main points of discussions and make contributions which show understanding; ask questions about what they hear; 	<ul style="list-style-type: none"> make relevant contributions to discussion; respond appropriately to others' points of view;
<ul style="list-style-type: none"> use vocabulary from within their experience to describe thoughts and feelings; talk imaginatively in role-play situations; talk about their experiences; 	<ul style="list-style-type: none"> use a general vocabulary to express thoughts, imaginings and opinions; talk about events in sequence with supporting detail; 	<ul style="list-style-type: none"> explain their views/thinking; use a suitable vocabulary; 	<ul style="list-style-type: none"> articulate and explain information, ideas and opinions clearly; use an appropriate vocabulary; plan an approach to talking;
<ul style="list-style-type: none"> speak audibly to be heard and understood; 	<ul style="list-style-type: none"> speak clearly to be heard and understood; 	<ul style="list-style-type: none"> vary their voice and intonation; 	<ul style="list-style-type: none"> use language techniques and register to engage the listener;
<ul style="list-style-type: none"> make eye contact and take turns whilst engaging in conversation. 	<ul style="list-style-type: none"> use body language to show engagement. 	<ul style="list-style-type: none"> understand that body language may influence the listener. 	<ul style="list-style-type: none"> use non-verbal methods to engage the listener.
When engaging with texts through modelled, shared and guided reading, pupils can...	In a range of short, simple texts, both reading aloud and silently, pupils can...	In a range of texts of more than one paragraph for a variety of purposes, both reading aloud and silently, pupils can...	In a range of texts of varying lengths for a variety of purposes, pupils can...
<ul style="list-style-type: none"> talk about meaning carried by print, pictures and images; 	<ul style="list-style-type: none"> understand, recount and sequence events and information; 	<ul style="list-style-type: none"> understand, sequence and paraphrase main points and information; choose and use reading strategies independently; 	<ul style="list-style-type: none"> understand, identify and summarise main points or ideas; read independently;
<ul style="list-style-type: none"> understand that words are made up of sounds and syllables and that sounds are represented by letters; use reading strategies; 	<ul style="list-style-type: none"> use a range of reading strategies; 	<ul style="list-style-type: none"> use organisational features to locate and obtain information; 	<ul style="list-style-type: none"> locate relevant information and use it appropriately;
<ul style="list-style-type: none"> read and understand familiar words, signs and symbols in the environment; use visual clues to locate information; use language associated with texts*; 	<ul style="list-style-type: none"> select information to answer questions; use alphabetical knowledge and visual clues to locate information; recognise some types and features; 	<ul style="list-style-type: none"> understand that there are different types and features; make deductions using information from the text*; 	<ul style="list-style-type: none"> recognise main features and understand how these are linked to type and purpose; understand some implicit meanings;
<ul style="list-style-type: none"> answer questions and talk about what they have read. 	<ul style="list-style-type: none"> ask questions, express opinions and make predictions. 	<ul style="list-style-type: none"> express opinions and give reasons. 	<ul style="list-style-type: none"> explain and justify opinions about what they read.
Following modelled, shared and guided writing, pupils can...	In a range of forms, using simple structure and organisation, pupils can...	In a range of forms, for specific purposes, pupils can...	In a range of forms and formats, for different audiences and purposes, pupils can...
<ul style="list-style-type: none"> talk about what they are going to write; 	<ul style="list-style-type: none"> talk about what they are going to write and how they will present their writing; make changes in relation to agreed criteria; 	<ul style="list-style-type: none"> talk about and plan their writing; make improvements to their writing; 	<ul style="list-style-type: none"> check writing to make improvements in accuracy and meaning;
<ul style="list-style-type: none"> express thoughts, feelings and ideas using symbols, pictures, words, phrases and simple sentences; 	<ul style="list-style-type: none"> express thoughts, feelings and ideas, from within their experience, using a general vocabulary; 	<ul style="list-style-type: none"> structure and sequence their writing; express thoughts, feelings, ideas and opinions; provide supporting detail; use a suitable vocabulary; 	<ul style="list-style-type: none"> structure writing, including using paragraphs; express thoughts, feelings, ideas and opinions, giving reasons when appropriate; express meaning clearly, using an appropriate vocabulary and level of detail; choose from and use a range of forms, as appropriate;
<ul style="list-style-type: none"> write words using sound-symbol correspondence; write personal and familiar words; form lower and upper-case letters. 	<ul style="list-style-type: none"> use basic punctuation; spell and write common and familiar words recognisably; produce legible handwriting. 	<ul style="list-style-type: none"> use appropriate form; 	<ul style="list-style-type: none"> use a range of sentence structures; use a range of punctuation accurately; use accurate grammar and spelling on most occasions.
<ul style="list-style-type: none"> start sentences in different ways; use basic punctuation and grammar accurately; spell and write frequently used and topic words correctly; produce handwriting which is accurately formed and consistent in size. 			

