



## National Unit specification

### General information

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

**Unit code:** HA6L 44

**Superclass:** CD

**Publication date:** May 2016

**Source:** Scottish Qualifications Authority

**Version:** 02

### Unit purpose

This Unit is designed to provide learners with **basic** knowledge, understanding and practical problem-solving skills in using spreadsheet applications, through a range of practical and knowledge tasks. The Unit has a particular emphasis on using web applications, although this is not exclusive and desktop apps can be used.

Learners will gain knowledge and skills in creating **simple** spreadsheets and implementing practical solutions using a range of **basic** features.

Learners will be introduced to the sharing facilities provided by contemporary cloud services.

This Unit is suitable for learners who have no previous experience of using spreadsheet applications and wish to gain **basic competency** in their use.

This Unit is a mandatory Unit of the National Progression Award in PC Passport at SCQF level 4 and is also available as a free-standing Unit. On successful completion of this Unit Learners could progress to the Unit *Web Apps: Spreadsheets* (SCQF level 5).

### Outcomes

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

- 1 Describe the basic features of a spreadsheet application.
- 2 Create a basic spreadsheet to a given brief.
- 3 Share a basic spreadsheet.

## National Unit specification: General information (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

### Credit points and level

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

### Recommended entry to the Unit

Entry to this Unit is at the discretion of the centre. No previous experience of spreadsheet software is required. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience.

*Web Apps: Word Processing* at SCQF level 4

*Web Apps: Presentations* at SCQF level 4

H9PV 43 *Computer Applications* at SCQF level 3

In terms of prior learning and experience, relevant experiences and Outcomes may also provide an appropriate basis for doing this Unit.

### Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

Complete Core Skill                      Problem Solving at SCQF level 4

Core Skill component                      Providing/Creating Information at SCQF level 4

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

### 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.

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](http://www.sqa.org.uk/assessmentarrangements).

## **National Unit specification: Statement of standards**

### **Unit title:** Web Apps: Spreadsheets (SCQF level 4)

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 basic features of a spreadsheet application.

##### **Performance Criteria**

- (a) Describe the basic formatting features of a spreadsheet application.
- (b) Describe the basic editing features of a spreadsheet application.
- (c) Describe the basic graphical features of a spreadsheet application.
- (d) Describe the basic functions of a spreadsheet application.
- (e) Describe how to share a spreadsheet via a cloud service.

#### **Outcome 2**

Create a basic spreadsheet to a given brief.

##### **Performance Criteria**

- (a) Create a structure to store numerical information to the brief.
- (b) Populate information into a spreadsheet to the brief.
- (c) Use basic editing and formatting features of a spreadsheet application.
- (d) Use basic formulae and functions of a spreadsheet application.
- (e) Amend information from the brief.
- (f) Store a spreadsheet solution for the brief.
- (g) Retrieve a spreadsheet solution for the brief.
- (h) Present information in a graphic format.

#### **Outcome 3**

Share a basic spreadsheet.

##### **Performance Criteria**

- (a) Upload a spreadsheet to a cloud service.
- (b) Select the method of sharing.
- (c) Create an appropriate link to the shared spreadsheet.
- (d) Share the link with the target audience.
- (e) Compile comments online on the shared spreadsheet.
- (f) Adhere to data security requirements and procedures.

## National Unit specification: Statement of standards (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

### Evidence Requirements for this Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their candidates 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 candidates have achieved all Outcomes and Performance Criteria. However, sampling may be used in certain circumstances (see below).

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 or video, and formats (analogue and digital) which clearly demonstrate that the candidate has achieved all the Outcomes and Performance Criteria. Particular consideration should be given to digital formats and the use of multimedia.

Evidence is required for **two** types of competence: evidence of cognitive competence (knowledge and understanding) and evidence of practical competence (practical abilities).

The evidence of cognitive competence for this Unit will relate to Outcome 1 (all Performance Criteria).

Evidence of cognitive competence may be sampled across the knowledge domain defined by this Unit specification, so long as the sample is unknown, and unpredictable to the candidate. The assessment will be closed-book and if a traditional test is used to assess the candidate's knowledge and understanding, this test should be timed and should be completed in a single assessment occasion ('sitting') and an appropriate pass mark being set. Where reassessment is required, it should contain a different sample from that previous used.

The evidence of practical competence for this Unit will relate to Outcome 2 (all Performance Criteria) and Outcome 3 (all Performance Criteria). The evidence should be generated by the creation of at least **one simple** spreadsheet to a supplied brief, which will be shared online.

For Outcome 3 candidates must demonstrate a practical ability on storing/retrieving and sharing fields to a cloud device. The spreadsheet must be shared with at least **one** additional user via a cloud service. The candidate must gather feedback from another user on the spreadsheet via that cloud service.

