

Core Skills Framework: an introduction

Information Technology

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Introduction

Core Skills enable people to put their knowledge and understanding into action flexibly, adapting them to new situations. Core Skills apply to a wide range of contexts in education and training, in life, and in work. They underpin and promote the development of learning and study skills, and provide a foundation for lifelong learning and personal development.

The importance of Core Skills is now widely recognised in employment and education. Lifelong learning which builds on people's Core Skills is essential if individuals are to meet their personal needs and the needs of society. In the workplace, employees at every level are increasingly expected to take responsibility for the quality of the products and services they produce or provide. Individuals who can analyse and solve problems, communicate well, use information technology, and work with others effectively, are well-equipped to assume the active, flexible and responsible roles which modern workplaces need.

A wide variety of skills and qualities are developed and used in education and training, in work and in life. Some of these are 'core' to personal development and performance.

First, there are skills for **tackling issues and problems**. These skills include being able to:

- ◆ think critically
- ◆ analyse situations and suggest courses of action
- ◆ plan and organise work and carry it through to completion
- ◆ reflect on what has been done and to draw conclusions for the future

Second, there are skills that are vital in enabling individuals to function effectively. **Communication**, both orally and in writing, is essential for clarifying your own thoughts, for relating to others, and for learning and working. The **numerical skills** involved in processing, interpreting and communicating information can help you to understand, predict and solve many types of problem. Skills in **using information technology** are increasingly useful for obtaining and analysing information, for organising your ideas, and for communicating and working with others. And being able to **work with others** means having skills that help you to co-operate with others in learning and working situations to identify and achieve your shared goals.

The Core Skills

Each Core Skill, and its components, can be assessed at each of five levels (Access 2, Access 3, Intermediate 1, Intermediate 2 and Higher — SCQF levels 2 – 6). This is a brief description of each component and the range activities that its assessment will involve at the different levels.

Communication

Communication skills underpin almost all personal, social, learning and working activity. They are essential in clarifying your thoughts, in interacting and conversing effectively with others, in expressing thoughts and in conveying information, feelings and opinions.

Oral Communication

This component involves the ability to produce and respond to oral communication for a range of purposes and audiences. Essentially, it means being able to take part in discussions and make presentations, interacting with your audience as appropriate. Attainment levels range from:

- ◆ conveying basic information and opinions through short, informal communications on familiar topics
- to:
- ◆ presenting and analysing complex information and issues through more sustained discussions or presentations on complex topics

Written Communication

This component involves the ability to produce and respond to written communication for a range of purposes and audiences. Attainment levels range from:

- ◆ dealing with brief communications expressing a few basic ideas or pieces of information about familiar topics
- to:
- ◆ dealing with communications which analyse and explore complex information and issues

Numeracy

To cope with the demands of everyday life, including work and study, people need to be comfortable with numbers and with graphs, symbols, diagrams and calculators. The skills needed for this are essentially those of interpreting, processing and communicating quantifiable and spatial information.

Using Graphical Information

This component involves the ability to use a range of graphical skills to interpret and communicate quantifiable information. Attainment levels range from:

- ◆ working in familiar contexts with simple specified tables and graphs

to:

- ◆ working in more abstract contexts and with more complex graphical information which may require some analysis, and where decisions have to be made on effective ways to communicate the information

Using Number

This component involves the ability to apply a range of numerical and other relevant mathematical and statistical skills. Attainment levels range from:

- ◆ working confidently with basic numbers in everyday contexts

to:

- ◆ working confidently with more complex numerical concepts and techniques in more abstract contexts

Information Technology

Information Technology is concerned with the electronic collection, organisation, analysis, presentation and communication of information. It encompasses all media types and formats as well as all relevant tools. The Core Skill focuses on the ability to use information technology to process information in a variety of ways which will be useful in work and in the home. It is not about developing IT specialists who will act as first-line support for others or install specialist systems.

Using Information Technology

This component involves the ability to use an IT system to support a range of information-processing activities. Attainment levels range from:

- ◆ accessing the basic facilities of a computer system to perform simple processing of familiar data and to select information from a local database

to:

- ◆ making effective, responsible and secure use of a computer system, using software in a context requiring some analysis and design and retrieving information from a range of sources

Problem Solving

The three components of this skill are stages in the process of tackling issues and problems in personal, social, vocational and occupational contexts. They are often used sequentially, and repeatedly, in a single context. Each skill can also be a major focus of activity on its own.

