



Assessing the Cross-Curricular Skills



Rewarding Learning

From 2017/18

Assessment Arrangements

In relation to pupils in the final years of
Key Stages 1 and 2 for Communication,
Using Mathematics and Using ICT

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Introduction

Purpose of this Booklet

This booklet provides information on the arrangements for statutory assessment of Communication¹, Using Mathematics and Using ICT at Key Stages 1 and 2.

Assessment Order

The Education (Northern Ireland) Order (2006), in operation from 1 August 2006, provides the statutory base for the assessment arrangements.

This booklet is the Assessment Document in relation to pupils in the final years of Key Stages 1 and 2 referred to in the Education (Levels of Progression for Key Stages 1, 2 and 3) Order (Northern Ireland) 2012 and encompasses those documents identified separately in Paragraphs 2a and 2c of the Order. It provides detailed information on the arrangements; explains the various components and timing of the arrangements; and indicates the action schools need to take. The arrangements have been extensively revised in light of engagement between the Department of Education and teachers' representatives; this booklet supersedes all previous Assessment Documents.

The arrangements set out in this Assessment Document relate to Key Stages 1 and 2 and apply to Communication, Using Mathematics and Using ICT.

¹ Communication in English – and/or Irish as appropriate in Irish-medium schools and units

Section 1

Overview of Statutory Assessment Arrangements

1.1 Introduction

The main elements of the arrangements are summarised in 1.4 below and are set out in more detail in Section 2.

Statutory assessment of the Cross-Curricular Skills (Communication, Using Mathematics and Using ICT) at Key Stages 1 and 2 will take the form of teacher assessment. This will be complemented and supported by internal standardisation and a moderation process.

Teacher assessments will be carried out using the statutory Levels of Progression provided for the purpose.

Assessment results for pupils at the end of Key Stages 1 and 2 will be sent to CCEA each year. CCEA will ensure that only the first three digits of each school's DE number will be transferred with the data to DE. This follows the former Education Minister's undertaking in his letter to teachers (dated 18 February 2016) that the Department of Education will not hold Key Stage assessment data at school level.

Note: In Irish-medium schools and units, pupils at the end of Key Stage 1 will be assigned levels in Communication in Irish only. Pupils at the end of Key Stage 2 will be assigned levels in both Irish and English.

1.2 Pupils with Special Educational Needs (SEN)

Pupils who have statements of special educational needs and who have been assessed as having severe learning difficulties (SLD) are exempted from statutory assessment.

Other pupils with statements of special educational needs will be assessed by teacher assessment in the same way as the majority of pupils. In exceptional cases, a pupil may be exempted from all or part of the assessment arrangements, if this is specifically provided for in the pupil's statement of special educational needs.

1.3 Other Exemptions

There may be other occasional and exceptional circumstances where the principal considers that it would be inappropriate to undertake teacher assessment. In such circumstances the pupil may be exempted on a temporary basis from the statutory arrangements. Details of the circumstances and procedures for making temporary exceptions are set out in Circular 1990/45 issued by the Department of Education in August 1990 (available at www.deni.gov.uk).

Exemption codes are as follows:

- E1 Statement of SEN specifying SLD
 - E2 Statement of SEN specifying exemption from end of Key Stage assessment
 - E3 Special direction pending statutory assessment of SEN*
 - E4 General direction for a newcomer pupil
 - E5 General direction due to pupil illness/period in hospital
 - E6 General direction due to other circumstances
- * (i) specifying SLD
(ii) specifying exemption from end of Key Stage assessment

1.4 Summary of the Main Components of Statutory Assessment

Teacher assessment of pupils' work

Teachers will assess each pupil in each component part of Communication (Talking and Listening, Reading, and Writing), Using Mathematics (the Requirements for the skill as well as the related Knowledge and Understanding) and Using ICT (Explore, Express, Exchange, Evaluate and Exhibit).

Pupils in Irish-medium primary schools and units will be assessed in Communication in Irish (Listening, Understanding and Talking; Reading; and Writing), Using Mathematics, Using ICT, and Communication in English. (Assessment of Communication in English in Irish-medium settings will take place in Key Stage 2 only.)

