**Qualifications and
Curriculum Authority**

Key skills test

Information and communication technology

Level 2

Test specification

Introduction

1   The information and communication technology (ICT) key skill qualification will be awarded to candidates who are able to demonstrate that their attainment meets national standards in ICT in both their portfolio of evidence and an external assessment (hereafter referred to as a test).

2   The test provides the external assessment component for each key skill at each level. The test is externally set and marked. The purpose of the test is to assess the candidate's knowledge of the standard applications of ICT and of the associated techniques.

3   For key skills, performance in the test is used to complement and support performance in the internal assessment component, the portfolio of evidence. The portfolio must contain evidence of the candidate's purposeful and effective use of ICT, which meets the full requirements of part B of the key skill standards. The portfolio evidence is internally assessed and externally moderated/verified. A candidate must satisfy the requirements of both components to be awarded the key skill.

4   The purpose of this specification is to inform the development of tests for the ICT key skill at level 2 by clarifying those aspects of the standards which may be tested.

5   This test specification is intended to provide writers, editors and reviewers, and also teachers and candidates, with detailed information about the acceptable content, coverage and demand for questions, together with the range of suitable contexts for questions at level 2.

6   This test specification is also intended to support the development of tests and items which may be re-used, as required.

7   This test specification should be read in conjunction with:

- *Level 2 information and communication technology key skills standards* (QCA, CCEA, ACCAC, 2004)
- *Guidance on the key skills* (QCA, CCEA, ACCAC, 2004).

8   This test specification has been designed to support the development and production of tests in English, Welsh and Gaeilge.

Design of tests

Principles

9   In creating tests, writers must take the following into account:

- the test will last for 1 hour
- the test will consist of 40 multiple-choice questions, each worth 1 mark
- candidates will be supervised while taking the test.

10   The test specification is complemented by awarding body instructions to centres on the conduct of tests and guidance on arrangements for candidates with special requirements.

Scope and demand of tests

11   The test must match the identified requirements of the ICT standards at level 2. This means that the test will focus on specific aspects of part A of the key skill standards, 'You need to know how to', as well as drawing on some aspects of part B, 'You must'. For the purpose of this test specification the requirements are organised into skill areas. Guidance on the range of skills covered by each of the skill areas is given in the appendix.

12   The ICT key skill standards have been aligned with the national curriculum order for ICT in England, which corresponds closely with the equivalent requirements in Wales and Northern Ireland. At level 2 this means that information on expectations may be drawn from the National Curriculum level descriptions for level 6 and associated programmes of study.

Pass mark

13   The test will be designed to have a predetermined pass mark in the range of 27–29 out of 40. Responsibility for setting the final pass mark for each paper resides with the awarding bodies acting jointly.

Form of questions

14   The test consists of multiple-choice questions. The terms and phrases used to describe the possible demands of questions are based upon this form of test. The use of multiple-choice questions necessarily restricts the test to those aspects of the key skill standards that are suitable for testing in this way. Skills, such as making judgements about the quality of information and decisions about when and how to apply ICT to good effect, are assessed more effectively by means of the portfolio, which must provide evidence covering part B of the standards.

15   Each question is in multiple-choice form with four potential answers, of which one is correct (the key) and three are wrong (the distractors). Each distractor must be plausible but incorrect in some significant respect, which is evident to a candidate appropriately prepared for the test. The requirement of each question must be clear and unambiguous.

16   Each question should encourage the candidate to reason correctly and work things out carefully. Questions should be designed to discourage guessing by ensuring that the four alternative answers offered are sufficiently plausible to ensure that candidates must undertake the necessary working in order to find or check the correct answer.

17   There will be no 'follow-through' between questions. Finding the correct answer to a question will not depend on having answered the previous question correctly.

18   All questions must avoid making demands on candidates beyond the scope of the ICT skills being assessed. In particular, all language used in the questions and source material should be simple and direct. Only information relevant to the questions should be included. Expectations of knowledge or familiarity with specialist contexts, concepts and terms beyond those associated with the ICT topics in this guidance must be avoided.

