

# Assessment Arrangements (Transitional)

in relation to Pupils in the Final  
Years of Key Stages 1 and 2

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# Introduction

## Purpose of this booklet

This booklet provides information on the transitional arrangements for statutory assessment of Communication and Using Mathematics in relation to pupils in the final years of Key Stages 1 and 2.

Following consultation on draft Levels of Progression in 2009, the Department of Education decided to commission further work on aspects of these. Before introducing the new Levels of Progression the Department wishes to ensure that they are robust, fit for purpose and command the confidence of the education sector, parents and employers, and that teachers and principals have the time, training and support they need to implement the associated assessment arrangements.

Until the new Levels of Progression are introduced, the Department has decided that:

- in assessing pupils in relation to Communication, schools should use the existing level descriptions for Language and Literacy (English and/or Irish); and
- in assessing pupils in relation to Using Mathematics, schools should use the existing level descriptions for Mathematics and Numeracy (Mathematics).

These Levels, which are referred to in this Document as Transitional Levels, are set out in Section 3.

## Assessment Order

To provide for these transitional arrangements, the Department of Education has made the Education (Levels of Progression for Key Stages 1, 2 and 3) (Transitional) Order (Northern Ireland) 2010. The Order comes into operation on 30 April 2010.

Although Levels of Progression have yet to be introduced, in the Order the existing level descriptions for Language and Literacy (English and/or Irish) are for legal reasons referred to as “levels of progression” in relation to Communication: similarly the existing level descriptions for Mathematics and Numeracy (Mathematics) are referred to as “levels of progression” in relation to Using Mathematics.

This booklet is the Assessment Document in relation to pupils in the final years of Key Stages 1 and 2 approved by the Department and referred to in 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 set out in this Document apply from the 2009/10 school year until further notice.



# Section 1

## Overview of Transitional Statutory Assessment Arrangements

### 1.1 Introduction

Statutory assessment of Communication and Using Mathematics in relation to pupils in the final years of Key Stages 1 and 2 will take the form of teacher assessment. Assessment will be against the existing level descriptions for – in the case of Communication – Language and Literacy (English – and/or Irish as appropriate in Irish-medium schools and units) and – in the case of Using Mathematics – Mathematics and Numeracy (Mathematics). In Irish-medium schools and units pupils will be assessed by their teachers in Irish and Mathematics at Key Stage 1 and in English, Irish, and Mathematics at Key Stage 2. The Transitional Levels are set out in Section 3 of this document.

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

As previously, assessment results for pupils at the end of Key Stages 1 and 2 must be sent to CCEA (in due course ESA) each year.

### 1.2 Pupils with Special Educational Needs

Pupils who have statements of special educational needs and who have been assessed as having severe learning difficulties 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/circular\\_1990\\_45.pdf](http://www.deni.gov.uk/circular_1990_45.pdf)).

### 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 English (Talking and Listening/Reading/Writing) and Mathematics (Processes in Mathematics/Number/Measures/Shape and Space/Handling Data). Pupils in Irish-medium primary schools and units will also be assessed in each component part of Irish (Listening, Understanding, Talking/Reading/Writing). In Irish-medium primary schools and units there is no requirement to assess pupils in English at the end of Key Stage 1.
- **Recording teacher assessment**  
Teachers' assessments of their pupils will be recorded on Class Assessment Records provided by CCEA (in due course ESA) which will be collected as specified on the Assessment Timetable (issued separately).

- Support for the assessment arrangements

Up to two days' substitute cover will be made available for Year 4 and Year 7 teachers to support the assessment process. Details are provided in DE Circular 1996/12 issued by the Department of Education in April 1996. (Arrangements for payment of substitute cover are set out in Circular 1996/36 issued by the Department of Education in September 1996.)

- Computing overall levels

CCEA (in due course ESA) will use the component levels provided by schools within the Class Assessment Records to compute the overall levels for each pupil and the overall outcomes for each school. This information will be returned to schools in the Class Assessment Records in time for schools to report results to parents by 30 June.