Having assessed the pupils in these component parts of the Cross-Curricular Skills, teachers will use this information to decide the level that has been achieved by each pupil in each skill at the end of the Key Stage.

Recording teacher assessment

Teachers' assessments of their pupils will be transferred electronically from schools to CCEA by EDI (Electronic Data Interchange) as specified on the 'Key Dates and Actions' Timetable (issued separately).

Information in relation to this process has been issued by C2K. Relevant mark sheets are available in Assessment Manager to record outcomes.

Support for the assessment arrangements

Substitute cover will be available for each Year 4 and Year 7 teacher to support the assessment process. Details will be issued by DE by means of a circular.

Section 2

Teacher Assessment

Teachers will assess their pupils through school-based assessment activities which are part of ongoing classwork; the work involved should not be additional work and can include CCEA Assessment Tasks.

2.1 CCEA Assessment Tasks

Schools do not have to use CCEA Assessment Tasks within the assessment arrangements for end of Key Stage pupils (Years 4 and 7). However, these tasks can be used as a key element in support of teachers' assessment judgements. Tasks should not be regarded as 'tests'; nor should they be used by teachers to determine their summative judgements. They should be regarded as one element of ongoing teacher assessment, alongside samples of work from across the curriculum, to support the summative judgements made. The use of tasks can also assist whole school internal standardisation processes.

2.2 Record-Keeping

The type and range of record-keeping to assist with teacher assessment is a matter for schools to decide. Schools are reminded that elaborate arrangements for recording assessments and retaining evidence are neither required by CCEA nor necessary to satisfy ETI inspection requirements.

2.3 Assessment of Pupils in the Final Years of Key Stages 1 and 2 (Years 4 and 7)

Teachers should assess each pupil as described in section 2.5 and should record the teacher-assessed levels for each pupil in the Assessment Manager module within SIMS.net.

In relation to the Cross-Curricular Skills, teachers should assess Communication, Using Mathematics and Using ICT by the date specified in the 'Key Dates and Actions' Timetable (issued separately).

As outlined above, to maintain anonymity of school data, only the first three digits of the school's DE number will be transferred with the data to DE. The Department of Education does not need individual schools' outcomes and will not be collecting them. Department of Education data will be anonymous and held at pupil level only.

Pupils' level outcomes should also be reported to parents/guardians of pupils in Years 4 and 7 by the end of June each year.

Making summative assessment judgements

Teachers should continue to use a variety of sources of assessment information to inform their judgements about the standard attained by their pupils. Once a teacher has considered the range of assessment information available to him/her, a level-based summative judgement is determined for Communication, Using Mathematics and Using ICT for pupils in Years 4 and 7.

a. Communication

One level will be reported for each Year 4 and each Year 7 pupil for Communication based on the outcomes for the three modes. At least two of the modes of Communication should be assessed at or above the level to be awarded.

For example:

Reading: Level 4

Writing: Level 3

Talking and Listening: Level 3

Overall Communication Level: Level 3

b. Using Mathematics

One level will be reported for each Year 4 and each Year 7 pupil for Using Mathematics – this should be the outcome of a holistic assessment of pupil performance in Using Mathematics based on evidence from the two components (i.e. the ‘Requirements’ and ‘Knowledge and Understanding’). A pupil judged to have achieved a particular level will have demonstrated the breadth and depth of the Requirements, and the Knowledge and Understanding, at that level.

c. Using ICT

One level will be reported for each Year 4 and Year 7 pupil for Using ICT. This should be the outcome of a holistic assessment of pupil performance in Using ICT based on evidence from the 5 ‘E’s (Explore, Express, Exchange, Evaluate and Exhibit). A pupil judged to have achieved a particular level will have demonstrated the skills of at least three of the 5 ‘E’s at or above the level to be awarded. These must include Explore (**both** bullet points), Express and one other ‘E’.

2.4 Recording Outcomes

The outcomes of these assessment judgements should be recorded in the Assessment Manager module within SIMS.net.

