National Unit specification

General information

Unit title: Information Literacy (SCQF level 4)

Unit code: H7E9 44

Superclass:	CX
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Unit purpose

This Unit is designed for non-specialists who want to acquire knowledge and skills in using and understanding information. It aims to educate citizens in the acquisition, use, organisation and evaluation of information. Learners undertaking this Unit will enhance their information skills and become active participants in the information society.

Information literacy relates to a range of 'hard' and 'soft' skills, and the associated underpinning knowledge and understanding. The hard skills relate to competencies in using information tools to capture, organise and share information; the soft skills relate to an appreciation of the vital role of information in contemporary society. At this level, only foundation knowledge and skills are covered.

On completion of this Unit, learners will possess basic information skills and have an appreciation of the importance of information for individuals, groups, businesses and society.

Outcomes

On successful completion of the Unit the learner will be able to:

1   Describe the use of information.
2   Process information using information tools.
3   Solve basic problems using information.

Credit points and level

1 National Unit credit at SCQF level 4: (6 SCQF credit points at SCQF level 4)

National Unit specification (cont)

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Recommended entry to the Unit

Whilst entry is at the discretion of the centre, it would be beneficial if learners possessed basic IT Skills, evidenced by completion of the following Unit:

H3LJ 09   *Computer Basics (SCQF level 3)*

or equivalent qualifications or experience.

Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill   Information and Communication Technology at SCQF level 4
                            Problem Solving at SCQF level 4

Core Skill component   None

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of the Unit Specifications for this Course.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

This Unit may be offered stand-alone or as part of the National Progression Award in *Digital Passport* at SCQF level 4. If offered as part of this Group Award, there may be opportunities to combine and integrate teaching and learning across Units. There may also be opportunities to combine Evidence Requirements and integrate assessments.

The Assessment Support Pack (ASP) for this Unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website **(http://www.sqa.org.uk/sqa/46233.2769.html)**.

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**.

National Unit specification: Statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Outcome 1

Describe the use of information.

Performance Criteria

(a) State the distinction between data and information.
(b) State the measures of digital data.
(c) Identify the growth of information.
(d) Describe the personal, communal, economic and societal uses of information.
(e) State rights and responsibilities relating to information.
(f) Statements and descriptions use the correct terminology.

Outcome 2

Process information using information tools.

Performance Criteria

(a) State the stages in processing information.
(b) State the tools that can be used to process digital information.
(c) Describe the concept of authority and common sources of information.
(d) Use tools to find, capture and share information.
(e) Use tools to digitise data and convert digital media.
(f) Use tools safely.

Outcome 3

Solve basic problems using information.

Performance Criteria

(a) Identify the information requirements of the problem.
(b) Locate appropriate sources of information.
(c) Select sources with justification.
(d) Organise and manipulate information.
(e) Share the solution in an appropriate format.
(f) State strengths and weakness of the solution.

National Unit specification: Statement of standards (cont)

Unit title: Information Literacy (SCQF level 4)

Evidence Requirements for this Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their learners to determine the most appropriate ways to generate evidence and the conditions and contexts in which they are used.

Evidence is required to demonstrate that learners have achieved all Outcomes and Performance Criteria. However, sampling may be used in certain circumstances (see below) where the sample is sufficiently random and robust to clearly infer competence in the full domain.

The evidence for this Unit may be written or oral or a combination of these. Evidence may be captured, stored and presented in a range of media (including audio and video) and formats (analogue and digital). Particular consideration should be given to digital formats and the use of multimedia. It is recommended that evidence is collected for the **Unit as a whole** and is a naturally occurring by-product of teaching and learning.

Evidence is required for two types of competence: evidence of **cognitive competence** (knowledge and understanding) and evidence of **practical competence** (practical abilities). In certain circumstances (see below), the evidence of cognitive competence may be sampled; the sample must be sufficiently random and robust to clearly infer competence in the entire knowledge domain. For example, if a traditional test is used to assess a candidate's knowledge and understanding, the test may sample across the knowledge domain; however, if a portfolio approach is taken then it would not be appropriate to sample, and evidence of every cognitive competence would be required. Evidence of practical competence cannot be sampled; however the amount of evidence is left to the professional judgement of the assessor and should be the minimum compatible with the requirements of this Unit. Outcome 2, Performance Criterion (f) may be evidenced by exception. In this circumstance, there is no requirement to provide evidence of competence; evidence is only required to demonstrate the absence of competence (unsafe practices when using information tools).

Evidence must be produced under controlled conditions. However, the amount of control will vary from context to context. For example, evidence of cognitive competence could take the form of a test, which would permit highly controlled conditions. Alternatively, evidence could be generated through the use of web log, written over an extended period of time at varying locations, which would not permit such close control. In every case, assessment must be controlled to some extent. Where the amount of control is low, the amount of authentication is high. It is not acceptable to produce evidence in lightly controlled conditions with little authentication.