Structure of tests

19   Tests will be made up of groups of questions based on different scenarios. Each group will include questions from more than one skill area (see below). Each piece of source material will have between four and six associated questions. There may also be some free-standing questions, which may draw from any skill area.

Context

20   The ICT key skill is concerned with finding information, deciding what is relevant, exploring, bringing together and developing information, and presenting information to meet a given purpose. Examples of contexts which provide opportunities to develop suitable questions involve seeking, developing and presenting information about:

- travel, for example journeys by car or public transport, holidays away from home
- leisure activities, for example hobbies, sports, clubs, TV, cinema, music, theatre
- employment, for example job roles, organisations, pay rates, income
- domestic activities, for example cooking, shopping, DIY
- personal items, for example health, social security, social activities, address books
- goods, for example food, clothing, toys, furniture, audio-video equipment, cars
- climate and weather, for example rainfall, hours of sun, temperatures, forecasts
- public records, for example library catalogues, electoral registers, census data, DVLA records
- standard documents, for example invoices, order forms, bank statements
- production, for example products, materials, suppliers, overheads, drawings, labour
- services, for example house agents, banks, mail order, education, health.

Underlined items are those which are additional to the level 1 requirements.

21   Some candidates will be familiar with a particular context and others may not have this advantage. Some candidates may not have been on an overseas holiday; young candidates may have limited experience of financial documentation; older candidates may be less familiar with some sports or hobbies. This does not mean that such contexts should always be avoided but sufficient descriptions and/or images may be necessary to ensure that the source material is understood by all concerned. A range of scenarios will be used in each test to minimise potential disadvantage. In all source material it is essential to be brief, to use simple language and to avoid jargon.

22   Every effort must be made to ensure that source material is free of any form of bias (for example gender, ethnic, age) which might favour or disadvantage any candidate or group of candidates.

23   The appendix to this test specification details the content areas from which questions in level 2 tests may be drawn. The content areas for level 2 build upon and include the content areas for level 1.

Skill areas and mark allocations

Mark allocations

Skill area 1	Find and select information	6–10 marks
Skill area 2	Enter and develop information	11–15 marks
Skill area 3	Layout and present information	11−15 marks
Skill area 4	Standard ways of working with ICT	4–8 marks
Total		**40 marks**

Skill area 1 – Find and select information

The skill area covers the following skills in part A and relates to ICT2.1 in part B.

- Identify suitable sources of information (for example written documents, materials to be scanned, CD-ROMs, the internet).
- Search for information using multiple criteria (for example using AND, or '<', and '>', or tools such as search engines).

6–10 marks

Skill area 2 – Enter, develop and derive information

The skill area covers the following skills in part A and relates to ICT2.2 in part B.

- Enter and bring together information (for example copy and paste or insert text, images and numbers) using formats that help development (for example using table structures, text boxes or text wrap to position information).
- Develop information in the form of text, images and numbers (for example organise information under headings, structure tables, generate graphs and charts from data, use queries to select records).
- Derive new information (for example compare information from different sources to reach a conclusion, use formulas to calculate information such as a total or average).

11–15 marks

Skill area 3 – Layout and present information

The skill area covers the following skills in part A and relates to ICT2.3 in part B.

- Select and use appropriate layouts for presenting combined information (for example document structures, such as indents, columns and headings, borders for images and text, highlight information to improve its impact, make sure it meets the needs of the audience).
- Develop the presentation to suit the purpose and types of information, including text, images and numbers (for example format information to improve its impact, refine layout, making sure it suits the needs of your audience).
- Present information in a consistent way (for example paragraph layouts, sizes and styles of text, alignment, fonts).

11–15 marks

Skill area 4 – Standard ways of working with ICT

The skill area covers the following skills in part A and relates to ICT2.3 in part B.

- Ensure work is accurate and clear (for example proofread, use a spellchecker, seek the views of others) and is saved appropriately (for example use suitable folders/directories and filenames, avoid loss).
- Know the benefits and disadvantages of using ICT, when it is necessary to observe copyright or confidentiality, how to identify errors and their causes and minimise risks from viruses, and how to work safely and minimise health risks.
- Identify health risks associated with working in ICT environments.
- Know how to send and receive email.