Assessment of pupils should be recorded as one of the following:

Key Stage 1	Key Stage 2
E1–6 (for various exemptions)	E1–6 (for various exemptions)
QQ (working towards Level 1)	QQ (working towards Level 1)
Level 1 Level 2 Level 3*	Level 1 Level 2 Level 3 Level 4 Level 5**

* If an exceptionally able pupil has begun work associated with the statutory curricular requirements for Key Stage 2, and is showing some characteristics of working at Level 4 in some components, then teachers are free to report this to parents alongside the information that the pupil has been statutorily assessed as having achieved Level 3.

** If an exceptionally able pupil has begun work associated with the statutory curricular requirements for Key Stage 3, and is showing some characteristics of working at Level 6 in some components, then teachers are free to report this to parents alongside the information that the pupil has been statutorily assessed as having achieved Level 5.

Section 2

Teacher Assessment (continued)

2.5 Making Judgements about Levels Achieved

In order to make a summative judgement that a pupil has achieved a level, the teacher should be content that the pupil has demonstrated competence across the breadth of requirements for the Cross-Curricular Skill and in most of the criteria relating to the level at which he/she is judged to be working.

When judging the level achieved by a pupil at the end of a Key Stage, teachers are advised to select the level that best describes the pupil's work, based on the pupil's knowledge, understanding and skills. To arrive at a rounded judgement about the level that a pupil has attained, teachers should form judgements, based on the pupil's performance as a whole, across a range of work.

The level selected should be carefully compared with those immediately above and below. Teachers should note that levels of progression are intended to build progressively on the knowledge, understanding and skills of lower levels. Skills outlined at a lower level should, therefore, be considered to have been subsumed within the higher level.

Note for Guidance:

When a teacher judges that a pupil has achieved Level 4, for example, the word 'achieve' means that in the teacher's judgement that pupil has solid achievement in Level 4 because:

- *he/she has demonstrated competence across the breadth of requirements for the Cross-Curricular Skill and in most of the criteria relating to the level across the range of work;*
- *he/she is demonstrating the ability to work consistently and independently in most aspects of the level; and*
- *he/she can apply what has been learned in new and/or unfamiliar situations as appropriate.*

2.6 Internal Standardisation

The internal standardisation process can add significantly to the effectiveness and reliability of the overall assessment system. Schools should engage in the process of internal standardisation.

Feedback suggests that many schools consider internal standardisation to be a worthwhile process for its own sake, irrespective of its contribution to end of Key Stage assessment. Internal standardisation can be undertaken at any time during the school year and need not necessarily be linked to the timetable for end of Key Stage assessment.

Some of the benefits of teachers coming together in a school to agree on standards of assessment based on levels of progression include:

- common agreement on standards of the work of pupils in the school;
- professional development of teachers in all year groups through collective discussion of standards and progression across the school; and
- common agreement on the pieces of work to make up the submission for moderation, if required.

CCEA will provide support for internal standardisation through:

- guidance materials; and
- direct assistance from the CCEA Moderation Team, depending on demand and the time available.

Section 3

Moderation

3.1 Moderation Process

The purpose of moderation is to provide confirmation to schools and other partners in education that the standards which schools are applying in assessing their pupils' work are appropriate and consistent.

All schools will provide a single, school-selected submission of samples of pupils' work representing **the range of levels that the school intends to award in the skill** in which it is being moderated. This **school submission** will be sent to CCEA in February and will be used to provide confirmation of the school's understanding of the Levels of Progression. There is no requirement to include work at Level 1 in the school submission.

3.2 Moderation

It is intended that for each skill area the samples of work should be drawn naturally from ongoing class activities arising from the schemes of work. The evidence submitted should be completed under normal classroom conditions. Samples of work may be drawn from any year group and from the current or previous academic year.

School Submissions for Communication (English – and Irish as Appropriate in Irish-medium Schools and Units) at Key Stages 1 and 2

In order to enable CCEA to verify the standards applied, the selection of work for the Key Stages 1 and 2 **school submission** in Communication (English – and/or Irish as appropriate in Irish-medium schools and units) should:

- contain six pieces of work (which may include any number of CCEA Assessment Tasks or none), three for Reading and three for Writing, **for each level that the school intends to award** in the skill; and
- cover a variety of contexts in Reading and Writing.