Authentication may take various forms including, but not limited to, oral questioning and plagiarism checks. Some forms of evidence generation (such as video recordings) have intrinsic authentication and would require no further means of verification. Where evidence is not generated under closely controlled conditions (for example, out of class) then a statement of authenticity should be provided by the candidate to verify the work as their own, and also state any necessary sources and permissions. The *Guide to Assessment* provides further advice on methods of authentication.

National Unit specification: Statement of standards (cont)

Unit title: Information Literacy (SCQF level 4)

Evidence of practical competence may be produced over an extended period of time, notwithstanding any Performance Criteria relating to duration or time. Consideration should be given to the use of e-portfolios.

It is recommended that the evidence is generated naturally, as a by-product of teaching and learning, and integrated into as few assessment tasks as possible. The *Guidelines on Approaches to Assessment* (see the Support Notes section of this specification) provide specific examples of instruments of assessment that seek to do this.

If an e-portfolio is used, the folio would include (in digital format) all of the statements, identifications, descriptions and selections required in the Performance Criteria, together with (digital) evidence of practical competence, which may include screenshots, photographs, videos and other digital artefacts.

The problem (Outcome 3) should be straight-forward and familiar to the learner. It is recommended that the learner is permitted to select the problem (either from a supplied list or their own idea). The critical aspect is not the problem but the manner in which the learner solves the problem. The evidence for this Outcome would be the solution to the problem, which would be assessed using the Performance Criteria. Examples of appropriate problems are given in the Support Notes (*Guidance on Approaches to Assessment of this Unit*).

National Unit Support Notes

Unit title: Information Literacy (SCQF level 4)

Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

The general context for this Unit is the 'information age'. Young learners (Prensky's 'digital natives') may not have experience of the pre-digital age; more mature learners (Prensky's 'digital immigrants') may not appreciate the scale of digitisation that is presently taking place; neither demographic may appreciate the scale of information creation currently occurring. Using historical context for each Outcome may reinforce the scale of change. For example, using historical context for Outcome 2 (which relates to information tools) would illustrate the (massively) increased sophistication of contemporary tools compared to the past.

The purpose of this Unit is to deliver basic knowledge and skills in the use of information.

This Unit is intended for non-specialists and should be delivered in that context.

At this level (SCQF level 4) treatment of every topic should be basic. Teaching should focus on imparting key knowledge and skills.

It is important to teach the more subjective parts of this Unit (such as those relating to online safety) in an objective and balanced manner, neither over-emphasising threats nor opportunities.

A key aspect of this Unit is that learners should see information as a resource with value. This may be a particular challenge to young learners who may not have the necessary life experience to appreciate the personal, economic and political value of information.

Outcome 1: This Outcome is designed to provide foundation knowledge. It should be assumed that the learner has little, or no, prior knowledge or experience of information systems. When they do, teaching, learning and assessment may be accelerated.

At this level, learners may not appreciate the importance of information nor what is meant by 'information' (Performance Criterion (a)) in its widest sense (which includes all digital artefacts including photographs and music). The exponential growth of information (Performance Criterion (c)) should be emphasised. This could be linked to the measures of digital data (Performance Criterion b) if a quantitative approach is taken. The concept of 'datafication' should be introduced and linked to the growth of information.

National Unit Support Notes (cont)

Unit title: Information Literacy (SCQF level 4)

Performance Criterion (d) relates to the uses of information. These include personal uses (such as fact-finding and learning), communal uses (such as information to support a local campaign), economic uses (such as decision making), and societal uses (such as planning). The basic idea behind big data should be introduced and its actual or potential uses described.

Performance Criterion (e) provides an opportunity to discuss online rights and responsibilities. Rights include the legal protection afforded to citizens as well as the 'moral' expectation of fair treatment when online. Responsibilities include the legal constraints on individuals when using information (such as intellectual property rights) as well as the 'societal' expectation of behaviour. At this level, it is not required that learners have a detailed knowledge of legislation. However, the main rights and responsibilities, from a legal and behavioural perspective, are required. For example, learners should know that accessing another person's e-mail without permission is illegal. There is an opportunity in this Outcome to discuss social issues related to the use of information technology such as cyber-bullying.

Outcome 2: This Outcome is about the tools that can be used to process information (and the associated underpinning knowledge). The sort of tools used would include: search engines, bookmarking, information organisation and social media tools. The Outcome provides an opportunity to practice using the tools that will be used for problem solving in the next Outcome.