* Note on texts: Texts refer to ideas that are organised to communicate and present a message in written, spoken, visual, digital and symbolic forms

Requirements for Communication
Across the curriculum, at a level appropriate to their ability, pupils should be enabled to develop skills in:
Talking and Listening Pupils should be enabled to:
<ul style="list-style-type: none"> listen to and take part in discussions, explanations, role-plays and presentations; contribute comments, ask questions and respond to others' points of view; communicate information, ideas, opinions, feelings and imaginings, using an expanding vocabulary; structure their talk so that ideas can be understood by others; speak clearly and adapt ways of speaking to audience and situation; use non-verbal methods to express ideas and engage with the listener.
Reading Pupils should be enabled to:
<ul style="list-style-type: none"> read a range of texts* for information, ideas and enjoyment; use a range of strategies to read with increasing independence; find, select and use information from a range of sources; understand and explore ideas, events and features in texts*;
<ul style="list-style-type: none"> use evidence from texts* to explain opinions.
Writing Pupils should be enabled to:
<ul style="list-style-type: none"> talk about, plan and edit work;
<ul style="list-style-type: none"> communicate information, meaning, feelings, imaginings and ideas in a clear and organised way; develop, express and present ideas in a variety of forms and formats, using traditional and digital resources, for different audiences and purposes; write with increasing accuracy and proficiency.