The **School Submission Cover Sheet(s) (EMA6C)** included with each school submission may provide a **brief** description of the assessment activity and other relevant information such as context and help given. This form will be available electronically.

Teachers do not have to annotate pupil work. However, they may do so where appropriate to help ensure clarity in moderation. This can include pupil work that teachers have previously annotated for ongoing assessment purposes.

School Submissions for Using Mathematics at Key Stages 1 and 2

In order to enable CCEA to verify the standards applied, the selection of work for the Key Stages 1 and 2 **school submission** in Using Mathematics should illustrate a range of work addressing the two main components of the Cross-Curricular Skill – the Requirements for Using Mathematics and the related Knowledge and Understanding.

The submission should:

- contain three pieces of work (one of which may be a CCEA Assessment Task) **for each level that the school intends to award**; and
- cover a variety of aspects of the Cross-Curricular Skill.

As far as possible, aspects covered by the other pieces of work should be different from those covered in any Assessment Task(s).

The **School Submission Cover Sheet(s) (EMA6M)** included with each school submission may provide a **brief** description of the assessment activity and other relevant information such as context and help given. This form will be available electronically.

Teachers do not have to annotate pupil work. However, they may do so where appropriate to help ensure clarity in moderation. This can include pupil work that teachers have previously annotated for ongoing assessment purposes.

School Submissions for Using ICT at Key Stages 1 and 2

In order to enable CCEA to verify the standards applied, the selection of work for the Key Stages 1 and 2 **school submission** in Using ICT should:

- include five pieces of pupil work in electronic format (which may include any number of CCEA Assessment Tasks or none) **for each level that the school intends to award**;
- include evidence of Explore (both bullet points) and Express at each level; and
- cover a variety of contexts and include a range of different types of ICT at each level.

The **School Submission Cover Sheet(s) (EMA6I)** included with each school submission may provide a **brief** description of the assessment activity and other relevant information such as context and help given. This form will be available electronically.

Teachers may submit any relevant pupil work relating to the assessment activity such as evidence of pupils' planning and evaluation. This should also be in electronic format (for example photographs of written work).

3.3 Collection and Moderation of Submissions

For moderation of Communication and Using Mathematics, CCEA will issue envelopes and labels as specified in the 'Key Dates and Actions' Timetable for the return of submissions in that school year (see section 3.1).

For Using ICT, school submissions will be collected electronically from the school C2K network.

All of the submissions will be reviewed by moderators and feedback will be sent to each school. Feedback will normally be written and will indicate either that the work in the submission illustrates a standard which is in line with that of other schools or that some

account needs to be taken of the comments and that the school's agreed standards should be reviewed accordingly.

3.4 Moderation Follow Up

Moderation Follow Up will involve **only** those schools whose understanding of the standards was not verified at moderation. Schools do not have to submit further evidence but will have the opportunity to avail of CCEA moderator support, which may include further discussion of evidence.

Supplementary Guidance on the Assessment Arrangements, including information on the process of moderation, will be available and will be issued separately.

Appendix 1

Levels of Progression in
Communication
across the curriculum:

Key Stages 1 and 2 (Levels 1–5)

The colours used in the following Levels of Progression in Communication provide a means by which progression in the Requirements may be tracked across the levels.

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.

Level 1

In familiar situations, when listening to and responding to a range of stimuli, pupils can:

- listen for information;
- take on the role of someone else;
- understand short explanations and simple discussions;
- follow short, straightforward instructions;
- ask and answer questions for specific information;
- use vocabulary from within their experience to describe thoughts and feelings;
- talk about their experiences;
- speak audibly to be heard and understood;
- make eye contact and take turns whilst engaging in conversation.

Pupils can:

- show understanding of the meaning carried by print, pictures and images;
- understand that words are made up of sounds and syllables and that sounds are represented by letters;
- use reading strategies;
- read and understand familiar words, signs and symbols in the environment;
- use visual clues to locate information;
- use language associated with texts*;
- talk about what they read and answer questions.

Pupils can:

- talk about what they are going to write;
- express thoughts, feelings and ideas, from within their experience, using symbols, pictures, words, phrases and simple sentences;
- write words using sound-symbol correspondence;
- write personal and familiar words;
- form lower and upper-case letters.

