Gold INGOT Unit 5:Spreadsheet Software SS (ITQ)

Relevant LINKS

BACK TO ITQ UNITS **[1]**

Handbook home page **[2]**

Overview

The candidate can select and use a wide range of spreadsheet software tools and techniques to produce, present and check spreadsheets that are at times non-routine or unfamiliar. Any aspect that is unfamiliar may require support and advice from others.

The range of data entry, manipulation and outputting techniques will be at times non-routine or unfamiliar. The tools needed to analyse and interpret the data require a basic knowledge and understanding of mathematical, logical, statistical or financial formulas and functions. The user will take some responsibility for setting up or developing the structure and functionality of the spreadsheet. **Example of context:** Working with peers to aggregate data collected from several questionnaires in a shared an on-line work book consisting of several sheets.

Activities supporting the assessment of this award **[3]**

Example of work at this level **[4]**

Assessor's guide to interpreting the criteria

General Information

QCF general description for Level 2 qualifications

- Achievement at QCF level 2 (EQF Level 3) reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.
- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems. Interpret relevant information and ideas. Be aware of the types of information that are relevant to the area of study or work.
- Complete well-defined, generally routine tasks and address straightforward problems. Select and use relevant skills and procedures. Identify, gather and use relevant information to inform actions. Identify how effective actions have been.
- Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

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Requirements

- Standards must be confirmed by a trained Gold Level Assessor or higher
- Assessors must at a minimum record assessment judgements as entries in the on-line mark book on the INGOTs.org certification site.
- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day to day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant web pages are available to their Account Manager on request by supply of the URL.
- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.
- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.
- This unit should take an average level 2 learner 40 hours of work to complete.

Assessment Method

Assessors can score each of the criteria N, L, S or H. N indicates no evidence. L indicates some capability but some help still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least a S on all the criteria to achieve the full award.

Expansion of the assessment criteria

1. The candidate will use a spreadsheet to enter, edit and organise numerical and other data

1.1 I can identify what numerical and other data is needed in the the spreadsheet and how it should be structured

The candidate should collect data, recognising that it should not be taken for granted that it is accurate even if it is empirical in nature. The candidate's plans should show a degree of complexity in its structure using a combination of numbers, charts, and text to differentiate from Level 1 performance which will involve the simplest of sheets. The data should be appropriate for the task with the capacity to provide the basis for a realistic model.

Evidence: from spreadsheet files created by the candidate and documentation in web pages.

1.2 I can enter and edit numerical and other data accurately

Taking account of evaluation of the data and initial analysis they should show capability of efficiently entering and editing the data into the sheet ensuring the data is fit for purpose in their proposed model, eliminating errors.

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Evidence: from spreadsheet files created by the candidate and documentation in web pages

Additional information and guidance:

This work can be linked to other criteria relevant to finding and eliminating errors and on-going quality assurance.

1.3 I can store and retrieve spreadsheet files effectively, in line with local guidelines and conventions where available

The candidate should organise their files appropriately and self-sufficiently storing them and retrieving them routinely. At level 2 there should be an ability to take responsibility for their files and their organisation.

Evidence: from observation, their files and web pages.

1.4 I can combine and link data across worksheets

The candidate should be able to link at least two sheets of data together such that changes in one sheet result in changes in the other. This should form the basis of a model in which one process being modelled affects another. e.g. temperature variations in one model trigger payment of a benefit which affects budgets in another.

Evidence: from their spreadsheet files

Additional information and guidance

This could be an opportunity to link to work with collaborative technologies. An on-line spreadsheet such as Google Docs could have a sheet for each collaborator. These sheets could be used to collect empirical data independently e.g. measurements in an experiment. These could then be aggregated across the sheets. Each member of the group should demonstrate that they can make the appropriate links.

2. The candidate will select and use appropriate formulas and data analysis tools to meet requirements

2.1 I can identify which tools and techniques to use to analyse and manipulate data to meet requirements

Candidates should be able to identify simple functions such as SUM, AVERAGE, MODE routinely. They should know how to find more specific functions for a particular task and use the application's "help" to determining syntax and similar needs. They should be able to find suitable sort tools and charting tools. They should show that they can use fixed (absolute) cell references and find out how to implement macros to support collections of operations.