4–8 marks

Total: 40 marks

Appendix

Guidance for writers, editors and reviewers on the key skills test information and communication technology level 2

The purpose of this appendix is to give guidance on the range of skills covered by each of the ICT key skills topic areas.

Underlined items are those which are additional to the level 1 requirements.

Skills area 1 – Find and select information

Identify suitable sources of information

Candidates should know about the different methods and media used to provide information and should be able to recognise advantages or limitations for each. These methods and media include:

- paper-based   newspapers, magazines, books (for example reference, encyclopaedia, educational, fiction), maps (for example road, world atlas), timetables (for example TV, train, bus, air, entertainment), brochures (for example holidays, products, services), financial statements (for example bank, insurance, bills), directories (for example telephone, yellow pages, companies)
- broadcast   TV, radio
- teletext   advertising (holidays, products, services), TV programme listings, news, weather forecasts, financial listings
- internet   websites for products (for example cameras), services (for example holidays), reference information (for example museums)
- CD or DVD   encyclopedias, manuals, brochures, directories, catalogues, clip art
- databases   contacts, goods, DVLA, police, electoral roll, census, timetables
- email   communication between individuals and groups, mailing lists
- people   questionnaires, discussion, meetings.

1.1 Questions may, for example, require candidates to:

- a   identify media suited to rapidly changing information (including newspapers, broadcast, teletext, databases, internet, email)
- b   identify media unsuited to rapidly changing information (including books, CD-ROMs, DVDs)
- c   identify constraints for media (including need for equipment, specialised skills)
- d   identify media that are convenient and portable (including newspapers, maps, books, mobile phones, mobile internet access).

Search for information using multiple criteria

Candidates should know how to carry out search activities including manual (for example use of contents lists, telephone directories and indexes) and ICT-based (for example following links, using an internet search engine, finding occurrences of a particular word, using search criteria and developing queries). Questions will require an understanding of searches on both structured information (for example location in a table or ordered list) and unstructured information (for example matching a word in a document).

1.2 Questions may, for example, require candidates to:

- a   identify methods of finding information suited to particular types of information source
- b   identify suitable text searches for finding information (including matching a word in a document, the appropriate use of the wildcards (* and ?), using a search engine)
- c   identify techniques for moving between internet pages and websites using a web browser, including links or hotspots, forward-back, favourites, bookmarking (adding to favourites)
- d   identify text or numeric search criteria to locate information in a database (including use of the relational operators =, >, <, <=, >=, < >)

e   identify the use of multiple search criteria to find information (including the use of the logical operators AND, OR, NOT)

f   identify the content of a query to locate specified information

g   identify techniques to locate files using directory (folder) search tools.

Select information

Candidates should be able to interpret a variety of different forms of information and identify what is relevant for a specific purpose.

Scenarios or questions may, for example, present information in the form of:

- common paper-based products (for example timetables, calendars, diaries, invoices, bank statements, diagrams)
- results of surveys or questionnaires (for example voting statistics, census results, consumer reports)
- database records (for example contacts, goods, sports results, holiday offers, financial information)
- spreadsheets (for example sales figures, hours worked, rates of pay, prices of goods, budgets)
- information in graph or chart form (for example growth/time graph, temperature/month bar chart, transport preference pie chart).

1.3 Questions may, for example, require candidates to:

Was 2.1. No e or f	a identify a particular record, field or cell value in a table, database or spreadsheet that match specified requirements
	b read charts and graphs to identify results and trends (including pie and bar charts, line graphs)
	c identify possible travel plans or meetings suited to given timetables, calendars or diaries
	d identify specified information from a survey or questionnaire.

Skills area 2 – Enter, develop and derive information

Enter and bring together information using formats that help development

Candidates should know about different types of information that can be entered and stored in a computer and the techniques that can be used to bring together different types of information. They should also understand the importance of using appropriate and consistent formats to facilitate further development.