## Section 2

# Teacher Assessment

### 2.1 Class Assessment Records

In September each year CCEA (in due course ESA) will write to schools requesting details of the number of Year 4 and Year 7 classes. CCEA/ESA will issue Class Assessment Records for each participating class.

The type and range of other 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/ESA nor necessary to satisfy DE inspection requirements.

Teachers should assess each pupil in each component using a 'best fit' approach, as described in 2.3 below, and should record the outcomes on the relevant sheet in the Class Assessment Record.

### 2.2 Assessment of pupils in the final years of Key Stages 1 and 2 (Years 4 and 7)

Teachers should assess each pupil in all three component parts of English and/ or Irish and in all five component parts of Mathematics by the date specified on the Assessment Timetable. The outcomes of these assessments should be recorded on the appropriate sheet in the Class Assessment Record.

Assessment at both key stages is linked to the relevant statutory requirements. Assessment of pupils should be recorded as either:

#### Key Stage 1

E (exempt)

W (working towards Level 1)

Level 1

Level 2

Level 3\*

#### Key Stage 2

E (exempt)

W (working towards Level 1)

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 working at 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 working at Level 5.

In order to arrive at a rounded judgement of the level which best fits a pupil's performance in each component, teachers' judgements should draw upon:

- practical and oral work in the classroom; and
- written work completed in class.

### 2.3 Making judgements about levels achieved

When judging the level achieved by a pupil at the end of the key stage, teachers are advised to select the level description which best fits the pupil's work over a period of time. This judgement should be verified by careful comparison of the selected level description with those immediately above and below it. Level descriptions build progressively on the knowledge, understanding and skills of lower levels which are, therefore, subsumed within them.

Teachers should form judgements based on a pupil's performance as a whole. To be recorded as performing at a particular level a pupil should be showing solid achievement at that level, although he or she may be working at a lower level in some aspects of English/Irish or Mathematics or at a higher level in others.

Asking the following questions may assist teachers in making such judgements:

Is the level description at Level 3, for example, rather than at Level 2 or 4, a better description of:

- the content of the pupil's recent work?
- the level of difficulty of the tasks that the pupil has been undertaking recently?

Has the pupil demonstrated that he or she:

- has in general mastered the content of this aspect of learning at this level?
- is normally successful in completing tasks in this aspect of learning at this level?

### 2.4 Collection, processing and return of Class Assessment Records

The Class Assessment Records must be completed and will be collected by CCEA (in due course ESA) as specified on the Assessment Timetable.

The sheets inside each Class Assessment Record will be removed and the optical mark-read data will be entered into the computer which will then produce a page setting out the overall levels for each pupil as well as levels for each of the component parts of English (and/or Irish) and Mathematics. The sheets will be returned to the Record so that the levels match up with the names of the pupils.

The Class Assessment Records will be returned to all schools and will be accompanied by:

- a summary of the complete assessment outcomes for the school which will include:
  - class results sheets showing overall and component levels for each pupil in English, Mathematics and Irish (if applicable);
  - school summary records (by class) showing the number of pupils achieving each level in English, Mathematics and Irish (if applicable);

- school summary records (by key stage) showing the number and percentage of pupils achieving each level in English, Mathematics and Irish (if applicable); and
- a summary of the outcomes for Northern Ireland.

In addition, a statement of the 'expected' level of achievement for each Key Stage will be provided.

The assessment outcomes will be returned to schools by the date specified on the Assessment Timetable.



# Section 3

## Transitional Levels

### English

**Levels 1-5 for:**

Talking and Listening  
Reading  
Writing

### Irish

**Levels 1-5 for:**

Listening, Understanding, Talking  
Reading  
Writing

### Mathematics

**Levels 1-5 for:**

Processes in Mathematics  
Number  
Measures  
Shape and Space  
Handling Data

# English

## Transitional Levels 1-5

### TALKING AND LISTENING

Pupils should develop the ability to express and communicate meaning in spoken language, listening to and interpreting what others say, and matching style and response to audience, context and purpose. Pupils unable to communicate by speech may use other means including the use of technology, signing, symbols or lip-reading as alternatives to talking and listening.