Evidence of practical competence may be produced over an extended period of time; but where it is generated without supervision some means of authentication must be carried out. The Guide of Assessment provides advice on methods of authentication.

The Guidelines on Approaches to Assessment (see the Support Notes section of this specification) provide specific examples of instruments of assessment.



## **National Unit Support Notes**

**Unit title:** Web Apps: Spreadsheets (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**

This Unit may be delivered as a stand-alone Unit or in combination with other Units as part of a group of Units making up an award, eg NPA PC Passport at SCQF level 4.

The contents of this Unit provide a basic introduction to the features of spreadsheets along with storing and sharing files within a cloud service. The Unit has a particular emphasis on using web applications, although this is not exclusive and desktop apps can be used.

Although the focus for the Unit is on practical competencies, it also seeks to provide learners with knowledge and understanding of safe working practices, so that they can transfer their knowledge and skills. For example, learners should be familiar with the concept of a user interface (UI) and appreciate that UI is a key (and variable) feature of every computing device.

An important aspect of this Unit is online safety. Safe practices should be emphasised and learners should be introduced to the basic legal constraints on their use of computing devices including introduction to Intellectual Property Rights (IPR) specifically where data is being shared between computing devices.

This Unit deals mainly with the practical use of spreadsheet application packages. The learner should be aware of the correct procedure to start and shut down a computer. The learner should also be aware of how to log on to a system and the importance of logging off when they are finished using the system. The learner should know the correct procedure for starting and terminating an application package.

Learners must be aware that they must proofread their own work for accuracy. The Unit is designed to be a practical based Unit and it is anticipated that most of the time will be spent on practical work.

## National Unit Support Notes (cont)

### Unit title: Web Apps: Spreadsheets (SCQF level 4)

This Unit requires the use of cloud services to allow for editing and sharing. Learners should know the type of applications that are available from cloud systems such as Quickbooks, Google Apps and Outright. Learners should examine the different cloud based services available, before deciding on the one they are going to use. These include, but are not limited to, Microsoft's OneDrive, Dropbox and Google Drive. Microsoft and Google both include their own integrated free web based spreadsheet application packages within their cloud services (Microsoft PowerPoint and Google Slides). Dropbox offers integration to 3rd party applications, such as Microsoft's Office365 which includes PowerPoint. If access to cloud services is restricted in your centre then it is acceptable to use the basic functionality of the web interfaces of your chosen cloud services to upload and download files via shared links. Learners can then view or edit documents using an appropriate desktop app and, if required, upload edited versions back to the cloud.

#### Outcome 1

Learners are expected to be able to describe the basic features outlined in the Standard of Statements section of this document which will assess the learners' understanding of the content of the Unit.

The description of the structure of a spreadsheet should include terms such as: cell, row and column, with a clear indication of their difference.

Learners should be able to identify appropriate editing and formatting features and which chart or graph type to use to display information for a specific task, providing simple reasons for their choice.

Descriptions of basic functions should demonstrate the learners' understanding on the use of the most appropriate formula for a specific task.

The learner should be able to demonstrate the difference between formula using single cell references and functions using a range of cells.

The knowledge and understanding questions used in the assessment could be in the context of the following or similar to make it more relevant to the learner:

- ◆ The learner may be asked to explain why the formula =B2+C2+D2+E2 would be less effective and efficient than =SUM (B2:E2). An example response may be, but is not exclusive to, there is less opportunity of making mistakes and new columns/rows will automatically be included in the SUM function. This response may also be given for the following functions; AVERAGE, MINIMUM AND MAXIMUM.
- ◆ An example of a spreadsheet could be given with a series of formula/function and the learner would be required to indicate the expected results from the values given.
- ◆ An example of a spreadsheet could be given and learners asked to show the formula/function that could be used to obtain the desired result.
- ◆ An example spreadsheet could be, but is not exclusive to, a representation of pupils attending school trips from each year group. The learner would be asked to use a formula to show; the total amount of pupils attending each trip, total amount of pupils attending from each year group, the average pupils attending each trip, the smallest and largest trip pupil number.

## National Unit Support Notes (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

### Outcome 2

Learners will be introduced to a range of basic features of a spreadsheet application package, they are required to carry out appropriate tasks to demonstrate that they can effectively use the features to complete tasks and manage files and folders using appropriate names for ease of retrieval.