Evidence: from candidate's spreadsheet files and descriptions of work in their blogs/e-portfolios.

2.2 I can use functions and formulas to meet calculation requirements

Candidates should be provided with opportunities to use a range of spreadsheet functions including conditional statements that allow models to be built.

Evidence: from the candidate's spreadsheet files.

Additional background for assessors:

An example might be to make a model of throwing a die and recording the number of times each value is shown. This would require a random number function to generate the data copied down several rows and a conditional statement to increase a counter each time a particular number appeared.

2.3 I can use spreadsheet tools and techniques to analyse and manipulate data to meet requirements

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Candidates should use the spreadsheet to provide a logical structure to obtain information from large quantities of data in the sheet that can be provided or self-generated.

Evidence: from spreadsheet files and/or on-line pages.

This could include sorting information, applying functions to process it and operating on the data to produce information in graphs and charts. Work in a spreadsheet can be shared collaboratively in Google Docs. The Google Docs spreadsheet is free and is more than powerful enough at this level. Exploring its use would be an excellent link between this unit and the unit on using collaborative technologies.

3. Candidates will select and use tools and techniques to present and format spreadsheet information

3.1 I can select and use appropriate tools and techniques to format cells, rows, and columns of information.

Candidate should be able to adjust column widths, freeze rows and columns so the rest of the sheet will scroll past the fixed rows and columns, format numbers to an appropriate number of decimal places and automatically display percentages from decimals. They should be able to set cell borders and embed graphs and charts to provide a clear and aesthetically pleasing presentation.

Evidence: from spreadsheet files

3.2 I can identify which chart or graph type to use to display information.

Candidates should be able to identify appropriate chart and graph types for data in the same way as for the Level 1. They should show that they can choose the right chart for the right circumstances consistently for a full range of situations. It is highly advisable in schools to combine this with work in other subjects particularly maths and science but also humanities and arts subjects where there is a data analysis element.

Evidence: from their files and web pages

3.3 I can select and use appropriate tools and techniques to generate, develop and format charts and graph.

Candidates should be able to select appropriate chart and graph types for data in the same way as for the Level 1. They should show that they can choose the right chart for the right circumstances consistently for a full range of situations. It is highly advisable in schools to combine this with work in other subjects particularly maths and science but also humanities and arts subjects where there is a data analysis element.

Evidence: from their files and web pages

3.4 I can select and use appropriate page layout to present and print spreadsheet information

Candidates should show the capability of producing spreadsheet page layouts to present information including size, orientation, margins, page numbers, date and time, headers and footers, including consideration of printing and page sizes

Evidence: from their files and web pages

3.5 I can check spreadsheet information meets needs, using IT tools and making corrections as appropriate

Candidates should evaluate the quality of their solutions including checking accuracy of numbers, formulas and any text; accuracy of results; suitability of charts and graphs and impact on their intended audience. They should seek external evaluation from peers and use the feedback constructively

Evidence: from their files and web pages

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3.6 I can describe how to find errors in spreadsheet formulas
Candidates should check the plausibility of outcomes for obviously inaccurate results and use this to detect errors in formulas that are not picked up as syntax errors by the software. They should describe how they checked their results in their evaluation reports and should use peer review and the opinions of others if needed.

Evidence: from their files and web pages

3.7 I can respond appropriately to any problems with spreadsheets
Candidates should review and modify their work seeking feedback from others as their work progresses. They should document at least some of their specific projects and tasks formally in their blogs or e-portfolios to show how they have responded to feedback to fix problems and improve their work.

Evidence: from their files and web pages.

Moderation/verification
Assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialogue with their Account Manager and provide their assessment records to the Account Manager through the on-line mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios. Before authorising certification, the Account Manager must be satisfied that the assessors judgements are sound.

Source URL: https://theingots.org/community/SIL2U5X

Links
[1] http://theingots.org/community/ITQ_unit_development
[2] http://theingots.org/community/handbook2
[3] http://www.theingots.org/community/ITQcourse1
[4] https://theingots.org/community/sites/default/files/uploads/user4/PupilFNC7.pdf

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