2.1 Questions may, for example, require candidates to:

Was 3.1.	a identify ways of entering information (including keyboard, microphone, scanner, digital camera)
	b identify reasons for consistent use of spaces, tabs and returns
	c identify when and why tables might best be used
	d identify techniques for entering and bringing together information (including insert or copy and paste of text, tables, images, lines and boxes)
	e identify techniques used when inserting images (including position, text wrap and the use of behind/in front)
	f identify text boxes as a useful technique to insert, combine and position text in a document.

Develop information in the form of text, images and numbers

Candidates should be able to identify the different types of information they are dealing with and the best structures for further developing that information.

2.2 Questions may, for example, require candidates to:

a identify suitable applications software for developing given information (including word processing, database, spreadsheet and graphics software)

b identify suitable methods of amending, inserting and deleting information (including copy and paste, cut and paste, move [drag and drop, find and replace] insert or delete fields, records, columns or rows)

c identify why and how to insert, crop, size and position images

d identify why and how to adjust table structures (including column width, row height, add rows, add columns, merge cells, split cells)

e identify techniques for ordering information (including sorting on one or more text, numeric or date fields in ascending or descending order)

f identify suitable field names and data types (including text, number, currency, date), sizes and primary keys to develop information in the form of records

g identify improvements or corrections to the content of database queries and reports

h identify suitable organisation of given information in a spreadsheet structure (including cells, rows, columns, headings)

i identify suitable spreadsheet cell contents for developing given information (including text, number, currency, percentage and date)

j identify the effects of changing specified values and formulas in a spreadsheet

k identify appropriate formula or cell content in a spreadsheet to achieve specified results.

Derive new information

Candidates should understand how to derive new information from different sources or from information they have developed themselves. This new information may be the result of writing summary reports, comparing information from different sources, merging information, calculating results, searching and sorting records or interpreting charts and graphs.

2.3 Questions may, for example, require candidates to:

a identify mail merge as a way of merging files to produce personalised letters

b identify spreadsheet data suited to developing output in the form of a line graph or pie chart or bar chart

c identify suitable formulas including functions, to derive a required result, such as difference in
weight, total expenditure, minimum cost, average age, profit, bonus calculation. These may include the use of:
- cell references in spreadsheet formulas, for example =G11
- cell ranges, for example C3:C7, A5:F8
- parentheses and multiple arithmetic operators: +, -, *, /, for example =(B7+C7)/D4, =F9*C10-A6
- formulas including functions for including SUM, MIN, MAX, AVERAGE, for example =AVERAGE(C3:C17), =MAX(A5:F8)
- replication of a formula into other cells

d identify conclusions from given information, such as most likely result, prediction by calculation or from a trend or graph.

Skills area 3 – Layout and present information

Select and use appropriate layouts for presenting combined information

Presentation is concerned with the structure, format, impact and readability of information. Scenarios for questions may use examples of standard ways of presenting information including memos, letters, invoices, agendas, minutes and email. Candidates should also be aware of other types of document that are used for presenting information including publicity flyers, reports and newsletters.

Candidates should be aware of a variety of formatting techniques and should be able to identify the most appropriate for a given situation.

3.1 Questions may, for example, require candidates to:

<table>
<tr><td>Was 4.1</td><td></td></tr>
</table>

a   identify suitable page layout settings for printing given material (including margins, orientation [portrait, landscape], <u>columns [number, size, spacing]</u>, headers, footers, page numbering, <u>date</u>)

b   identify suitable paragraph layout settings for a document (including left, right, centred and fully justified text alignment, line spacing, tabs [left, right, centre], <u>indents [left and right whole paragraph, first line, hanging]</u>, bullets and numbering, <u>borders, shading</u>)

c   identify text formats used in given examples (including regular, bold, italic and underlined font styles, changes in font size)

d   identify number formats used in given examples of database fields and spreadsheet cells (including currency, percentage, number of decimal places)

e   identify table format settings used in given examples (including row and column size, horizontal and <u>vertical</u> text alignment, <u>merged/split cells, borders, shading</u>)

f   <u>identify suitable spreadsheet layouts for given information (including row height, column width, row and column headings, sheet titles)</u>

g   <u>identify suitable chart layouts for given results (including pie charts, bar charts, line graphs)</u>

h   <u>identify suitable headings for charts and graphs (including chart title, legend, axis and data labels)</u>.