Draft Levels of Progression in COMMUNICATION		
The colours used in this document provide a means by which progression in the requirements may be tracked across the levels.		
Level 5	Level 6	Level 7
In a range of formal and informal contexts and for a variety of purposes with different audiences, pupils can...	In a range of formal and informal contexts and for a variety of purposes, pupils can...	In a wide range of formal and informal contexts, including unfamiliar audiences, and for a variety of purposes, pupils can...
<ul style="list-style-type: none"> listen to and identify relevant information and ideas; make relevant contributions in different roles; 	<ul style="list-style-type: none"> listen to complex information and identify implicit meanings; move discussion forward in different roles; 	<ul style="list-style-type: none"> discuss how complex information and ideas are communicated; make distinctive contributions in different roles;
<ul style="list-style-type: none"> ask questions to explore and develop ideas; justify and challenge ideas and opinions; 	<ul style="list-style-type: none"> put in words their understanding of others' ideas, showing sensitivity; 	<ul style="list-style-type: none"> engage persuasively in decision-making using agreement and challenge;
<ul style="list-style-type: none"> communicate detailed information clearly using precise vocabulary; 	<ul style="list-style-type: none"> express and justify complex ideas and opinions; explain information and ideas clearly and logically, using appropriate ways to support main points; 	<ul style="list-style-type: none"> support their opinions and arguments with appropriate evidence from a range of sources;
<ul style="list-style-type: none"> structure their talking; 	<ul style="list-style-type: none"> plan and organise the structure and content of talking to be concise, logical and coherent; 	<ul style="list-style-type: none"> convey complex information by explaining it to others in an original way;
<ul style="list-style-type: none"> use language techniques and register to achieve effects; 	<ul style="list-style-type: none"> use language techniques and register to maintain the interest of the listener; 	<ul style="list-style-type: none"> exploit language techniques and register to present complex information and ideas effectively;
<ul style="list-style-type: none"> use non-verbal methods to achieve effects. 	<ul style="list-style-type: none"> use non-verbal methods to maintain the interest of the listener. 	<ul style="list-style-type: none"> use non-verbal methods to maintain the interest of the listener.
In a range of texts of varying lengths for a variety of purposes, including texts not specifically for their age range, pupils can...	In a range of complex texts, including those not specifically for their age range, pupils can...	Across a range of complex sources, including those not specifically for their age range, pupils can...
<ul style="list-style-type: none"> understand, identify and summarise details, processes main points or ideas; 	<ul style="list-style-type: none"> identify how main points, details, processes or ideas are organised and developed; 	
<ul style="list-style-type: none"> select and manage information from a range of sources; 	<ul style="list-style-type: none"> read critically to compare information from a range of sources; evaluate and adapt information; 	<ul style="list-style-type: none"> discriminate the relevance, reliability and accuracy of information; synthesise information from a range of sources;
<ul style="list-style-type: none"> recognise and identify writers' intentions and some implicit meanings and attitudes; differentiate between fact and opinion; describe language, structure and presentation; 	<ul style="list-style-type: none"> detect points of view, lines of reasoning and bias; explain the effects of language, structure and presentation; 	<ul style="list-style-type: none"> explain in detail the effects of language, structure and presentation;
<ul style="list-style-type: none"> refer to text* to justify opinions and draw conclusions. 	<ul style="list-style-type: none"> use appropriate and sufficient evidence to support their ideas and opinions. 	<ul style="list-style-type: none"> develop and expand on opinions, informed by well-selected evidence.
In a range of forms and formats, for different audiences and purposes, including the formal, pupils can...	In a range of forms and formats for different purposes and audiences, including in unfamiliar and formal situations, pupils can...	In a range of forms and formats for different purposes and in different contexts, including for real audiences and in formal and unfamiliar situations, pupils can...
<ul style="list-style-type: none"> redraft to improve meaning; 	<ul style="list-style-type: none"> redraft writing for effect; 	<ul style="list-style-type: none"> make discriminating choices about language in order to create impact;
<ul style="list-style-type: none"> structure writing logically and coherently; use precise vocabulary to convey thoughts, ideas, information and to justify opinions; 	<ul style="list-style-type: none"> communicate ideas, information and opinions in a sustained and developed way; 	<ul style="list-style-type: none"> communicate complex ideas and opinions in a sustained, developed way; make use of information and evidence to support their ideas, analyses and conclusions;
<ul style="list-style-type: none"> match writing to purpose and audience; present information effectively, using a formal style where appropriate; 	<ul style="list-style-type: none"> organise and present writing for deliberate effect; use appropriate style and tone; 	<ul style="list-style-type: none"> match style, tone and presentation to create an impact;
<ul style="list-style-type: none"> create sentence structures which help to convey meaning; use a range of punctuation consistently and accurately; use accurate grammar and spelling. 	<ul style="list-style-type: none"> use complex language and sentences; use punctuation for effect. 	<ul style="list-style-type: none"> use complex language and sentences; use punctuation for effect.

* Note on texts: Texts refer to ideas that are organised to communicate and present a message in written, spoken, visual, digital and symbolic forms

Requirements for Using Mathematics

Across the curriculum, at a level appropriate to their ability, pupils should be enabled to:

- choose the appropriate materials, equipment and mathematics to use in a particular situation;
- use mathematical knowledge and concepts accurately;
- work systematically and check their work;
- use mathematics to solve problems and make decisions;
- develop methods and strategies, including mental mathematics;
- explore ideas, make and test predictions and think creatively;
- identify and collect information;
- read, interpret, organise and present information in mathematical formats;
- use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working;
- develop financial capability;
- use ICT to solve problems and/or present their work.

Coverage/Range

Number and Algebra

Shape, Space and Measures

Handling Data

Draft Levels of Progression in USING MATHEMATICS

The colours used in this document provide a means by which progression in the requirements may be tracked across the levels.

