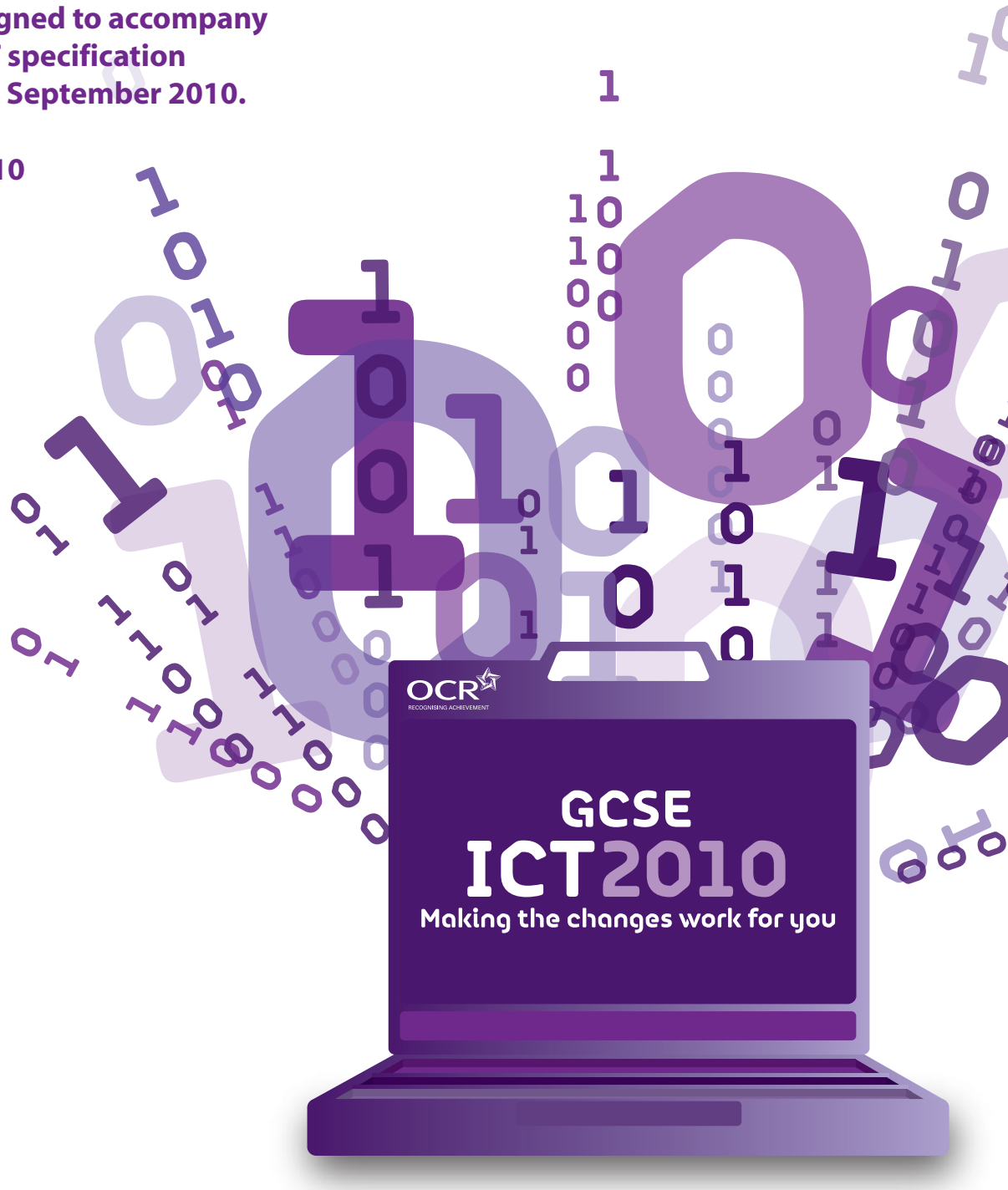
OCR
RECOGNISING ACHIEVEMENT

OCR GCSE in ICT

guide to controlled assessment

This guide is designed to accompany the OCR GCSE ICT specification for teaching from September 2010.

Version 2 July 2010



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1 Introduction

1.1 What is Controlled Assessment?

Controlled Assessment is a new form of internal assessment. Following a coursework review by QCA, Controlled Assessment has been introduced as part of nearly all new GCSEs, to replace coursework.