Present information in a consistent way

Candidates need to be able to recognise inconsistencies in writing and presentation style. They should be able to identify where page, paragraph text or number formatting is used inconsistently.

3.2 Questions may, for example, require candidates to:

<table>
<tr><td>Was 4.2 b gone.</td><td></td></tr>
</table>

a   identify inconsistencies in a presentation (including unintended variations in headings, <u>image layout</u>, paragraph styles, bullets and numbering, tabs, <u>indents</u>, line spacing, text fonts, font styles, font sizes).

Develop the presentation to suit the purpose and types of information, including text, images and numbers

Candidates need to be able to identify how information should be organised in a presentation so that it meets the purpose.

3.3 Questions may, for example, require candidates to:

<table>
<tr><td>Was 4.3</td><td></td></tr>
</table>

a   identify main features of the information in examples of standard documents (including sender's name and address, receiver's name and address, date and reference)

b   identify ways to improve the organisation of information in examples of standard documents

c   identify suitable formats to present or summarise given information (including tables, bulleted lists, numbered lists, pie or bar charts<u>, line graphs</u>)

d   <u>identify the purpose of a given presentation (including to communicate personally, to attract attention, to explain something, to summarise information, to collect information)</u>

e   <u>identify situations where a form could be used (including ordering goods, applying for membership, undertaking a survey, describing a house property)</u>.

Skill area 4 – Standard ways of working with ICT

Ensure work is accurate and clear and is saved appropriately
Standard ways of working with ICT

Candidates need to understand ways in which ICT can help with their work.

Candidates should be aware that information stored in a computer should be accurate, consistent and reliable, and that it should be stored securely.

There are many reasons for having standard ways of working with ICT. Candidates need to know that information in ICT systems can easily be lost or misused. They need to know that:

- unauthorised people may gain access to confidential information
- people may copy original work and present it as their own
- files may be lost, corrupted by a virus or damaged in other ways
- computers or disks may be damaged so information stored in them cannot be recovered
- inaccurate or poorly written information may confuse or annoy readers
- information presented professionally may be believed, even though it may be inaccurate
- poorly laid-out workplaces may cause physical stress or be hazardous to ICT operators.

4.1 Questions may, for example, require candidates to:

<table>
<tr><td>Was 5.1 all letters changed</td><td>a</td><td>identify techniques used to send and receive email <u>with attachments</u></td></tr>
</table>

a   identify techniques used to send and receive email <u>with attachments</u>

b   identify different types of inaccuracy (including mistakes in content, spelling, <u>grammar and layout</u>)

c   identify ways of checking information for accuracy (including proofreading, spell checking, using print preview, <u>grammar checking, identifying and verifying sources</u>, asking others)

d   identify sensitive information (including health records, police records, pay records, bank statements, credit card statements) and ways of keeping it confidential (including physical security, passwords)

e   identify material that may be copyright and <u>the purpose of copyright protection</u>

f   identify ways that information may be damaged (including viruses, vandalism, breakdown, accidental damage, theft, fire) and how its loss may be minimised (including backup files, keeping original paper records, <u>placing backup files in a secure location</u>)

g   <u>identify ways of recovering from data loss (including backup of data files to a secure medium, saving data files often and with different filenames, keeping a log of changes</u>)

h   <u>identify and define suitable directory (folder) structures for storing files</u>

i   identify types of human physical strain potentially related to using ICT systems (including Repetitive Strain Injury (RSI) and eye strain) and ways of reducing these problems (including equipment position, seating, lighting, taking breaks)

j   identify potential hazards in ICT workplaces (including power supplies, cable layout, position of equipment).