* Texts refer to ideas that are organised to communicate and present

Level 2

In familiar situations, when listening to and responding to a range of stimuli, pupils can:

- 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;
- follow discussions, make contributions and observe conventions of conversation;
- ask and answer questions to develop understanding;
- use a general vocabulary to express thoughts, imaginings and opinions;
- talk about events in sequence with supporting detail;
- speak clearly to be heard and understood;
- use body language to show engagement.

Engaging with a range of short, simple texts*, both reading aloud and silently, pupils can:

- understand, recount and sequence events and information;
- use a range of reading strategies;
- select information for a purpose;
- use basic alphabetical knowledge and visual clues to locate information;
- recognise some forms and features of texts*;
- ask questions to seek clarification that develops understanding;
- express opinions and make predictions.

In a limited and specified range of forms, pupils can:

- talk about what they are going to write and how they will present their writing;
- make changes in relation to agreed criteria;
- express thoughts, feelings and ideas, from within their experience, using a general vocabulary;
- show a sense of structure and organisation;
- write using a given form;
- use basic punctuation;
- spell and write common and familiar words recognisably;
- produce legible handwriting.

Level 3

In a range of situations and for a variety of audiences and purposes, pupils can:

- listen for specific information;
- maintain a role;
- follow the main points of discussions and make contributions which show understanding;
- ask and respond to questions to extend understanding;
- explain their views/thinking;
- use an expanding vocabulary;
- sequence events and plan what to say;
- vary their voice and intonation;
- understand that body language may influence the listener.

Engaging with a range of longer texts* for a variety of purposes, both reading aloud and silently, pupils can:

- recognise, understand and sequence main points;
- paraphrase with general accuracy;
- choose and use reading strategies independently;
- use organisational features, including alphabetical order, to locate and obtain information;
- understand that there are different forms and features of texts*;
- make deductions using information from the text*;
- ask and respond to questions to extend understanding;
- express opinions and give reasons.

In a range of specified forms and for specified audiences and purposes, pupils can:

- talk about and plan their writing;
- make improvements to their writing;
- express thoughts, feelings, ideas and opinions;
- structure and sequence their writing;
- provide supporting detail using an expanding vocabulary;
- use the form appropriately;
- 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.

a message in written, spoken, visual 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:

- 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.

Level 4

In a range of contexts, with different audiences and taking account of a variety of purposes, pupils can:

- listen attentively;
- develop a role;
- make relevant contributions to discussions;
- ask questions about others' points of view and respond appropriately;
- explain information, ideas and opinions clearly;
- use an appropriate vocabulary;
- plan an approach to talking;
- use language techniques and register to engage the listener;
- use non-verbal methods to engage the listener.

Engaging with a range of texts* of varying lengths for a variety of purposes, pupils can:

- show understanding by identifying and summarising information;
- paraphrase;
- read independently;
- locate relevant information and use it appropriately;
- recognise main features and understand how these are linked to form and purpose;
- understand explicit meanings and recognise some implicit meanings;
- explain opinions about what they read.

In a range of forms, for different audiences and purposes, pupils can:

- plan and make use of planning;
- check writing to make improvements in accuracy and meaning;
- express thoughts, feelings, ideas and opinions, giving reasons when appropriate;
- structure writing, including using paragraphs;
- express meaning clearly, using an appropriate vocabulary and level of detail;
- choose from and use a range of forms, as appropriate;
- vary word order and use linking words within sentences;
- use a range of punctuation accurately;
- use accurate grammar and spelling on most occasions.

* Texts refer to ideas that are organised to communicate and present

Level 5

In a range of formal and informal contexts, with different audiences and for a variety of purposes, pupils can:

- listen to and identify relevant information and ideas;
- make relevant contributions in different roles;
- discuss their own and others' ideas;
- ask questions to explore and develop ideas;
- justify ideas and opinions;
- communicate detailed information clearly, using precise vocabulary;
- structure their talk logically and coherently;
- use language techniques and register to maintain the interest of the listener;
- use non-verbal methods to maintain the interest of the listener.