Critical Thinking

This component involves using analysis and reasoning to make decisions and to create or suggest ideas, courses of action and strategies. Attainment levels range from:

- ◆ working in situations which involve a few, easily-identified factors set in familiar contexts

to:

- ◆ working in more complex situations which require a greater degree of analysis before approaches can be devised

Planning and Organising

This component involves the ability to plan a task, taking account of available resources, and to manage the task to completion. Attainment levels range from:

- ◆ creating plans involving a small number of steps and using familiar resources

to:

- ◆ efficient management of a more complex plan, which may include a review of strategy and a degree of research in identifying the resources to be used

Reviewing and Evaluating

This component involves the ability to reflect on and review the process of tackling issues and problems, to evaluate the Outcomes, and to identify where alternative strategies might have been used. Attainment levels range from:

- ◆ identifying some strengths and weaknesses in a strategy

to:

- ◆ identifying and gathering evaluation evidence, evaluating strategies, and making appropriate recommendations

Working with Others

The inclusion of Working with Others as a Core Skill emphasises its importance in co-operative learning and working situations.

Working with Others

This component involves the ability to work with others to plan, agree and take responsibility for tasks, to support co-operative working in appropriate ways, and to review the effectiveness of one's own contribution. Attainment levels range from:

- ◆ taking allocated responsibility for tasks, seeking or providing information from/to others as required and reviewing one's own contribution

to:

- ◆ analysing tasks and negotiating goals, roles and responsibilities, anticipating and responding to needs of others and evaluating the effectiveness of one's own contribution

Core Skills certification

Since 1999, candidates for a range of SQA qualifications have been able to show what they have achieved in Core Skills. Virtually all Standard Grade candidates should now get a Core Skills profile which will be reviewed each time they achieve a new SQA qualification. There is no need for candidates to achieve all Core Skills, or to complete a Group Award. Their profile will report their Core Skills achievements by component — so Core Skills certification is available to those who do not complete a whole Core Skill. With increasing emphasis being placed on Core Skills in education (including higher education), training and employment, it is important that candidates are given the opportunity to be credited for what they can do.

Candidates can achieve Core Skills through:

- ◆ any Unit or Course which has been audited against the Core Skills framework and validated as fully covering one or more Core Skills component
- ◆ named Core Skills Units

In the former case, certification will be automatic. Neither the centre nor the candidate will need to enter for the Core Skills component — the entry on the Core Skills profile will be generated automatically by SQA when the candidate achieves the relevant Unit or Course.

Named Core Skills Units are available for use by schools, colleges, higher education institutions, training providers, and in the workplace.

All candidates undertaking a Scottish Group Award will have to achieve specified levels of attainment in Core Skills.

Purpose of this document

The remainder of this document provides detailed technical specifications for each Core Skill for use by those designing and auditing Units, Courses, assessment programmes and Group Awards, and by staff of the Scottish Qualifications Authority.

General skill

Use a familiar IT system to perform very simple tasks with assistance if required.

Specific skills

- ◆ carry out very simple operations on a computer system using keyboard, mouse or other appropriate device
- ◆ carry out very simple processing in a familiar software application
- ◆ find and present information from a familiar electronic data source

Further information

The candidate must:

- ◆ use menus to select items
- ◆ load a file from hard drive, floppy drive or CD familiar to the candidate
- ◆ save an already named document
- ◆ enter, edit and output data in a given format in a text processing or other application
- ◆ find information using a single identifying criterion. The criterion could be a key term, field, file name or other characteristic. The information may be textual, numerical, graphical, images, video, audio or data sets
- ◆ present this information by displaying on screen or outputting in printed or other appropriate mode

When extracting and presenting information from an electronic data source, candidates may use either a local or remote source that is familiar to them. The data source may be identified for candidates and may be one that they have helped to construct, such as a very simple filing system, database or help text.

General skill

Using an IT system to perform simple tasks.

Specific skills

- ◆ carry out simple operations on a computer system using keyboard, mouse or other appropriate device
- ◆ carry out simple processing in two types of software application
- ◆ find and present information from a familiar electronic data source

Further information

The candidate must:

- ◆ use menus to select items
- ◆ load a file from hard drive, floppy drive or CD familiar to the candidate
- ◆ save an existing file
- ◆ enter, edit and output data in a given format in two types of software application
- ◆ find information using a single identifying criterion. The criterion could be a key term, field, file name or other characteristic. The information may be textual, numerical, graphical, images, video, audio or data sets
- ◆ present this information by displaying on screen or outputting in printed or other appropriate mode

The two types of application can be chosen from text processing, spreadsheet, database, simulation, sound generation, drawing, painting, educational/training or other appropriate application.

When extracting and presenting information from an electronic data source, candidates may use either a local or remote source which is familiar to them. The data source may be identified for candidates and may be one which they have helped to construct, such as a filing system, simple database or help text.

General skill

Using an IT system effectively to perform a range of straightforward tasks.

Specific skills

- ◆ make effective use of a computer system including keyboard, mouse, monitor, disk drive and printer
- ◆ carry out straightforward processing in three types of software application
- ◆ carry out two straightforward searches to find and present relevant information from electronic data sources

Further information

The candidate must:

- ◆ find and start up applications
- ◆ locate data
- ◆ use straightforward tools, eg file manager, print manager and control panels
- ◆ organise folders and sub directories
- ◆ apply naming conventions
- ◆ copy and delete files and folders
- ◆ enter, edit and output data in a given format in two types of software application
- ◆ carry out two straightforward searches
- ◆ find information using two criteria (eg key term, or field) from relevant data, eg records in a database. The information may be textual, numerical, graphical, images, video, audio or data sets
- ◆ present this information by displaying on screen or outputting in printed or other appropriate mode

Candidates must produce work which is accurate and meets the desired purpose, within a reasonable timescale.