#### Level 1

Pupils have something to say about matters of immediate and personal interest. In their talk they use a basic vocabulary and attempt to sequence words and ideas, conveying simple meaning adequately. They listen to what is being told or said to them by others and can usually respond appropriately.

#### Level 2

Pupils engage in conversation and show a willingness to talk and to listen. In their response to others they use appropriate vocabulary to express their ideas and understanding. They show some awareness of the needs of the audience by beginning to organise their ideas and by beginning to vary their use of register according to situation and purpose. Their talk will also include some relevant detail.

#### Level 3

Pupils listen with increasing concentration in a range of contexts. In discussion they make contributions and ask questions and show understanding of the main points. They begin to adapt what they say to the needs of the audience and to vary their use of register and detail. They structure and sequence their talk sufficiently to make their meaning clear.

#### Level 4

Pupils talk with increasing confidence and listen attentively in a range of contexts. They develop ideas, describe events and show the beginnings of an ability to explain their views and opinions. They comment on their own and others' contributions. They express and structure their ideas, thoughts and feelings appropriately for their audience. In discussion, they explore, develop and communicate ideas with clarity. They are responsive to others' ideas and views.

## READING

Pupils should develop the ability to read, understand and engage with various types of text for enjoyment and learning. Pupils who need to do so may use non-sighted methods of reading such as Braille. Pupils physically unable to read aloud may use other means such as signing.

### Level 1

Pupils listen and respond to text with enjoyment and some understanding. Pupils show awareness that print and pictures carry meaning. They recognise letters, words and phrases, which have significance for them in a familiar text. Pupils recognise and name some of the letters of the alphabet. In all of these activities they will require support.

### Level 2

Pupils read both silently and aloud a range of simple texts with some independence and understanding. They make simple predictions. They use, with help, a range of strategies, *such as phonic, graphic, syntactic and contextual*, to identify unfamiliar words. They demonstrate some knowledge of the alphabet in using personal word books and simple dictionaries and use simple reference materials.

### Level 3

Pupils read aloud with some fluency from familiar material. They show some independence in using a range of strategies to identify unfamiliar words. They read silently and show understanding. In texts, they recognise some of the main points and can select some appropriate information to support what they say. In talking about texts they begin to use inference and deduction to explore and appreciate meaning. They use their knowledge of the alphabet to locate books and find information.

### Level 4

Pupils read, independently, a range of texts and talk about interests and preferences. They show understanding of significant ideas, themes, events and characters and begin to make use of an appropriate vocabulary when referring to texts. They recount narrative and attempt to reconstruct text. Pupils recognise and express explicit meaning and begin to be aware of some implicit meaning and attitudes when making inferences and deductions. They locate and use ideas and information.

## WRITING

Pupils should develop the ability to make and shape text in order to communicate meaning in written language, appropriate to the context, purpose, reader and audience. At each level the use of technological aids by pupils who depend on them physically to produce their written work is acceptable.

### Level 1

Under the guidance of the teacher, the pupils' writing conveys meaning through the use of pictures, symbols, words and phrases and some simple sentences. Pupils show some control over the size, shape and orientation of letters.

### Level 2

Pupils compose with help, in a limited range of forms in which separate ideas can be identified. In their writing they show a sense of simple structure and organisation, on occasion using complete sentences. Common and familiar words are spelt in a recognisable way or are phonetically plausible. There is evidence of the use of upper and lower case letters.

### Level 3

Pupils compose with some independence. Their writing is based on a range of experiences and uses a variety of forms. Writing shows a sense of structure appropriate to the chosen form and includes some supporting detail to make meaning clear to the reader. Their work is sometimes planned in collaboration with the teacher and/or their peers. Within the context of their writing, familiar and important words are spelt correctly and sentences are punctuated independently with basic accuracy. Handwriting is accurately formed and consistent in size.

### Level 4

Pupils compose independently. The ideas are often sustained and developed, making use of appropriate detail and vocabulary to enhance meaning. The writing demonstrates an ability to use appropriate form and style and shows an awareness of audience. The pupils are beginning to use correct sentence punctuation to make meaning clear. The writing begins to show an awareness of syntax. Most regularly used words are spelt accurately. Planning for revision and redrafting of writing is done with some independence. Handwriting is swift and legible.