High, medium or low control levels are set for each of the Controlled Assessment processes: task setting, task taking and task marking. For each stage, the level of control will ensure reliability and authenticity, and make assessments more manageable for teachers and candidates.

Weighting of Controlled Assessments is defined by QCA subject criteria and is 60% of the total assessment.

1.2 What does 'control' actually mean?

QCA has produced a *Glossary of terms for Controlled Assessment regulations*. The levels of controls are defined as follows:

- Formal supervision (High level of control) – the candidate must be in direct sight of the supervisor at all times. Use of resources and interaction with other candidates is tightly prescribed.

- Informal supervision (Medium level of control) – questions/tasks are outlined, the use of resources is not tightly prescribed and assessable outcomes may be informed by group work. Supervision is confined to (i) ensuring that the contributions of individual candidates are recorded accurately, and (ii) ensuring that plagiarism does not take place. The supervisor may provide limited guidance to candidates.

- Limited supervision (Low level of control) – requirements are clearly specified, but some work may be completed without direct supervision and will not contribute directly to assessable outcomes.

1.3 What is the purpose of this guide?

This Guide provides detailed information for teachers about how to manage Controlled Assessment: some of the information applies to all GCSE subjects and some information provides subject specific guidance. It is important to make the point that this Guide plays a secondary role to the Specification itself. The Specification is the document on which assessment is based and specifies what content and skills need to be covered in delivering the course. At all times,

therefore, this teacher support should be read in conjunction with the Specification. If clarification on a particular point is sought then that clarification should be found in the Specification itself.

Teaching of this qualification will vary greatly from school to school and from teacher to teacher. With that in mind, this Guide is offered as guidance but may be subject to modifications by the individual teacher.

2 Summary of Controlled Assessment Units

2.1 Unit B062: Practical applications in ICT

This unit allows candidates to study a range of everyday software applications in order to be able to manipulate and process data and other information effectively and efficiently. This information will then be presented in a solution suitable for purpose and audience.

In this unit, candidates complete **one** Controlled Assessment task to solve a problem set by OCR.

Candidates gain the knowledge, skills and understanding to investigate a need, use software tools to present their working solution and undertake a critical evaluation.

Candidates need to be able to:

- carry out research into the requirements and context for a solution
- clearly record and display findings by using annotated drawings to record original design ideas, including the components of the proposed solution as well as their overall solution
- make reasoned decisions about items of hardware and software to produce the design of their solution
- demonstrate good ICT skills by developing the components of the solution and their overall solution
- carry out effective testing strategies involving others and potential users
- demonstrate critical evaluation skills when evaluating the final product against the design specification
- make effective use of the ideas of others.

For the full GCSE: B062 represents 30% of the total assessment and has a maximum of 60 marks.

For the short course GCSE: B062 represents 60% of the total assessment and also has a maximum of 60 marks.

Approximately 20 hours will be required for the assessment. Up to 8 hours will be required for research/preparation and up to 12 hours in producing the final outcome.

Candidates are required to create an ICT solution using ICT applications. Candidates will choose **one** task from a list provided by OCR.

This unit is internally assessed and externally moderated.

Internally assessed units apply the principles of controlled assessment. Controls are set within the assessment and in each of the stages of the assessment process:

Task setting: high level of control in relation to the setting of tasks. The controlled assessment tasks are set by OCR.

Task taking: this stage is divided into two different stages, each with a different level of control:

- research/data collection: low level of control
- create an ICT solution: medium level of control.

Task marking: medium level of control.

More information about each stage of the process is provided in the following sections of this guide.

2.2 Unit B064: Creative use of ICT

The main aim of this optional unit is to further develop skills and abilities gained from units B061, B062 and B063 in order to design and make a fully functioning quality multimedia solution.

In this unit, candidates complete **one** Controlled Assessment task to solve a problem set by OCR.