Level 1	Level 2	Level 3
Using real objects and in simple activities, pupils can:	In simple, practical activities in familiar and accessible contexts, pupils can:	In structured activities in familiar and accessible contexts, pupils can:
<ul style="list-style-type: none"> • use the materials and equipment required for their work; • begin to show organisation in their practical work; • talk about ways to solve simple everyday problems; • use simple counting strategies; • look for and talk about simple patterns and make simple predictions; • collect and talk about some identified information; • represent their work using pictures and objects; • use some simple mathematical language; 	<ul style="list-style-type: none"> • make suggestions about how to approach an activity/problem; • select and use the materials, equipment and mathematical operations required; • begin to check their work; • use simple counting and mental strategies to carry out calculations and solve problems; • recognise patterns and simple relationships and make simple predictions; • collect and interpret some information; • identify ways of presenting information and recording their findings; • use simple mathematical language to talk about their work; 	<ul style="list-style-type: none"> • suggest different ways an activity might be approached; • select and use appropriately the materials, equipment and mathematics required for an activity; • begin to organise their work and check its accuracy; • use mathematics to solve simple, everyday problems; • develop and use efficient mental calculation strategies; • identify and explain patterns and relationships and make predictions; • find, collect and interpret information; • record and present their findings using simple mathematical formats; • use appropriate mathematical language to discuss and describe their work;
<ul style="list-style-type: none"> • use, estimate, add and subtract numbers up to at least 10; • understand conservation of number; • create and describe repeating patterns using objects, numbers or pictures; • recognise and use coins. 	<ul style="list-style-type: none"> • read, write and order whole numbers up to at least 100; • understand that the place of the digit indicates its value; • understand and use halves and quarters; • use addition and subtraction patterns up to 10 to understand the relationship between addition and subtraction; • use a symbol to stand for an unknown number; • add and subtract up to at least 20; • recall number facts up to 10; • use simple mental strategies when working with numbers within 20; • understand relationships between all coins up to £1 and use this knowledge to carry out shopping activities. 	<ul style="list-style-type: none"> • understand, use, add and subtract whole numbers up to at least 1000; • understand and use the concept of place value in whole numbers; • approximate to the nearest 10 or 100; • understand and use simple fractions in context; • identify and begin to describe simple number patterns within the 100 square; • solve problems involving division in practical situations; • recall number facts up to 20; • know 2, 3, 4, 5 and 10 multiplication facts and use this knowledge to solve problems; • use number skills to solve problems in the context of money up to £10.
<ul style="list-style-type: none"> • use everyday language associated with length, 'weight', capacity and area to describe and make simple comparisons; • sequence events, recognise 'special' times on the clock and know the days of the week; • sort 2-D and 3-D shapes and make and describe 2-D and 3-D constructions; • use language and follow instructions, in practical situations, for position and movement. 	<ul style="list-style-type: none"> • identify and use non-standard units to measure length, 'weight', capacity and area; • understand the need for standard units and know the most commonly used units in length, 'weight', capacity and time; • name and order days of the week, months of the year, seasons and read simple analogue clock displays; • recognise and name common 2-D shapes and sort 2-D and 3-D shapes, giving reasons for sorting; • recognise turning movements. 	<ul style="list-style-type: none"> • estimate, measure and record length, capacity, volume, 'weight', time and temperature; • find the area of shapes by counting squares; • read simple measuring instruments with an appropriate degree of accuracy; • read and interpret a calendar; • read digital and analogue displays; • recognise, name and describe simple 2-D and 3-D shapes; • recognise lines of symmetry and simple tessellation in 2-D shapes; • recognise right angles in the environment and understand the notion of angle in the context of turning.
<ul style="list-style-type: none"> • sort real objects for one criterion and record using objects, drawings or ICT. 	<ul style="list-style-type: none"> • sort and classify objects for two criteria; • collect information and record results using simple tables, block graphs and diagrams; • discuss and interpret information. 	<ul style="list-style-type: none"> • collect and record relevant data for a given task; • construct and label simple bar charts and pictograms; • find and interpret information from tables, pictograms, lists, bar charts, simple pie charts and databases.

Requirements for Using Mathematics

Across the curriculum, at a level appropriate to their ability, pupils should be enabled to:

- choose the appropriate materials, equipment and mathematics to use in a particular situation;
- use mathematical knowledge and concepts accurately;
- work systematically and check their work;
- use mathematics to solve problems and make decisions;
- develop methods and strategies, including mental mathematics;
- explore ideas, make and test predictions and think creatively;
- identify and collect information;
- read, interpret, organise and present information in mathematical formats;
- use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working;
- develop financial capability;
- use ICT to solve problems and/or present their work.

Coverage/Range

Number and Algebra

Shape, Space and Measures

Handling Data

Draft Levels of Progression in USING MATHEMATICS

The colours used in this document provide a means by which progression in the requirements may be tracked across the levels.