Engaging with a range of texts* of varying lengths for a variety of purposes, including texts* written for a wider audience, pupils can:

- show understanding by identifying and summarising information, ideas and details;
- select and manage information from a range of sources;
- describe language, structure and presentation;
- understand some implicit meanings and attitudes;
- differentiate between fact and opinion;
- make reference to text* to support opinions and draw conclusions.

In a range of forms, for different audiences and purposes, including in formal situations, pupils can:

- redraft to improve accuracy and meaning;
- use precise vocabulary to convey thoughts, ideas, relevant information and to justify opinions;
- structure writing logically and coherently;
- match writing to purpose and audience;
- present information effectively, using a formal style where appropriate;
- create sentence structures which help to convey meaning;
- use a range of punctuation consistently and accurately;
- use accurate grammar and spelling.

a message in written, spoken, visual and symbolic forms.

Appendix 2

Levels of Progression in
Using Mathematics
across the curriculum:

Key Stages 1 and 2 (Levels 1–5)

The colours used in the following Levels of Progression in Using Mathematics provide a means by which progression in the Requirements may be tracked across the levels.

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;

using their **Knowledge and Understanding** of:

Number

Measures

Shape and Space

Handling Data

Level 1

In structured activities, in familiar and accessible contexts, pupils can:

- talk about and use the materials and equipment provided to carry out an activity;
- use some mathematical notation;
- show some organisation in their practical work;
- talk about ways to solve simple everyday problems;
- use counting strategies when carrying out activities;
- look for and talk about patterns;
- talk about and collect information required;
- represent their work using pictures and objects;
- use appropriate mathematical language to respond to questions about their work;

- 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;

- use everyday language associated with length, 'weight', capacity and area to describe, compare and order three objects;
- sequence familiar events;
- know the days of the week and their sequence;
- recognise 'special' times on the clock;

- 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;

- sort and classify real objects for one criterion and re-sort for a different criterion, using Venn, Carroll and Tree diagrams;
- collect information and record using real objects or drawings.

Level 2

In structured activities, in familiar and accessible contexts, pupils can:

- talk about how to approach an activity;
- select and use the materials, equipment and mathematics required;
- use appropriate mathematical notation;
- organise their practical work and check what they have done;
- use mental strategies to carry out calculations when solving problems/carrying out activities;
- recognise patterns and relationships and make predictions;
- discuss the information required and how it can be collected;
- present the information appropriately and talk about their findings;
- use appropriate mathematical language to talk about their work and respond to questions;

- read, write and order whole numbers up to at least 100;
- understand that the place of the digit indicates its value;
- use quick recall of number facts up to 10;
- add and subtract mentally within 20 and in written form;
- use addition and subtraction patterns within 20 to explore the relationship between addition and subtraction;
- understand that addition is commutative and subtraction is not;
- add and subtract within 100;
- understand the use of a symbol to stand for an unknown number;
- understand and use halves and quarters;
- understand relationships between all coins up to £1 and use this knowledge to carry out shopping activities;

- 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 and seasons;
- read simple digital and analogue clock displays;

- recognise and name common 2-D and 3-D shapes;
- sort 2-D and 3-D shapes, giving reasons for sorting;
- use language and follow instructions, in practical situations, for turning movements;

- sort and classify objects for two criteria using Venn, Carroll and Tree diagrams;
- collect information and record results using simple tables, block graphs, simple pictograms and diagrams;
- discuss and interpret information.

Level 3

In structured activities, in familiar and accessible contexts, pupils can:

- suggest different ways an activity might be approached;
- select and use the appropriate materials, equipment and mathematics required;
- use a range of appropriate mathematical notation;
- organise their work and know how to check its accuracy;
- use mathematics to solve simple two-stage problems;
- use a range of mental calculation strategies;
- identify and explain patterns and relationships and make predictions;
- identify, collect and record the information required;
- present their findings clearly using a range of appropriate mathematical formats;
- explain their findings;
- use appropriate mathematical language to discuss and describe their way of working and respond to questions;