The two types of application can be chosen from text processing, spreadsheet, database, simulation, graphics, audio/music, desktop publishing, communications, data logging and control or other appropriate application. The different applications can be contained within an integrated package. All basic features of any application package should be used as appropriate

When searching, extracting and presenting information from an electronic data source, candidates may use either a local or remote source such as local data, on-line database or CD-ROM. The data source should either be familiar to the candidate or have a structure for searching which offers straightforward choices. The two searches must involve either different data sets (eg from different topics/subjects), different forms of search (eg menu or open choice), or different forms of information (eg text, numbers, images).

General skill

Using an IT system effectively and responsibly to process a range of information.

Specific skills

- ◆ make effective and responsible use of the range of IT equipment in everyday use
- ◆ carry out straightforward processing in two types of software application
- ◆ carry out complex processes to use one further application in depth
- ◆ integrate different types of data in a piece of work
- ◆ carry out two searches to extract and present relevant information from electronic data sources

Further information

The candidate must:

- ◆ use mouse, keyboard, printer, monitor, disk drive, processor or other hardware as appropriate
- ◆ keep data secure and well-managed, eg by performing back-ups, using passwords, using virus protection measures
- ◆ for all three applications, enter, edit and output data in a format suited to the purpose, or to meet a given specification
- ◆ in one application, carry out two or more complex processes to apply skills in depth (eg prepare documents using a word processor, using at least two from spell checker, styles, templates, tables or indexer to improve style and layout)
- ◆ integrate two different types of data (eg text, number, graphics, sound, video) within one piece of work
- ◆ carry out two searches requiring some decisions about an effective search strategy (eg taking account of time, cost, effective filtering and outcome)
- ◆ extract information using several criteria (eg key term, or field). The information may be textual, numerical, graphical, images, video, audio or data sets
- ◆ present this information by displaying on screen or outputting in printed or other appropriate mode

Candidates must make effective and responsible use of hardware devices and software applications, demonstrating due attention to other users.

The three types of software application can be chosen from text processing, database, spreadsheet, simulation, graphics, communications, animation, audio/music, video/multi-media, desk-top publishing, data retrieval, data logging and control, or other appropriate package. Use of still images may require the use of screen grabber, digital camera or scanner. The different applications can be contained within an integrated package as in music sequencing and processing software.

When searching, extracting and presenting information from an electronic data source, candidates may use either a local or remote source. The data source should require several straightforward choices or have a less obvious structure or more complex inter-relationships. The two searches must involve different data sets, different forms of search (eg menu, open choice) or different types of data.

General skill

Using an IT system independently to process a range of information.

Specific skills

- ◆ use a range of IT equipment, paying attention to security and other users
- ◆ resolve one simple hardware or software problem
- ◆ use software in an unfamiliar context requiring some analysis and design, integration of data and decision on output format
- ◆ carry out two searches to extract and present relevant information from electronic data sources

Further information

The candidate must:

- ◆ keep data secure and well-managed, eg by maintaining personal file area and locating files and applications as appropriate, logging on/off, using passwords, performing back ups, using virus protection measures
- ◆ be able to correct simple faults in cable connections, device settings and/or software option settings, eg printer off-line, sound not working, too many open programs, system freeze
- ◆ use three or more applications to create documents, designs, compositions or models, using presentation styles appropriate to the context. This must include two from different types of data, eg graphics, video, audio, text, numbers
- ◆ output information in a format suited to purpose or to meet a given specification
- ◆ carry out two searches requiring some decisions about an effective search strategy (eg taking account of time, cost, effective filtering and outcome)
- ◆ extract information using several criteria (eg key term, or field). The information may be textual, numerical, graphical, images, video, audio or data sets
- ◆ present this information by displaying on screen or outputting in printed or other appropriate mode

Candidates should operate with minimum support from assessors, supervisors, colleagues or technicians and make use of on-line help, package help facilities or supplier's manuals. Candidates must make effective and responsible use of hardware devices (processor, monitor, keyboard, mouse, disk drive, printer or other device, as appropriate) and software applications. Candidates should be aware of common hardware and software problems.

Candidates will use software to process complex information, working in a context which requires some element of design and selection, such as choosing appropriate software or designing the presentation style of a written or oral presentation, or customising an application for purpose/context.

Use of still images may involve the use of screen grabber, digital camera or scanner. The different applications can be contained within an integrated package.

When searching, extracting and presenting information from an electronic data source, candidates may use either a local or remote source. The data source should require several straightforward choices or have a less obvious structure or more complex inter-relationships. The two searches must involve different data sets, different forms of search (eg menu, open choice) or different types of data.