# English

## Transitional Levels 1-5

### TALKING AND LISTENING

Pupils should develop the ability to express and communicate meaning in spoken language, listening to and interpreting what others say, and matching style and response to audience, context and purpose. Pupils unable to communicate by speech may use other means including the use of technology, signing, symbols or lip-reading as alternatives to talking and listening.

#### Level 5

Pupils talk with confidence and listen in a range of contexts. Their talk holds the interest of the audience as they begin to vary appropriately their use of register. In discussion they pay close attention to what others say, ask questions to develop ideas and structure their contributions to take account of others' views. They begin to develop the ability to justify and sustain argument and opinions. They discuss their own and others' contributions.

#### Level 6 (for comparison purposes only)

Pupils are beginning to adapt their talk to the demands of a range of different contexts and audiences with increasing confidence. Their talk engages the interest of the audience through the variety of its vocabulary and expression. Pupils take an active part in discussion, showing understanding of ideas and sensitivity to others. They are beginning to demonstrate an ability to plan, organise and present opinions, information and ideas competently. Pupils show an awareness of their own and others' use of register in their talk and in how they react to each other.

## READING

Pupils should develop the ability to read, understand and engage with various types of text for enjoyment and learning. Pupils who need to do so may use non-sighted methods of reading such as Braille. Pupils physically unable to read aloud may use other means such as signing.

### Level 5

Pupils read a range of texts, talk and write about their interests and preferences, drawing on an increasing range of appropriate vocabulary. They recognise and express explicit and some implicit meanings and attitudes when making inferences and deductions. Pupils begin to talk about the perceived intentions of authors in texts and to give personal responses, supporting these with reference to the text. They retrieve and collate information from a range of sources.

### Level 6 (for comparison purposes only)

Pupils read a range of texts, talk or write about interests and preferences, drawing on an increasingly appropriate vocabulary. In reading and discussing a range of texts, pupils identify different layers of meaning and comment on their significance. They give personal responses to texts, referring to aspects of language, structure, style and themes in justifying their views. They locate, evaluate and manage information effectively for research and presentation.

## WRITING

Pupils should develop the ability to make and shape text in order to communicate meaning in written language, appropriate to the context, purpose, reader and audience. At each level the use of technological aids by pupils who depend on them physically to produce their written work is acceptable.

### Level 5

Pupils' writing is varied and interesting, conveying meaning clearly in a range of forms for different audiences and using a more formal style, where appropriate. Vocabulary choices are imaginative and words are used precisely. Syntax and punctuation are used with increasing proficiency and more complex words are spelt correctly. The pupils are increasingly independent in planning, revising and redrafting to improve accuracy and enhance meaning. Handwriting is swift and legible.

### Level 6 (for comparison purposes only)

Pupils' writing often engages and interests the audience. Ideas are sustained, developed and show some originality. The use of vocabulary is varied and expressive. Language is used effectively across a range of forms, taking account of purpose, audience and task. Increasingly, syntax and punctuation are used to enhance meaning and most complex words are spelt correctly. Writing is logical and coherent, showing increasing confidence and competence. Independent planning, composing and revising of work improves accuracy, content and presentation. Handwriting is swift and legible.

# Irish Transitional Levels 1-5

## LISTENING, UNDERSTANDING, TALKING

Pupils should develop the ability to express and communicate meaning in spoken language, listening to and interpreting what others say and matching style and response to audience, context and purpose. Pupils unable to communicate by speech may use other means including the use of technology, signing, symbols or lip-reading as alternatives to listening and talking.

### Level 1

Pupils listen to the teacher and indicate an understanding of what is being said. While there may be a tendency to use English in their own speech, they also use words, phrases and complete sentences in Irish.

### Level 2

Pupils show an ability to listen to others and participate in simple discussions. They describe events that have happened. They express their own opinions and feelings. In the formal context of the classroom, Irish predominates as the medium of communication.