Level 4	Level 5
In activities with some structure, in familiar and some unfamiliar contexts and situations, pupils can:	In closed or open-ended activities with some structure, in familiar and unfamiliar contexts and situations, pupils can:
<ul style="list-style-type: none"> • identify the materials, equipment and mathematics required; 	<ul style="list-style-type: none"> • identify the materials, equipment, mathematics and strategies to be used;
<ul style="list-style-type: none"> • plan and organise their own work and work systematically; • review their work and check for accuracy; 	<ul style="list-style-type: none"> • plan and work systematically and efficiently; • review their work, considering if their findings are reasonable and making changes where appropriate;
<ul style="list-style-type: none"> • use a range of problem-solving strategies; 	<ul style="list-style-type: none"> • use a range of problem-solving strategies, suggesting and trying out different approaches;
<ul style="list-style-type: none"> • investigate patterns and relationships, using their findings to make predictions; 	<ul style="list-style-type: none"> • make and test simple predictions, summarise their findings and make general statements;
<ul style="list-style-type: none"> • find, organise and interpret information; • record and present information clearly, commenting on their findings; 	<ul style="list-style-type: none"> • identify, obtain, process and interpret information; • record and present information accurately and appropriately;
<ul style="list-style-type: none"> • use appropriate mathematical language to discuss their work and explain their thinking; 	<ul style="list-style-type: none"> • use appropriate mathematical language to express and communicate ideas precisely;
<ul style="list-style-type: none"> • use knowledge of place value to multiply and divide whole numbers by 10 and 100; • use fractions to describe quantities and proportions, and perform simple calculations involving fractions; • understand equivalence of fractions; • understand and use simple percentages in practical contexts; • interpret and apply simple rules expressed in words; • know multiplication facts up to 10x10 and use this knowledge to solve problems; • add, subtract, multiply and divide whole numbers using a range of mental, written and calculator methods; • add and subtract numbers with up to two decimal places; • use the relationship between addition and subtraction to check simple calculations; • make choices about spending and value for money; • show understanding of ways in which payments for goods can be made. 	<ul style="list-style-type: none"> • use knowledge of place values to multiply and divide numbers with up to two decimal places by 10 and 100; • estimate answers to calculations and approximate by rounding; • understand the relationship between common fractions, decimals and percentages; • calculate simple fractions and percentages of quantities; • use understanding of equivalence to add and subtract fractions; • understand and use negative numbers in practical contexts; • express and use simple formulae and rules for generating sequences in words and/or symbolic form; • multiply and divide numbers with up to 2 decimal places by a whole number; • check calculations by applying inverse operations; • make informed choices about personal budgeting and spending and understand the concept of interest when saving and borrowing.
<ul style="list-style-type: none"> • estimate and measure length, 'weight'/mass, time and temperature, working to an appropriate degree of accuracy; • understand the relationship between metric units and choose and use the appropriate metric units for tasks; • add and subtract common measures; • estimate area and volume of simple shapes by counting squares/cubes, using standard units; • find perimeters of simple shapes; • understand and use analogue and digital time, and use am, pm and 24-hour notation; • describe regular and irregular 2-D shapes in terms of sides, angles, symmetry and tessellation; • explore the relationship between 2-D and 3-D shapes; • understand and use the language of line, angle and location; • use co-ordinates in the first quadrant. 	<ul style="list-style-type: none"> • convert from one metric unit to another; • add, subtract, multiply and divide common measures; • calculate areas of squares, rectangles and right-angled triangles and volumes of cubes and cuboids; • understand and use scale in the context of simple maps and drawings; • read and interpret timetables and solve related problems; • reflect 2-D shapes in a line; • describe common 3-D shapes; • draw nets of 3-D shapes; • identify the properties of triangles and quadrilaterals; • measure, draw and label angles.
<ul style="list-style-type: none"> • collect, group, record and present data with given class intervals; • represent and interpret data using a range of graphs, tables and diagrams; • understand and use the language of probability. 	<ul style="list-style-type: none"> • collect, organise, record and represent data; • construct and interpret a range of tables, diagrams and graphs; • design and use a data collection sheet; • calculate and use mean and range; • compare and order the likelihood of events.

Requirements for Using Mathematics

Across the curriculum, at a level appropriate to their ability, pupils should be enabled to:

- choose the appropriate materials, equipment and mathematics to use in a particular situation;
- use mathematical knowledge and concepts accurately;
- work systematically and check their work;
- use mathematics to solve problems and make decisions;
- develop methods and strategies, including mental mathematics;
- explore ideas, make and test predictions and think creatively;
- identify and collect information;
- read, interpret, organise and present information in mathematical formats;
- use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working;
- develop financial capability;
- use ICT to solve problems and/or present their work.