- understand, use, add and subtract whole numbers up to at least 1000;
- understand and use the concept of place value in whole numbers;
- use quick recall of number facts up to 20;
- add and subtract mentally two 2-digit numbers within 100;
- approximate to the nearest 10 or 100;
- identify and describe simple number patterns within the 100 square;
- know 2, 3, 4, 5 and 10 multiplication facts;
- understand that multiplication is commutative;
- explore and use division in practical situations;
- understand and use simple fractions in context;
- use number skills in the context of money up to £10;

- choose and use appropriate standard units to estimate, measure and record length, capacity, volume, 'weight', time and temperature;
- read simple measuring instruments with an appropriate degree of accuracy;
- find the area of shapes by counting whole and half squares;
- read and interpret a calendar;
- read digital and analogue clock displays;

- recognise, name and describe common 2-D and 3-D shapes;
- recognise one line of symmetry in common 2-D shapes;
- recognise tessellations through practical activities;
- recognise right angles in the environment and understand angle as a measurement of turn;
- use grid references in practical situations;

- collect and record relevant data for a given activity;
- draw and label pictograms and bar charts;
- read and interpret information from tables, pictograms, diagrams, 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;

using their **Knowledge and Understanding of:**

Number

Measures

Shape and Space

Handling Data

Level 4

In activities with some structure, in familiar and some unfamiliar contexts and situations, pupils can:

- decide how an activity might be approached and compare their approaches with others;
- identify and use appropriately the materials, equipment and mathematics required;
- use a range of appropriate mathematical techniques and notation;
- organise their own work and work systematically;
- review their work and check for accuracy;
- use a range of problem-solving strategies;
- use a range of efficient mental calculation strategies;
- investigate patterns and relationships, using their findings to make predictions;
- investigate general statements to see if they are true;
- find, organise and interpret relevant information;
- present information clearly;
- compare methods of presentation;
- use appropriate mathematical language to discuss their work and explain their thinking;

- read, write and order whole numbers within 10 000;
- use knowledge of place value to multiply and divide whole numbers by 10 and 100;
- understand place value to two decimal places;
- approximate within 10 000 to the nearest 10, 100 and 1000;
- estimate answers to calculations and approximate by rounding;
- 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 calculations;
- know multiplication facts up to 10×10 and derive associated division facts;
- understand and use multiples and factors;
- use fractions to describe quantities;
- perform simple calculations involving unitary fractions;
- understand equivalence of fractions;
- understand and use simple percentages;
- interpret and apply simple rules expressed in words;
- interpret a calculator display when solving money problems;
- make choices about spending and value for money;
- know different ways in which payments for goods can be made;

- estimate and measure length, 'weight'/mass, time and temperature, working to an appropriate degree of accuracy;
- understand the relationship between metric units;
- add and subtract common measures;
- estimate area and volume of shapes by counting squares/cubes;
- work out perimeters of simple shapes;
- understand and use digital and analogue clock displays, using am, pm and 24-hour notation;

- explore the properties of common 2-D and 3-D shapes;
- explore the relationship between 2-D and 3-D shapes;
- recognise and draw lines of symmetry in a variety of 2-D shapes;
- know the eight points of the compass;
- understand and use the language of line, angle and location;
- use coordinates in the first quadrant;

- collect, group, record and present data with given class intervals;
- present and interpret data using a range of graphs, tables, diagrams, spreadsheets and databases;
- understand and use the language of probability.

Level 5

In activities with some structure, in familiar and some unfamiliar contexts and situations, pupils can:

- plan and decide how an activity might be approached;
- identify and use efficiently the materials, equipment, mathematics and strategies required;
- use a range of appropriate mathematical techniques and notation;
- plan and work systematically and efficiently;
- review their work, considering if their findings are reasonable and making changes where appropriate;
- use a range of problem-solving strategies, suggesting and trying out different approaches when difficulties arise;
- make and test predictions;
- make general statements based on findings and test using new examples;
- summarise their findings;
- identify, obtain, process and interpret information appropriate and sufficient for the activity;
- present information accurately and appropriately including the use of mathematical language, symbols and diagrams;
- use appropriate mathematical language to express and communicate ideas accurately;