### Level 3

Pupils listen carefully to others. They participate in discussions asking relevant questions and responding to the ideas of others. Irish is used in spontaneous situations with their peers and is used consistently in the formal context of the class. Their competence in Irish demonstrates the development of increasing accuracy along with a greater variety in use of vocabulary, sentence patterns and verbs.

### Level 4

Children talk with confidence and express themselves clearly. Their ideas indicate a coherence and logic. In presenting their own ideas they can make some attempt at expressing and justifying their position and commenting on the contribution of others. They use a wider range of language and demonstrate a greater consolidation of language accuracy.

## READING

Pupils should develop the ability to read, understand and engage with various types of text for enjoyment and learning. Pupils who need to do so may use non-sighted methods of reading. Pupils physically unable to read aloud may use other means such as signing.

### Level 1

Pupils indicate that they are developing an interest in and enjoyment of reading and they understand that pictures and print carry meaning. They recognise words and phrases that have relevance in the context of the classroom and can read a simple text based on them. They begin to recognise the names and sounds of letters.

### Level 2

Pupils read simple texts and use basic strategies in attempting unfamiliar words. They demonstrate an awareness of the literal meaning of a text and begin to develop an understanding of inferential aspects of a text. They make simple predictions. They use their knowledge of the alphabet within a simple context.

### Level 3

Pupils read familiar texts with consistent accuracy and begin to read with effect when reading aloud. They can make a simple summary and give an opinion on an event or character. With help, they can find a book which they require and locate relevant information.

### Level 4

Pupils read a range of material both fact and fiction. They summarise information confidently and with independence. They refer to both explicit and implicit meaning when discussing a text or article. There is a credible basis to their opinions and feelings. They can locate books and information with reasonable independence.

## WRITING

Pupils should develop the ability to make and shape text in order to communicate meaning in written language appropriate to the context, purpose, reader or audience. At each level the use of technological aids by pupils who depend on them physically to produce their written work is acceptable.

### Level 1

Pupils begin to write independently and with the help of the teacher begin to put shape and structure on simple ideas. They use simple sentences and words which arise from their reading experience. They demonstrate some control over the size and shape of letters.

### Level 2

Children write independently, indicating, with help from the teacher, an ability to organise and structure their thoughts. They begin to spell the most basic high frequency words with accuracy. Handwriting is legible and they indicate an awareness of basic punctuation conventions.

### Level 3

Pupils begin to use a variety of forms in their writing. There is a sense of coherence and logic in their work. They begin to extend their range of language. They spell high frequency words with reasonable accuracy. Handwriting is neat and legible and letters are consistent in size. They regularly demonstrate basic punctuation conventions.

### Level 4

The pupils use a variety of forms in writing based on a range of experiences. Writing shows confidence along with coherent structure and credible chronology in the events being described. They display a more extended range of language. Pupils are beginning to use basic drafting skills and spell high frequency words with consistent accuracy. They show that they are developing a clear consistent style of writing, joined or unjoined. Basic punctuation conventions are consistently in place and they show an awareness of the more complex punctuation conventions.

# Irish Transitional Levels 1-5

## LISTENING, UNDERSTANDING, TALKING

Pupils should develop the ability to express and communicate meaning in spoken language, listening to and interpreting what others say and matching style and response to audience, context and purpose. Pupils unable to communicate by speech may use other means including the use of technology, signing, symbols or lip-reading as alternatives to listening and talking.

### Level 5

Pupils organise their thoughts and ideas effectively in a range of contexts and situations. They pay close attention to what others say. They show an ability to follow an argument and to evaluate a variety of opinions. They show an awareness of the need to motivate and stimulate audience interest.

### Level 6 (for comparison purposes only)

Pupils participate in discussions on a range of topics in which ideas and opinions are expressed. They are beginning to demonstrate an ability to plan, organise and present opinions, information and ideas competently. They begin to appreciate the use of language to heighten effect and to create atmosphere.

## READING

Pupils should develop the ability to read, understand and engage with various types of text for enjoyment and learning. Pupils who need to do so may use non-sighted methods of reading. Pupils physically unable to read aloud may use other means such as signing.