Candidates gain the knowledge, skills and understanding they need to analyse a problem, design, develop, test and critically evaluate their final solution. Candidates need to be able to:

- develop and demonstrate analysis skills to produce a design specification based on a problem set by the board, recording their analysis of existing solutions
- use annotated drawings to record original design ideas, including the components of the proposed solution as well as their overall solution
- make reasoned decisions about items of hardware and software to produce the design of their solution
- demonstrate good ICT skills by developing the components of the solution and their overall solution
- carry out effective testing strategies involving others and potential users
- demonstrate critical evaluation skills when evaluating the final product against the design specification
- make effective use of the ideas of others.

Unit B064 represents 30% of the total assessment and has a maximum of 60 marks. Approximately 20 hours will be required for the assessment. Up to 8 hours will be required for research/preparation and up to 12 hours in producing the final outcome. This unit is internally assessed, applying the principles of controlled assessment. Controls are set within the assessment in each of the stages of the assessment process:

Task setting: high level of control in relation to the setting of tasks. The controlled assessment tasks are set by OCR.

Task taking: this stage is divided into two different stages, each with a different level of control:

- research/data collection: low level of control
- create an ICT solution: medium level of control.

Task marking: medium level of control.

More information about each stage of the process is provided in the following sections of this guide.

2.3 Unit B065: Coding a solution

This optional unit allows students who have developed the extra skills required to produce a programmed solution to a problem to demonstrate this ability within a framework similar to that used for unit B064. The same skills assessed within B064 are also assessed within this unit;

Candidates gain the knowledge, skills and understanding to analyse a problem, design, develop, test and critically evaluate a solution to a problem.

Candidates need to be able to:

- develop and demonstrate analysis skills to produce a design specification based on a problem set by the board, recording their analysis of existing solutions
- use appropriate methods including suitable algorithms to record original design ideas, including the components of the proposed solution as well as their overall solution
- make reasoned decisions about items of hardware and software to produce the design of their solution
- demonstrate good ICT skills by developing the components of the solution and their overall solution
- carry out effective testing strategies involving others relating this testing to the needs of potential users
- demonstrate critical evaluation skills when evaluating the final product against the design specification
- make effective use of the ideas of others.

Unit B064 represents 30% of the total assessment and has a maximum of 60 marks. Approximately 20 hours will be required for the assessment. Up to 8 hours will be required for research/preparation and up to 12 hours in producing the final outcome.

This unit is internally assessed, applying the principles of controlled assessment. Controls are set within the assessment in each of the stages of the assessment process:

Task setting: high level of control in relation to the setting of tasks. The controlled assessment tasks are set by OCR.

Task taking: this stage is divided into two different stages, each with a different level of control:

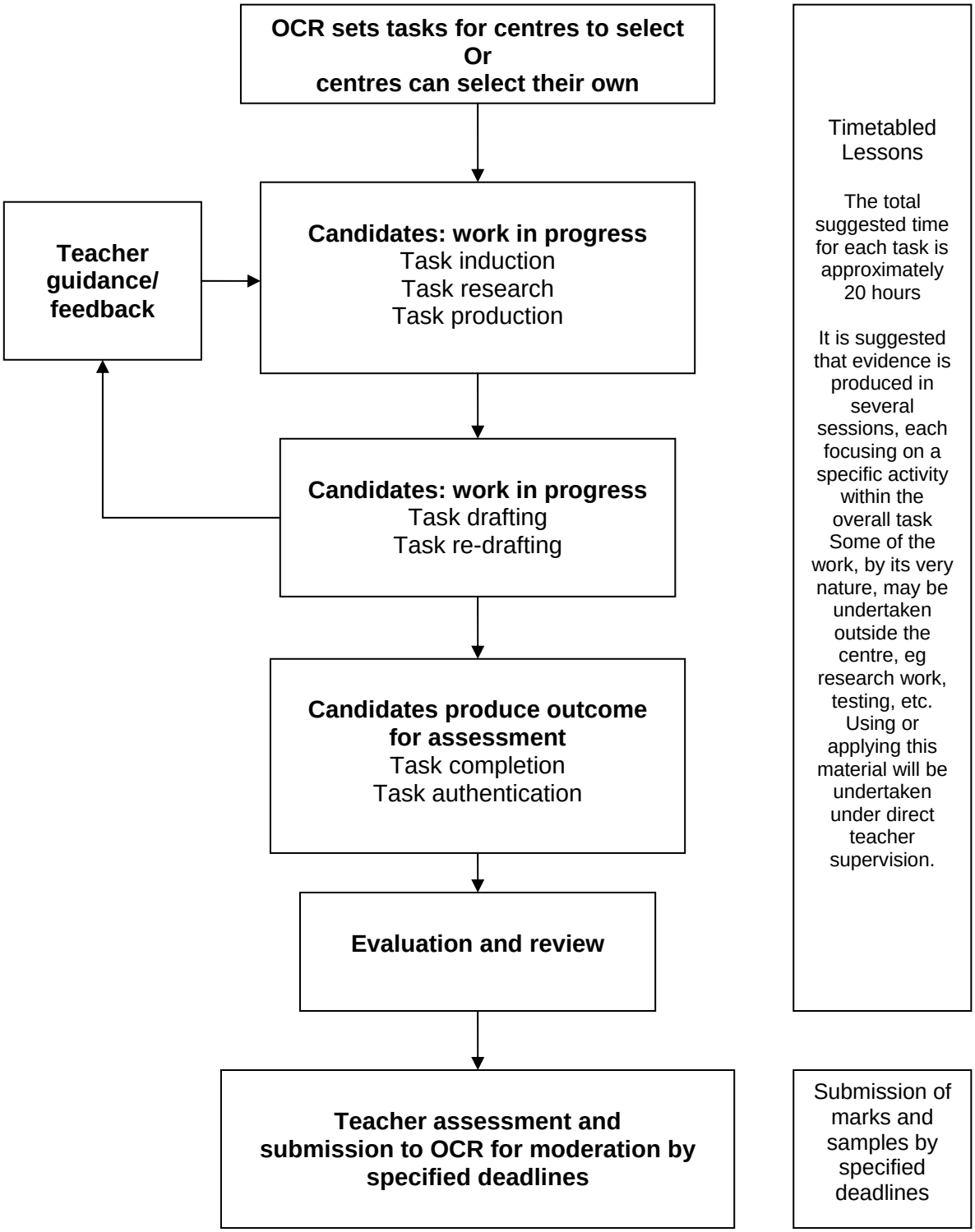
- research/data collection: low level of control
- create an ICT solution: medium level of control.

Task marking: medium level of control.

More information about each stage of the process is provided in the following sections of this guide.

3 Teacher guidance on how to plan Controlled Assessment

3.1 Controlled Assessment Delivery Flow Chart



3.2 Guidance on the release of Controlled Assessment tasks to candidates

3.2.1 Choice of Controlled Assessment task

OCR will assume a high level of control in relation to the setting of tasks. A number of Controlled Assessment tasks will be available from OCR for the Controlled Assessment units. These tasks have been designed to meet the full assessment requirements of the unit. Candidates will need to take part in a planned learning programme that covers the underpinning knowledge and skills of the unit in addition to completing the evidence requirements of the designated assessment tasks. Centres can choose one from a number of theme based tasks offered by OCR (see Section 4 of the Specification). These tasks can be used as set by OCR or with a minimum amount of adaptation so that they allow for the usage of local resources available to the centre and interests of the particular cohort of candidates being taught.

The same OCR Controlled Assessment task must NOT be used as the practice material and then as the actual live assessment material. Centres should devise their own practice material using the OCR specimen Controlled Assessment task as guidance.

3.2.2 When and how to give Controlled Assessment tasks to students

Controlled Assessment tasks will be available from Interchange from 1 June 2010. The first set of tasks will be available for assessment up to, and including, the June 2012 examination series. Tasks will be added to in subsequent years.

The nature of a unitised qualification means that candidates may embark on a Controlled Assessment task either as a short focussed activity, or as a longer on-going activity. Teachers may prefer to select appropriate themes based on knowledge of the facilities available at the centre. Other centres will give their candidates an open choice of tasks. What is essential is that the work of candidates is 'controlled' in such a way to preserve the integrity of the qualification while allowing candidates to work safely and independently.

3.3 Guidance on research/data collection

The controlled assessment tasks should be completed within the suggested time limit (see section 3.1) and supervised and marked by the teacher.

- Introduction to the task (teacher led): **1 hour.**

Includes choice of tasks, possible approaches and preparation, time allocations, programmes of work and deadlines, methods of working, control requirements.