- read, write and order whole numbers of any size;
- use knowledge of place value to multiply and divide numbers by 10, 100 and 1000;
- understand place value to three decimal places;
- round decimals to the nearest whole number;
- multiply and divide numbers with up to two decimal places by a whole number;
- check calculations by applying inverse operations;
- understand and use negative numbers in practical contexts;
- understand and use square, cube and prime numbers;
- understand the relationship between common fractions, decimals and percentages;
- calculate fractions and percentages of quantities, including money;
- use understanding of equivalence to add and subtract fractions;
- devise and use rules for generating sequences in words and/or symbolic form;
- express and use formulae in words and/or symbolic form;
- make informed choices about personal budgeting and spending;

- convert from one metric unit to another;
- use the four operations to solve problems related to measures;
- calculate areas of squares, rectangles and right-angled triangles and volumes of cubes and cuboids;
- calculate perimeters of a range of shapes;
- understand and use scale in the context of simple maps and drawings;
- read and interpret timetables;

- describe the properties of regular and irregular 2-D shapes in terms of sides, angles, symmetry and tessellations;
- reflect 2-D shapes in a line;
- describe the properties of 3-D shapes in terms of faces, edges and vertices;
- draw nets of 3-D shapes;
- estimate, measure, draw and label angles up to 360 degrees;

- collect, organise, record and represent data;
- design and use a data collection sheet;
- construct, label and interpret a range of graphs, tables, diagrams, spreadsheets and databases;
- understand, calculate and use mean and range;
- place events in order of likelihood.

Appendix 3

Levels of Progression in **Using ICT** across the curriculum:

Key Stages 1 and 2 (Levels 1–5)

The colours used in the following Levels of Progression in Using ICT provide a means by which progression in the Requirements may be tracked across the levels.

Requirements for Using ICT

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

Pupils should be provided with opportunities to develop knowledge and understanding of e-safety and acceptable online behaviour.

Pupils should be enabled to:

Explore

- access, select, interpret and research information from safe and reliable sources;
- investigate, make predictions and solve problems through interaction with digital tools.

Express

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

Exchange

- communicate safely and responsibly using a range of contemporary digital methods and tools, exchanging, sharing, collaborating and developing ideas digitally.

Evaluate

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

Exhibit

- manage and present their stored work and showcase their learning across the curriculum, using ICT safely and responsibly.

Level 1

Pupils can:

- find and select information from a given digital source;
- explore and interact with a digital device or environment.

- express ideas by creating pictures and composing text or adding own voiceover.

- know that digital methods can be used to communicate.

- talk about their work.

- print their work.

Level 2

Pupils can:

- find, select and use information from a given digital source;
- carry out a series of instructions using a digital device or environment.

- create and edit text onscreen, combining images and/or sound.

- identify and talk about ways of communicating digitally.

- talk about how to improve their work.

- save their work.

Pupils should demonstrate, when and where appropriate

Level 3

Pupils can:

- research, select, edit and use information from given digital sources;
- carry out and edit a series of instructions, make predictions and solve problems using a digital device or environment.

- communicate and develop ideas by creating and editing text onscreen – combining this with an appropriate selection of images and/or sounds.

- use a contemporary digital method to communicate or contribute to a supervised online activity.

- make modifications to improve their work.

- save using file names and select work to showcase learning digitally.

Level 4

Pupils can:

- research, select, edit and use assets from a range of digital sources;
- investigate and solve problems in a digital environment.

- process found or self-produced assets, including text, data, sound, still or moving images, and combine these to create, present and communicate their work, showing an awareness of audience and purpose.

- use contemporary digital methods to communicate, exchange and collaborate in supervised online activities.

- use appropriate ICT tools and features to improve work.

- select, organise, store and retrieve their work to showcase learning digitally in a personalised area.

Level 5

Pupils can:

- research, select, edit, use and evaluate assets from a range of digital sources;
- investigate and solve problems in a range of digital environments.

- process found and self-produced assets, integrating text, data, sound, still and moving images to create, present and communicate their work, demonstrating a clear understanding of audience and purpose.

- use a range of contemporary digital methods to communicate, exchange and share their work, collaborating online with peers.

- use appropriate ICT tools and features to carry out ongoing improvements and evaluate process and outcome.

- organise, store and maintain their work within a personalised area to showcase learning digitally across the curriculum.



**INVESTORS
IN PEOPLE**