### Level 5

Pupils read aloud confidently and clearly with appropriate expression and intonation. They summarise a text or article effectively. They express coherent opinions about characters and events, clearly and confidently, supporting their opinions with reference to the text and their own experiences. They can differentiate between fact and the personal opinion of the author. They begin to appreciate the use of language to heighten dramatic effect, create atmosphere and intensify feeling. They use a range of sources to locate and manage information effectively.

### Level 6 (for comparison purposes only)

Pupils read a range of texts, and talk or write about interests and preferences. They read a range of texts in which facts and opinions are expressed and can distinguish between these. Their knowledge of the language is such as to enable them to identify an author's purpose and style at a basic level. They give personal responses, referring to aspects of language, structure, style and themes in justifying their views, drawing on an increasingly appropriate vocabulary. They are able to identify relevant information from a range of sources and to use it effectively.

## WRITING

Pupils should develop the ability to make and shape text in order to communicate meaning in written language appropriate to the context, purpose, reader or audience. At each level the use of technological aids by pupils who depend on them physically to produce their written work is acceptable.

### Level 5

Pupils' writing is confident, competent and interesting. They use a range of forms and language is chosen to heighten the impact of writing. They are reasonably independent in redrafting work. They spell a range of words accurately. They have a legible and flowing style of handwriting. More complex conventions of punctuation are used regularly and appropriately.

### Level 6 (for comparison purposes only)

Pupils' writing often engages and interests the audience. Ideas are sustained, developed and show some originality. The use of vocabulary is varied. Language is used effectively across a range of forms, taking account of purpose, audience and task. Writing is logical and coherent, showing increasing confidence and competence. Independent planning, composing and revision of work improves grammatical accuracy, content and presentation. Handwriting is swift and legible.

# Mathematics

## Transitional Levels 1-5

### PROCESSES IN MATHEMATICS

Pupils should develop mathematical processes through practical tasks, real-life problems and investigations within mathematics itself.

#### Level 1

Pupils use materials provided under direction. They use mathematics as an integral part of classroom activities. They talk about their work in response to questions. They represent their work with objects or pictures. They begin to make simple predictions.

#### Level 2

Pupils select, with help, the materials and mathematics required for some classroom activities. They talk about their work, using appropriate mathematical language and represent their work using symbols and simple diagrams. They respond to open-ended questions.

#### Level 3

Pupils select and use the materials and mathematics appropriate for their work. They find ways to overcome difficulties that arise when they are solving problems. They begin to organise their work and work systematically. They use and interpret mathematical symbols and diagrams. They represent their work in a variety of ways and check it themselves. They discuss their mathematics and begin to explain their thinking.

#### Level 4

Pupils gather information required for a task. They begin to develop and use their own strategies for solving problems. They discuss their work and compare their ideas and methods with others. They present information and results in a clear and organised way, explaining the reasons for their choice of presentation. They understand general statements and investigate whether or not particular cases match them.

## NUMBER

Pupils should understand number, number notation, number operations - addition, subtraction, multiplication and division - and make use of appropriate methods of calculation. They should estimate and approximate in number. They should recognise and use patterns, relationships and sequences, and make generalisations. They should understand and use function machines and rules expressed in words.

### Level 1

Pupils count, read, write and order whole numbers up to at least 10. They understand the conservation of number. They begin to make sensible estimates of small numbers of objects. They add and subtract up to 10 using real objects and use these skills to solve simple problems. They copy, continue and devise repeating patterns using real objects or pictures.

### Level 2

Pupils read, write and order whole numbers up to at least 100 and begin to show some understanding of place value. They have good recall of number facts to 10 and add and subtract up to at least 20, using these skills to solve problems, including those that involve money. They explore and use addition and subtraction patterns up to 10 and use these patterns to understand the relationship between addition and subtraction.