Performance Criteria (a) and (b) are about the stages in processing information and the associated (digital) tools that can be used at each stage. The stages in processing information are: find, select, capture, organise and share (or equivalent). There are tools associated with each stage; for example, search engines are commonly used to find information.

Learners are required to know the common sources of information (Performance Criterion (c)). These include websites, gateway sites, search engines, social media services, blogs and RSS sources. The concept of authority should be introduced. The sources' longevity and reputation are aspects of this. However, it should be explained that sources with good reputations may still provide incorrect information.

Performance Criteria (d), (e) and (f) relate to the use of information tools. The use of each tool should be basic but sufficient to illustrate the tool's purpose and functionality. For example, learners are expected to know the basic use of a search engine. This would include some knowledge of how to compose search terms but would not include the advanced features of search services.

As part of Performance Criterion (d), learners should be introduced to the meaning of, and idea behind, cloud storage and its potential for capturing and sharing information.

Digitisation (Performance Criterion (e)) may simply involve converting an analogue image to digital format using a scanner or smartphone (camera). The conversion may involve changing from one graphic or text format to another (say DOC to PDF). The critical aspect is that learners appreciate that there are commonly available tools that can be used to capture and convert digital media.

National Unit Support Notes (cont)

Unit title: Information Literacy (SCQF level 4)

Learners are required to use the tools safely (Performance Criterion (f)). This is linked to their rights and responsibilities (Outcome 1). For example, illegal behaviour (such as copying music without permission) would breach this criterion; so too would dangerous behaviour such as providing personal details on sites/services that may be accessed by strangers. Less obviously, weak (or rarely changed) passwords are unsafe practices and violate this Performance Criterion.

Outcome 3: This Outcome is about solving problems using information. The problem should be simple and familiar. Examples include: discovering the cheapest price for a flight; working out the best way to travel from one place to another using public transport; how to resolve a simple technical problem; learning to play a new game; or learning a new skill such as speed reading.

The Performance Criteria are self-evident and require little explanation. The critical aspect of this Outcome is that learners appreciate the critical importance of information when solving problems and, also, learn a formal method for solving problems. Most learners will have approached problem solving in an *ad hoc* way so the advantages of using more formal methods may need to be carefully introduced. Performance Criterion (a), in particular, will not be common practice among most learners.

Learners will require significant guidance about the selection of sources of information (Performance Criterion (c)). This is linked to the concept of authority (see Outcome 2) and triangulation (multiple sources). For example, in resolving a specific problem (say the price of flights), learners would be expected to consider several sources of information and select one of these based on a number of factors including the source's reliability (which is an aspect of authority).

The strengths and weaknesses of the solution should be stated (Performance Criterion (f)). At this level it is not expected that the learners carry out a critical evaluation of their solution. It is sufficient for them to state what is good about it and how it could be improved.

Guidance on approaches to delivery of this Unit

A practical, hands-on approach to learning should be adopted in order to engage learners and exemplify key concepts. However, all practical activities should be underpinned with appropriate knowledge before learners commence these activities. The maturity, and life experience, of learners should be taken into account.

At this level, most learning may need to be tutor-led. Learners may lack confidence in their own knowledge and abilities, and confidence building is a vital Outcome.

Case studies (including video presentations) could be used to provide concrete examples of how information can be used.

National Unit Support Notes (cont)

Unit title: Information Literacy (SCQF level 4)

The distribution of time over the three Outcomes is at the discretion of the centre and thus will be influenced by a number of factors such as the actual technologies utilised. However a possible distribution is as follows:

♦ Outcome 1: 10 hours
♦ Outcome 2: 20 hours
♦ Outcome 3: 10 hours

A considerable proportion of the time should be spent on learning to use information tools (Outcome 2) since this will entail practice in using a wide range of software and services.

Throughout this Unit learner activities should relate to their personal or vocational interests. Learners should be encouraged to become confident with as wide a range of digital technologies as possible. It may be appropriate that learners' activities relate to their personal interests.

Guidance on approaches to assessment of this Unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

The Outcomes can be assessed in a variety of ways. A traditional approach would involve the testing of knowledge through a selected response instrument (such as a multiple choice test). It is recommended that if this approach is adopted then **all** of the knowledge and understanding in this Unit is combined into a **single test** that **samples** from the knowledge domain, with an appropriate pass mark. The remaining practical competencies could be assessed through observation of candidate activity throughout the duration of the Unit (and recorded on an observation checklist).