- Preparation/research/collection of evidence: **8 hours.**

In the preparation/research stage/collection of evidence, a low level of control is required, which means that candidates can undertake this part of the process without direct teacher supervision and outside the centre as required. Candidates are also able to work in collaboration during this stage. **However, when producing their final piece of work, candidates must complete and evidence all work individually.** With all internally assessed work, the teacher must be satisfied that the work submitted for assessment is the candidate's own work and they should be able to authenticate it using the specified procedure.

During the preparation/research/collection of evidence phase candidates can be given support and guidance. Teachers can explain the task, advise on how the task could be approached, give advice on available resources and alert the candidate to key things that must be included in their final piece of work.

Access to resources will be limited to those appropriate to the controlled assessment task. Candidates will need to be provided with the most appropriate materials and equipment to allow them full access to the marking criteria, but this must be closely monitored and supervised.

Research material may include internet or paper-based research, interviews, questionnaires, audio and video files. Candidates must be guided on the use of information from other sources to ensure that confidentiality and intellectual property rights are maintained at all times. It is essential that any material directly used from a source is appropriately and rigorously referenced.

3.4 Guidance on the production of the outcome

3.4.1 Controls for the production of the outcome

Teachers must keep live Controlled Assessment tasks secure and confidential at all times whilst in their possession. For example, candidates may collect the results of any research or investigations undertaken in a research folder which must be handed in to the teacher before the writing up sessions begin. In such circumstances, it is the responsibility of the teacher to keep the research folders secure between the writing up sessions and that candidates do not have access to these folders outside of the allotted sessions.

The final piece of work is produced in the centre under controlled conditions, which means under direct teacher supervision. It is expected that the production of the final outcome for each unit will take approximately 12 hours. Teachers must be able to authenticate the work and there must be acknowledgement and referencing of any sources used.

During the carrying out of the task, candidates may have access to the notes which they have made during the research/data collection phase of task taking. It is the responsibility of the centre to ensure that these are indeed research notes and do not include a draft or final version of the task.

When supervising tasks, teachers are expected to:

- exercise continuing supervision of work in order to monitor progress and to prevent plagiarism

- exercise continuing supervision of practical work to ensure essential compliance with Health and Safety requirements

- ensure that the work is completed in accordance with the specification requirements and can be

- assessed in accordance with the specified marking criteria and procedures.

Teachers must not provide templates, model answers or feedback on drafts. Candidates must work independently to produce their own final piece of work.

3.4.2 Controlled Assessment task security

It is the responsibility of the centre to ensure that downloaded Controlled Assessment Tasks and candidates' scripts are stored securely. Any breach in security must be reported to OCR as soon a possible by submitting a written report (a blank report form is available on Interchange) from Head of Centre to OCR Quality and Standards Division detailing the circumstances, the candidates concerned and any action taken.

Candidates' scripts for all completed Controlled Assessment tasks must be stored securely and they should be available for moderation. It is suggested that they are destroyed after the last date for Enquiries about Results following the examination series in which entries for the units concerned are made.

Candidate absence at the time of assessment

If a candidate is absent from a centre when an assessment is carried out, the Controlled Assessment task may be set at an alternative time provided that the centre is satisfied that security has been maintained by keeping all materials secure.

Unexpected circumstances

If an unexpected problem (such as a fire alarm or other circumstances beyond the teachers' control) occurs while a Controlled Assessment task is taking place, the task may be resumed subsequently provided the teacher ensures that no candidate is likely to have been advantaged or disadvantaged by doing so.

3.4.3 Presentation of work

Candidates must observe certain procedures in the production of controlled assessment tasks:

- tables, graphs and spreadsheets may be produced using appropriate ICT. These should be inserted into the report at the appropriate place.

- any copied material must be suitably acknowledged

- quotations must be clearly marked and a reference provided wherever possible.

Work submitted for moderation must be marked with the:

– centre number

– centre name
– candidate number
– candidate name
– unit code and title
– assignment title.

Work submitted on paper for moderation or marking must be secured by treasury tags. Work submitted in digital format (CD or via the OCR Repository) must be in a suitable file structure as detailed in Appendix A at the end of this specification.

4 Teacher guidance on task marking

4.1 General guidance on how to mark Controlled Assessment tasks

The starting point for marking the tasks is the marking criteria. These contain levels of criteria for the skills, knowledge and understanding that the candidate is required to demonstrate.