### Level 3

Pupils read, write and order whole numbers up to at least 1000 and use the knowledge that the position of the digit indicates its value. They approximate to the nearest 10 or 100. They use mental recall of number facts up to 20 and of the majority of multiplication tables up to  $10 \times 10$  in solving problems. They add and subtract money expressed in conventional notation up to £10. They solve problems involving addition, subtraction and multiplication (involving numbers up to 1000) and those that involve division in practical situations. They recognise and understand simple fractions which arise naturally, and their notation. They explain and predict number patterns within 100, including those in the 2, 5 and 10 times tables. They use function machines with one operation.

### Level 4

Pupils understand and use numbers with up to two decimal places in relevant contexts. They add mentally two two-digit numbers and subtract mentally one two-digit number from another. In solving problems, they use a range of mental, written and calculator methods of computation involving the four operations. They recognise approximate proportions of a whole and use simple fractions to describe these. They understand that addition and subtraction are inverse operations and use this to check their results when solving problems. They explore and predict patterns and sequences of whole numbers, *such as doubling and halving numbers*. They understand number properties, *such as multiple and factor*. They understand and use simple rules expressed in words.

## MEASURES

Pupils should estimate and measure quantities and appreciate the approximate nature of measurement.

### Level 1

Pupils measure and order objects using direct comparison and use appropriate language associated with length, 'weight', capacity and area. They sequence events and recognise 'special' times on the clock.

### Level 2

Pupils use non-standard units to measure length, 'weight', capacity and area and understand the need for standard units. They know the most commonly used units in length, 'weight', capacity and time.

### Level 3

Pupils use standard units to measure length, 'weight', capacity and time in a range of contexts. They read times on the analogue clock and the date from a calendar. They choose and use a range of units and instruments, interpreting, with reasonable accuracy, numbers on a range of measuring instruments.

### Level 4

Pupils understand the relationship between metric units. They find perimeters of simple shapes, find areas by counting squares and find volumes by counting cubes. They begin to make sensible estimates using standard units in relation to everyday situations. They understand and use the twelve and twenty-four hour clocks.

## SHAPE AND SPACE

Pupils should recognise and use the properties of two-dimensional and three-dimensional shapes. They should recognise locations in the study of space.

### Level 1

Pupils sort and make constructions with 2-D and 3-D shapes, using everyday language to describe their work. They use prepositions to state a position.

### Level 2

Pupils sort 2-D and 3-D shapes in various ways and give reasons for sorting. They name common 2-D shapes. They understand right and left turns.

### Level 3

Pupils name and describe common 2-D and 3-D shapes, using appropriate mathematical language. They identify lines of symmetry in simple 2-D shapes. They understand angle as a measurement of turn and recognise right angles in the environment.

### Level 4

Pupils make simple 2-D and 3-D shapes. They understand and use language associated with line and angle. They know the eight points of the compass and understand the terms clockwise and anticlockwise. They use co-ordinates to plot points and draw shapes in the first quadrant.

## HANDLING DATA

Pupils should collect, record, process, represent and interpret data. They should understand and estimate simple probabilities.

### Level 1

Pupils sort and classify objects and talk about the criterion they have used. They record their work using real objects or drawings.

### Level 2

Pupils sort and classify objects for two criteria. They collect information and record it in simple tables, block graphs and diagrams. They interpret the information.

### Level 3

Pupils extract and interpret information presented in simple tables and lists. They collect, display and interpret data in pictograms and bar charts in order to communicate information.

### Level 4

Pupils collect, group and order discrete data with given class intervals. They represent and interpret data using a range of graphs, tables and diagrams. They construct and interpret pictograms where the symbol may represent a group of units. They interrogate a simple data base for one criterion. They understand and use simple vocabulary associated with probability, *such as certain, uncertain, impossible, likely, unlikely and fair.*

# Mathematics

## Transitional Levels 1-5

### PROCESSES IN MATHEMATICS

Pupils should develop mathematical processes through practical tasks, real-life problems and investigations within mathematics itself.

#### Level 5

Pupils identify and obtain information required to carry through tasks and solve mathematical problems. They explain their approach to the task. They present their work using symbols, words and diagrams. They check their results and consider whether these are reasonable. They make general statements based on evidence and give an explanation of their reasoning.