The tasks must allow the learner to demonstrate a competence in each of the following areas:

- ◆ Open and close spreadsheet application.
- ◆ Create, store and retrieve spreadsheet files effectively, in line with specified tasks.
- ◆ Enter and edit numerical and other data accurately which may include inserting/deleting rows/columns.
- ◆ Select and use appropriate tools to format data attributes, which may include, but is not exclusive to; font size, style and type, number of decimal places and percentage.
- ◆ Select and use appropriate tools and techniques to format spreadsheet cells, rows and columns which may include, but is not exclusive to, bordering and shading of cells.
- ◆ Use functions and formulas to meet calculation requirements such as; addition, subtraction, SUM, average, minimum and maximum.
- ◆ Select and use appropriate page layout to present and print spreadsheet information which may include, but is not exclusive to; showing formula view, with or without gridlines and with or without row/column headings.
- ◆ Use spreadsheet tools and techniques to summarise and display information in an order in line with specified tasks.
- ◆ Select and use appropriate tools and techniques to generate, develop and format charts and graphs.

### Outcome 3

This Outcome focuses on using cloud devices to store, share, locate and update information. Learners should know how to establish an internet connection and make use of browser software. They should also know how to set up and use an email account and be able to share the location of information using email and other facilities such as social networking sites and blogs.

The learner must be able to demonstrate the use of comments online within cloud stored files for a specified task.

They should be aware of safe use procedures such as choosing secure passwords and restricting the amount of personal information available online and should know about legal requirements (such as the Computer Misuse Act, Copyright, Design and Patents Act and Data Protection Act) and local restrictions like Acceptable Use Policies. They should also be aware of ethical considerations such as intellectual property rights, behaving in an acceptable manner online (netiquette) and respecting the privacy of others.

## National Unit Support Notes (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

Throughout this Unit the learner will develop effective use of a spreadsheet application relating to online connections. At this level the speed of completion of the tasks is not the overriding concern. However, learners are required to complete the defined tasks without assistance. In the use of the internet software, the learner should be able to navigate the application and use the basic facilities effectively but not, necessarily, efficiently. Learners should be able to open and close a browser, save a spreadsheet document to a cloud service. Similarly, in the use of the e-mail software, the Learner should be able to send and receive e-mails effectively.

Learners are expected to develop a basic awareness of the security risks of using cloud services and e-mail and have knowledge of the laws mentioned above.

Successful completion of this Unit and the knowledge and skills gained will allow the learner to progress to the Unit *Web Apps: Spreadsheets* (SCQF level 5) and will form part of the NPA PC Passport SCQF level 4.

### Guidance on approaches to delivery of this Unit

The Outcomes may be delivered in the order in which they are written. They have been written with a learning sequence in mind.

The actual distribution of time between Outcomes is at the discretion of the centre, however one possible approach is to distribute the available time as follows:

Outcome 1 and 2 — 30 hours  
Outcome 3 — 10 hours

The allocated timings allow for assessment and re-assessment where required.

It is anticipated that the required concepts will be introduced by the teacher and reinforced by appropriate examples.

A practical hands-on approach to learning should be adopted to engage learners and exemplify key concepts. Outcome 1 carries the knowledge and understanding for this Unit and it would be expected that this be taught using a range of appropriate practical activities which would underpin the appropriate knowledge to allow for the use of the features of the package.

Outcomes 2 and 3 are designed to consolidate, through practical application, the knowledge in Outcomes 1.

It is, therefore, expected that the teaching plan for the Unit will commence with Outcomes 1 and 2 where learners are introduced to the application package, its features and the uses of the package. Learners will then continue to Outcome 3 where they are introduced to cloud devices and storage.

Terminology and underpinning knowledge should be introduced in a practical context.

## National Unit Support Notes (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

While teaching will necessarily focus on a specific product, learners should be made aware that alternative packages are available and should be encouraged to explore these alternatives and the generic features of the class of software should be emphasised.

This Unit may be delivered stand-alone or in conjunction with other Units. Where it is delivered alongside other Units, there is an opportunity to contextualise this Unit in terms of the contents of the other Unit(s) since this Unit's contents are generic.

### 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.

Authentication may take various forms including, but not limited to, oral questioning and plagiarism checks. Evidence can be recorded electronically or in written/printed form, however it is encouraged to look at alternate approaches making use of modern technology such as e-portfolios, web blogs, video blogs, pod casts and even social media. 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 learner to verify the work as their own, and also state any necessary sources and permissions.

A traditional approach to assessment would involve an end of Unit test of the knowledge and understanding (Outcome 1) and a practical assessment of practical abilities (Outcomes 2 and 3).

For Outcomes 1 a suitable assessment may be an objective test which demonstrates that the candidate has the required knowledge. The evidence for the Outcome should be obtained under controlled, supervised conditions. The assessment will be closed-book. Achievement can be decided by the use of a cut-off score. The possibility may arise where these questions are taken as an online assessment.

It is expected that the questions will be of the multiple-choice variety. Centres may consider the use of alternative questions types, particularly if using Computer Assisted Assessment approaches. However, care should be taken that the questions are valid and at an appropriate level. The use of simple true/false question responses is unlikely to achieve this.