The assessment task for each unit should be marked by teachers according to the given marking criteria within the relevant unit using a 'best fit' approach. For each of the assessment objectives/criteria, teachers select one of the three band descriptors provided in the marking grid that most closely describes the quality of the work being marked.

Marking should be positive, rewarding achievement rather than penalising failure or omissions. The award of marks **must be** directly related to the marking criteria. Teachers use their professional judgement in selecting the band descriptor that best describes the work of the candidate.

To select the most appropriate mark within the band descriptor, teachers should use the following guidance:

- where the candidate's work convincingly meets the statement, the highest mark should be awarded
- where the candidate's work adequately meets the statement, the most appropriate mark in the middle range should be awarded
- where the candidate's work just meets the statement, the lowest mark should be awarded.

Teachers should use the full range of marks available to them and award full marks in any band for work that fully meets that descriptor. This is work that is 'the best one could expect from candidates working at that level'. Where there are only two marks within a band the choice will be between work which meets the statement in most respects and work that just meets the statement. For wider mark bands the marks on either side of the middle mark(s) for 'adequately met' should be used where the standard is lower or higher than 'adequate' but not the highest or lowest mark in the band. Only one mark per assessment objective/criteria will be entered. The final mark for the candidate for the controlled assessment unit is out of a total of 60 and is found by totalling the marks for each of the marking objective/criteria strands.

4.2 Interpretation of the Controlled Assessment marking criteria B062/B064/B065

4.2.1 Unit B062: Practical applications in ICT

The guidance is based on the specimen task reproduced here:

Specimen Task

Litchfield Promotions works with over 40 bands and artists to promote their music and put on performances in the UK. The number of bands they have on their books is gradually expanding.

Litchfield Promotions needs to be sure that each performance will make enough money to cover all the staffing costs and overheads as well as make a profit. Many people need to be paid: the bands; sound engineers; and, lighting technicians. There is also the cost of hiring the venue.

Ben is the office administrator and currently uses a computer to type letters and other documents. He keeps records of the customers and artists in paper format in a filing cabinet. Ben uses a calculator to keep track of income and expenditure and types these values into a document he stores on his computer.

Litchfield Promotions needs to create an ICT solution to ensure that they have all necessary information and that it is kept up to date. Ben has been asked to produce this solution. The solution will show income, outgoings and profit. Ben will be responsible for the day to day management of this new system and it will be kept up to date by an administrative assistant.

You will need to:

- work with others to plan and carry out research to investigate how similar companies have produced a solution. (The company does not necessarily have to work with bands and artists or be a promotions company.)
- clearly record and display your findings
- recommend a solution that will address the requirements of the task
- produce a design brief, incorporating timescales, purpose and target audience
- produce a solution, ensuring that the following are addressed:
    - it can be modified to be used in a variety of situations
    - it has a friendly user interface
    - it is suitable for the target audience

- it has been fully tested.

- incorporate a range of:
  - software applications
  - software features
  - macros
  - modelling
  - validation checks (used appropriately).

- You will need to:
  - obtain feedback from others on your solution
  - evaluate your own and others' work
  - identify areas that require improvement, recommending improvement, with justification following your solution's evaluation
  - present information as an integrated document.

Marking criteria guidance

The information below expands the bullet points contained within the specification under sections 2.2.1, 2.2.2, 2.2.3, 2.2.4 and 2.2.5 of Unit B062.

Investigating a need

The investigation phase is carried out at a low level of control and may involve work outside of school and not under the direct supervision of the teacher. This phase should take approximately 8 hours.

(i) research a given context documenting sources of information and (v) work effectively with others to gain and share knowledge

Candidates should work together in a small group to research existing companies (which may not work in the same industry as the company identified in the task). For the sample task here, they should try to find out methods that existing companies use to keep track of their income, outgoings and profit. Within their group, candidates may choose to research in different ways, such as by talking to people they know who run their own business or by researching models on the internet. They will need to present evidence of their findings in the form of, for example, interview transcripts, samples of existing files, screenshots of evidence found on the internet.