Another approach to assessment would be the creation and maintenance of a web log, which would record candidate activity throughout the Unit. This would log, on a daily or weekly basis, what candidates learn and what they do. However, their posts would have to satisfy the relevant Performance Criteria. So, for example, the post(s) that relates to Outcome 1, Performance Criterion (b), would have to provide an adequate statement of the various Units of measurements used to quantify data (bit, byte, kilobyte, etc) or a link to such statements with some commentary. Practical activities could also be recorded *via* the blog. For example, the post relating to Outcome 2, Performance Criterion (e), would have to describe appropriate learner activities (digitisation and conversion). When practical activity is recorded on a blog (narratively), authentication could involve a photograph or video or candidate activity (this could be included as part of their post). Not every practical task would require authentication; at this level it is acceptable for some posts to be a simple description of appropriate practical activities. When necessary, separate authentication (such as oral questioning) could be used for verification purposes. The critical aspect is that the blog is an **overall** accurate reflection of the practical activities (and, therefore, the associated skills) carried out by the learner during the life of the Unit.

National Unit Support Notes (cont)

Unit title: Information Literacy (SCQF level 4)

Another approach would involve the creation and maintenance of an e-portfolio. The e-portfolio would include all of the statements, identifications, descriptions and selections necessary to satisfy the criteria relating to cognitive competencies, together with digital artefacts that provide evidence of their practical abilities. The latter [digital artefacts] would include screenshots, digital photographs, audio and video recordings, etc that collectively evidence candidates' competencies. Some form of authentication would be required. This could be as simple as a statement of originality, signed by the candidate and the assessor.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at **www.sqa.org.uk/e-assessment**.

National Unit Support Notes (cont)

Unit title: Information Literacy (SCQF level 4)

Opportunities for developing Core and other essential skills

This Unit provides opportunities to deliver some of the following Core Skills:

♦ *Information and Communication Technology (ICT)* (SCQF level 4)
♦ *Problem Solving* (SCQF level 4)
♦ *Numeracy* (SCQF level 4)

Most of the Core Skills in *Information and Communication Technology (ICT)* can be addressed in this Unit. Depending on delivery, the entire Core Skill may be covered. There are opportunities to use a range of application software (such as desktop browsers and smartphone apps), use various information tools (such as note-taking apps), locate and organise information, search and select information, and share (present) information. The main omission relates to data security.

Some of the Core Skills in *Problem Solving* can be addressed in this Unit. There are opportunities to decide on an approach to a problem, choose and obtain resources, carry out an action plan, and identify strengths and weaknesses of the solution.

One or more of the Core Skills in *Numeracy* can be addressed in this Unit. There are opportunities to use notation (for example, when measuring information), extract and interpret information (from tables, graphs and diagrams), and select visualisations to present information.

In addition to Core Skills, this Unit provides opportunities to develop citizenship skills.

This Unit has the Core Skill of Information and Communication Technology and Problem Solving embedded in it, so when candidates achieve this Unit their Core Skills profile will be updated to show that they have achieved Information and Communication Technology and Problem Solving at SCQF Level 4.

History of changes to Unit

Version	Description of change	Date

General information for learners

Unit title: Information Literacy (SCQF level 4)

This section will help you decide whether this is the Unit for you by explaining what the Unit is about, what you should know or be able to do before you start, what you will need to do during the Unit and opportunities for further learning and employment.

This Unit aims to improve your information skills. It will also help you to understand the importance of information in the modern world.

This Unit is about knowledge and skills in using and understanding information. It seeks to make sense of the changes in society that are being caused by the 'information age', which we are currently experiencing. You will gain knowledge of what these changes are and what you need to know in order to cope with these changes. You will gain skills in using a wide range of information tools to help you work with, and take advantage of, information in your personal, social and work life.

The Unit is designed for **beginners**. It covers a wide range of knowledge and skills including:

♦ the growth of information
♦ the changes taking place in society
♦ how people and organisations use information
♦ where to find information
♦ how to select information
♦ what can be trusted
♦ how to use a wide range of information tools such as search engines
♦ how to use information to carry out practical tasks such as booking a holiday or investigating a medical condition
♦ how to convert information from one format to another
♦ your rights and responsibilities

No previous knowledge or experience of computers is presumed. It is designed for the beginner who wants to learn how to use information for personal, social or business purposes. It is particularly suitable for the 'digital citizen' — the person who needs to learn about computers to participate in the 'information society'.

The assessment may take different forms. It will be straight-forward and not take much time away from your learning. It may involve a short test of your knowledge and some practical tasks, or it may simply be a record of your activities during the Unit. But the focus of the Unit is on learning — not assessing.

The key goal of this Unit is to teach you to be a knowledgeable, responsible and active user of digital technologies so that you can confidently use them for personal, social or educational purposes. **On completion of this Unit you will be able to use information to carry out a range of practical tasks, and appreciate the changes taking place in society as a result of the information age.**

This Unit is part of a series of Units on information literacy. You may progress to the next Unit in the series (*Information Literacy* at SCQF level 5) on completion of this Unit if you wish to improve your knowledge and skills in this area.