#### Level 6 (for comparison purposes only)

Pupils carry through substantial tasks with some given structure, modifying and refining strategies as they work. They identify and carry out the associated sub-tasks. They recognise and control some variables in the task with help where appropriate. They interpret, discuss and synthesise information which is in a variety of mathematical forms. They make generalisations with supporting arguments and make appropriate use of diagrams.

## NUMBER

Pupils should understand number, number notation, number operations - addition, subtraction, multiplication and division - and make use of appropriate methods of calculation. They should estimate and approximate in number. They should recognise and use patterns, relationships and sequences, and make generalisations. They should understand and use function machines and rules expressed in words.

### Level 5

Pupils extend their understanding of the relationships between place values, using this to multiply and divide numbers with up to two decimal places by 10, 100 and 1000. They use the four operations with decimals to two places, multiplying and dividing by whole numbers only. Using their understanding of equivalence, they add and subtract simple fractions. They understand the relationship between simple fractions and percentages. They apply inverse operations or estimation using approximations in order to check solutions. They understand and use terms *such as square, cube and prime numbers*. They use a letter to stand for an unknown number. They follow sets of instructions to generate a sequence and determine possible rules for generating sequences.

### Level 6 (for comparison purposes only)

Pupils understand and use decimals with up to three decimal places and approximate to two decimal places. They understand and use the equivalences between fractions, decimals and percentages, and calculate using ratios and percentages in relevant contexts. They understand and use order of precedence in numeral calculations, including the use of brackets. They use index notation to express powers of whole numbers. They understand and use the term square root. They understand and use basic conventions, simplification and substitution with an expression or formula. They understand and use formulae or linear equations expressed in symbolic form with whole number coefficients.

## MEASURES

Pupils should estimate and measure quantities and appreciate the approximate nature of measurement.

### Level 5

Pupils understand and use scale in the context of maps and drawings. They calculate areas of squares, rectangles and right angle triangles and volumes of cubes and cuboids. They are familiar with the Imperial units still in common use. They convert one metric unit to another. They understand and use negative numbers in context. They use timetables involving the twenty-four hour clock.

### Level 6 (for comparison purposes only)

Pupils calculate composite areas and volumes involving squares, rectangles, triangles, cubes and cuboids. They calculate the surface area of cubes and cuboids.

## SHAPE AND SPACE

Pupils should recognise and use the properties of two-dimensional and three-dimensional shapes. They should recognise locations in the study of space.

### Level 5

Pupils understand congruence of 2-D shapes. They investigate properties of triangles and quadrilaterals and measure and draw angles up to  $360^\circ$  with reasonable accuracy. They draw nets to make simple 3-D shapes. They reflect a shape in a line.

### Level 6 (for comparison purposes only)

Pupils recognise rotational symmetry, its order and centre. They know and use angle properties and symmetry properties of triangles and quadrilaterals. They classify and define types of quadrilaterals. They specify location by means of co-ordinates in all four quadrants. They understand and use language associated with the circle, *such as circumference, radius, diameter, sector, segments, arc and chord*. They construct triangles, using protractor, ruler and pair of compasses.

## HANDLING DATA

Pupils should collect, record, process, represent and interpret data. They should understand and estimate simple probabilities.

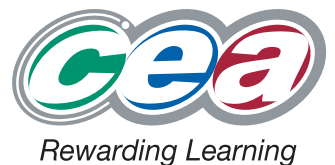
### Level 5

Pupils design and use a data collection sheet and interpret the results. They calculate and use the mean and range of discrete data. They construct and interpret simple line graphs. They interpret graphs and diagrams, including pie charts and draw conclusions. They insert and interrogate data in a computer database. They place events in order of 'likelihood' and use appropriate words to identify chance, *such as fifty-fifty and evens*.

### Level 6 (for comparison purposes only)

Pupils distinguish between and are able to find the mean, median, and mode of discrete data. They construct and interpret pie charts and conversion graphs. They know that the probability of an event is the number of desirable outcomes divided by the number of possible outcomes. They understand and use 0 and 1 as the limits of the probability scale.

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