Coverage/Range

Number and Algebra

Shape, Space and Measures

Handling Data

Draft Levels of Progression in USING MATHEMATICS

The colours used in this document provide a means by which progression in the requirements may be tracked across the levels.

Level 6

Through discussion, solving routine and non-routine problems with increasing independence in a wide range of familiar and unfamiliar contexts and situations, pupils can:

- plan for an activity by identifying and sequencing component steps;
- consider and identify a range of materials/equipment, mathematical techniques and problem-solving strategies required to meet the purpose of activities;
- work systematically and efficiently to a given degree of accuracy;
- review their work, using appropriate checking procedures and evaluating their effectiveness at each stage;
- adapt their approach as needed;
- make and test predictions, make general statements and draw conclusions;
- obtain, process and interpret information from a range of sources;
- use a range of suitable ways to present findings, following accepted conventions;
- use appropriate mathematical language to communicate and explain their work for a wider audience;

- carry out calculations with numbers of any size in practical contexts;
- use equivalences between fractions, decimals and percentages to solve problems;
- add, subtract, multiply and divide decimals to a given number of decimal places;
- add and subtract fractions, including mixed numbers;
- understand, use and calculate ratio and proportion;
- calculate using percentages in relevant contexts;
- apply mathematical concepts to a range of financial situations;
- use conventional notation in algebra;
- use formulae;
- rearrange simple formulae.

- calculate the circumference of circles and the perimeters of composite shapes;
- calculate composite areas involving squares, rectangles, triangles;
- calculate surface area and composite volumes of cubes and cuboids;
- use, convert and calculate measures involving metric and, where appropriate, imperial units;
- understand and use compound measures;
- work out dimensions using scale;
- recognise 2-D representations of 3-D shapes.

- collect and record discrete and continuous data using a variety of methods;
- construct and interpret a variety of diagrams and graphs for discrete and continuous data;
- find and use the median and mode;
- use range and one of the measures of average to compare two sets of data;
- understand and use the probability scale from 0 to 1 and express likelihood or comparability;
- understand the concept of insurance as a way of mitigating risk.

Level 7

Through discussion, solving routine and non-routine problems with increasing independence in a wide range of familiar and unfamiliar contexts and situations, pupils can:

- pose questions to better identify a problem or situation;
- plan an activity, explaining their reasons for their chosen structure and approach;
- consider and identify, with some justification, the materials/equipment, mathematical techniques and problem-solving strategies required;
- use a range of appropriate mathematical techniques and notation;
- critically review to what extent they succeeded in carrying out activities, checking if the level of accuracy and their findings are appropriate and making an assessment of any limitations.
- consider alternative approaches and adapt them as required;
- make and test predictions and attempt to justify their generalisations;
- consider, identify, obtain and analyse data/information from more than one source;
- select and use appropriate methods to present findings, following accepted conventions;
- use appropriate mathematical language to explain and justify their findings or solutions;

- use the advanced functions of a calculator to perform complex calculations;
- round numbers to an appropriate number of decimal places and significant figures;
- express one number as a percentage of another, calculate percentage increase and decrease, and find the original quantity given the result of a percentage change;
- use the four operations with fractions;
- understand and use inverse proportion;
- consider a range of factors to make informed decisions involving money;
- manipulate simple algebraic expressions, equations and formulae;
- formulate linear equations;
- solve two linear equations simultaneously by a graphical method.

- use 3 figure bearings to define direction;
- enlarge a 2-D shape by a given scale factor;
- perform length and area calculations on quadrilaterals and the circle;
- understand and apply Pythagoras' Theorem;
- solve complex problems involving perimeter, surface area and volume;
- understand that measurements have an error margin of half the given unit.

- pursue their own lines of enquiry, using appropriate methods of data collection, and interpret and present their findings;
- construct and interpret frequency tables and diagrams for sets of continuous data;
- estimate the mean of a set of grouped data and choose the most appropriate average (mean, median or mode) for a given line of enquiry;
- understand and use relative frequency as an estimate of probability and calculate expected frequency;
- apply their knowledge of the rules of probability to calculate an outcome/combination of outcomes.