## National Unit Support Notes (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

If a centre is presenting Outcome 1 of these assessments online the following assessment methods, where appropriate, may be selected:

- ◆ Multiple-choice
- ◆ Drag and drop
- ◆ Multiple response
- ◆ Mix and match
- ◆ a combination of the above

Where re-assessment of knowledge and understanding is required the questions presented to the candidate must be different on each assessment occasion.

It may be appropriate for some of the evidence for this Unit to be produced using e-assessment provided the national standard is applied and the conditions of assessment are consistent for all candidates. This may take the form of e-testing (for knowledge and understanding) and/or e-portfolios (for practical abilities).

The practical tasks used in the assessment could be in the context of one of the following or similar to make it more relevant to the candidate:

- ◆ Keep track of his/her monthly spending
- ◆ Show the attendance pattern at a series of meetings
- ◆ Record club fees for the athletic club
- ◆ Show fixtures and scores of a football league

The assessment of practical skills throughout this Unit may be demonstrated in the context of a single extended task, or in the context of a number of smaller tasks. The candidate will normally demonstrate the skills during the teaching and learning activities of the Unit, rather than as separate assessment activities.

Evidence of practical competence can be stored in a portfolio. On completion of this Unit the portfolio should contain a range of evidence drawn from the Evidence Requirements for each Outcome.

If this Unit is undertaken in the workplace there may be opportunities for candidates to gather evidence in day to day workplace activities.

The practical assessment could consist of observation of the learner over an extended period of time. In this scenario, the assessor would complete an observation checklist over an extended period of time, completing the checklist as s/he observed the learner perform specific tasks, such as creating formulas.

## National Unit Support Notes (cont)

**Unit title:** Web Apps: Spreadsheets (SCQF level 4)

### 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](http://www.sqa.org.uk/e-assessment).

### 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)

*Working with Others* (SCQF level 4)

This Unit involves learners using a range of features provided by spreadsheet application packages which provides opportunities to gather evidence towards the *ICT* Core Skill.

This Unit involves learners using the internet to access a cloud storage area which may provide an opportunity to gather evidence towards aspects of the *ICT* Core Skill.

Several of the Core Skills components in *Information and Communication Technology (ICT)* can be addressed in this Unit. There are opportunities to select and start application software, use tools, enter and edit data, locate information, select information, and recognise security risks and act accordingly.

One or more of the Core Skills components in *Working with Others* can be addressed in this Unit. There are opportunities to carry out role in a co-operative activity, and seek and offer support.

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

This Unit has the Core Skill of Problem Solving and Providing/Creating Information component of Information and Communication Technology embedded in it. This means that when learners achieve the Unit, their Core Skills profile will also be updated to show they have achieved Problem Solving at SCQF level 4 and Providing/Creating Information at SCQF level 4.

## History of changes to Unit

Version	Description of change	Date
02	Core Skill Problem Solving at SCQF level 4 and Core Skills Component Providing/Creating Information at SCQF level 4 embedded.	20/05/2016

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## General information for learners

### Unit title: Web Apps: Spreadsheets (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.

The Unit covers practical skills and key knowledge about spreadsheets. You will learn the basic features spreadsheet and gain hands-on experience of using it. You will learn the correct terms for the various parts of a spreadsheet. The Unit has a particular emphasis on using web applications, although this is not exclusive and desktop apps can be used.

No previous knowledge or experience of computers is presumed. It is designed for the beginner who wants to learn how to use spreadsheet safely and productively.

This Unit is about the knowledge and skills required to help you use spreadsheets on personal computers and other computing devices such as tablets and smartphones along with a number of topics such as protecting shared data.

The Unit can be used for personal, educational or vocational purposes. You could use your knowledge and skills to help you in personal purposes such as learning, or you could use the Unit to improve your workplace ICT skills.

The assessment of this Unit may take different forms. You might, for example, sit a short test and carry out some practical tasks in a cloud service for feedback. Alternatively, you might keep a diary of your work.

This Unit is a mandatory Unit within the National Progression Award in PC Passport at SCQF level 4. On successful completion of this Unit, you will be ready to undertake the Unit *Web Apps: Spreadsheets* at SCQF level 5.

This Unit will provide you with opportunities to develop Core Skills in *Information and Communication Technology (ICT)* at SCQF level 4 and *Working with Others* at SCQL level 4.

This Unit has the Core Skill of Problem Solving and Providing/Creating Information component of Information and Communication Technology embedded in it. This means that when you achieve the Unit, your Core Skills profile will also be updated to show you have achieved Problem Solving at SCQF level 4 and Providing/Creating Information at SCQF level 4.