Requirements for Using ICT

Across the curriculum, at a level appropriate to their ability, pupils should be enabled to develop ICT skills to:

Explore

- access and manage data and information;
- research, select, process and interpret information;
- investigate, make predictions and solve problems through interaction with digital tools.

Express

- create, develop, present and publish ideas and information using a range of digital media;
- manipulate information and multimedia products using a range of assets.

Exchange

- communicate using a range of contemporary digital methods and tools;
- share, collaborate, exchange and develop ideas digitally;
- understand how to keep safe and display acceptable online behaviour.

Evaluate

- talk about, review and make improvements to work, reflecting on the process and outcome;
- consider the sources and resources used.

Exhibit

- manage and present their stored work;
- showcase their learning across the curriculum.

Draft Levels of Progression in Using ICT

The colours used in this document provide a means by which progression in the requirements may be tracked across the levels.

	Level 1 Pupils can	Level 2 Pupils can	Level 3 Pupils can	Level 4 Pupils can	Level 5 Pupils can	Level 6 Pupils can	Level 7 Pupils can
Explore	access information from a given digital source	access, select and use information from a given digital source	access, select, edit and use information from given digital sources	research, select, edit and use assets from a range of digital sources	research, select, edit, use and evaluate assets from a range of digital resources	research, select and evaluate assets from a range of digital resources, justifying and referencing their sources	research, select and evaluate assets from a range of sources, found and created, discriminating the relevance, reliability and accuracy of this information, justifying and referencing their sources
	explore and interact with a digital device or environment	carry out a series of instructions using a digital device or environment	carry out and edit a series of instructions, make predictions and solve problems using a digital device or environment	investigate and solve problems in a digital environment	investigate and solve problems in a range of digital environments	investigate and solve problems in digital environments by developing and manipulating models	investigate and solve problems in digital environments by designing solutions to meet the needs of the user
	present their ideas in different ways including graphical forms	collect, enter and present data, making observations	collect, enter, organise and present data and draw conclusions				
Express	express ideas by creating pictures and composing text or adding own voiceover	create and edit text onscreen, combining images and/or sound	communicate and develop ideas by creating and editing text onscreen, combining this with an appropriate selection of images and/or sound	process found or self-produced assets, including text, number, sound, still or moving images, and combine these to create, present and communicate their work, showing an awareness of audience and purpose	process found and self-produced assets, integrating text, number, sound, still and moving images to create, present and communicate their work, demonstrating a clear understanding of audience and purpose	manipulate and integrate a combination of text, number, sound, still and moving images, to create, present and communicate their information and multimedia products, for specific audiences and purposes	exploit a range of appropriate software facilities, which includes digital video, web and multimedia authoring software, to produce a solution which meets user needs
Exchange			understand that digital methods can be used to communicate	use contemporary digital methods to communicate	use a range of contemporary digital methods to communicate, exchange and share work with peers	use a range of contemporary digital methods to communicate, exchange and share their information and multimedia products with peers, experts and end users	exploit contemporary communication methods to exchange, share, collaborate and develop their ideas and information with peers, experts and end users, contributing to a collaborative global environment
				demonstrate an awareness of acceptable online behaviour	demonstrate acceptable online behaviour	demonstrate acceptable online behaviour using agreed protocols	demonstrate acceptable online behaviour, showing an awareness of conventions and protocols associated with different environments
Evaluate		talk about how to improve their work	make modifications to their work	use appropriate ICT tools and features to improve work	use appropriate ICT tools and features to carry out ongoing improvements and reflect on process and outcome	review their use of ICT, routinely evaluating and justifying the processes and outcomes	review their use of ICT, testing and adjusting work as necessary, collecting and responding to the views of end users and to client needs
Exhibit	print their work	save their work	save work for further use, using meaningful file names	organise, store and retrieve their work	organise, store and maintain their work	manage their stored work showing an awareness of format, portability and size	manage, store and present work taking account of format, size, portability, copyright and versioning
			select and store work in a digital bank to showcase learning	select and organise their work in a digital bank to showcase learning	manage a digital bank of work to showcase learning across the curriculum	develop, maintain and present a digital bank of work to showcase learning across the curriculum	exploit appropriate ICT tools to develop, manage and present a logically structured digital bank of work to showcase learning across the curriculum