(ii) analyse systematically the information requirements to solve ICT problems and recommend and justify a solution that will address the requirements of the task

Candidates will need to bring together their research, share the results with the rest of their group and present their findings. They will then need to analyse their findings individually to help them decide on a model on which to base their own solution. They should then recommend a solution and justify their choice of solution.

(iii) think creatively, logically and critically throughout the development process of a set ICT-based solution

Candidates should explore different approaches whilst carrying out the research and during the development of the final system. They will draw on past experience and prior knowledge of software features, as well as using new information gained from research. Candidates should come to reasoned decisions about how to progress and should not be limited to following a specific approach with any one software package.

(iv) find and select appropriate data and information that is fit for purpose, relevant and accurate

Candidates should find appropriate sources of data and information that are relevant to the task and do their best to ensure the data is accurate. Evidence for this might involve candidates discussing why information they have found out is relevant to the task or mentioning information that they have rejected and why that was not appropriate.

(vi) produce a design brief and (vii) produce a system specification with measurable success factors

Candidates will need to produce a design brief which takes into account the initial requirements set out in the task as well as any findings as a result of their research and analysis. The design brief should include timescales, purpose and target audience. A system specification will need to be produced which covers what the final system should do and success criteria that will be used to evaluate the final solution; candidates may state hardware and software requirements at this stage. They should produce a test plan using the success criteria identified which can be used to test the final solution.

Candidates will need to plan out their order of work, possibly using a table or simple Gantt Chart, that allocates a length of time to each part of the process.

The development phase is carried out under controlled conditions under the direct supervision of the teacher. This phase should take approximately 12 hours.

Candidates should keep a log/diary of their work whilst undertaking the following sections. The work will not necessarily be presented in the order below.

Practical use of software tools to produce a working solution

(i) produce a fully working solution to a chosen set task

Candidates should produce a working solution that aims to meet the requirements set out in the design phase above. The solution should be suitable for the target audience and have a user-friendly interface where necessary. The development of the solution does not need to be documented in detail but the final solution should be fully documented/annotated to show the candidate's understanding and skills used in the process.

(ii) select and use a range of ICT tools and techniques to develop effective solutions

Candidates should use a range of appropriate software features to produce their final solution. It is expected that candidates will have prior knowledge of the different software applications and features available to make an informed choice. Candidates do not have to use one specific software application and they may choose to use more than one software application.

(iii) understand software features and their use

An understanding of the software features needs to be shown in the work of the candidate. One way of doing this would be to have screenshots of the final solution, well annotated to explain how software features were used to produce a particular outcome.

(iv) create sequences of instructions
(v) manipulate and process data and other information effectively and efficiently

Candidates should use the chosen software tools, including sequences of instructions, to manipulate and process data to produce different outcomes. Examples of this for the sample task may include, but are not limited to, calculations, queries, reports and mail merge documents.

(vi) integrate tools and techniques to work efficiently and to meet user needs

Candidates should use tools and techniques to show integration of software features. This may involve integrating data across two or more pieces of software but could also include integrating data within one piece of software into different output formats.

(vii) apply a wide range of tools and techniques across applications to produce ICT-based solutions

When producing the final solution candidates need to show an understanding of the software options and tools available and they should show use of the more advanced features of one or more pieces of software.

(viii) understand and adopt safe, secure and responsible working practices when using ICT.

Within the solution there should be an awareness of the need to keep personal data secure by means of, e.g. passwords. Other considerations in the sample task might include protecting certain parts of the system so that the user cannot change formulas and functions.

Practical use of file and data structure to produce a working solution

Parts of this section will be carried out before and during the previous section, practical use of software tools.

(i) use software features

Candidates should use a range of appropriate software features to produce their final solution. They should not be limited to using one or more specific software applications.

(ii) model situations and data to explore and develop ideas

Before producing the final solution, candidates should model alternative ideas, either using hand drawn diagrams or by producing quick 'prototypes' of their ideas using one or more pieces of software. They will design a file or data structure to meet the specification requirements. Candidates should also model different situations within their final solution during the development in order to test it and to show an understanding of how changing the rules and data in a model can affect the final solution.

(iii) enter, develop and format data and information to suit processing purpose and audience

Candidates should select appropriate data for the situation and audience to use in their solution. Candidates should enter enough data into their system to be able to effectively test that their solution meets the specification requirements but should not use large amounts of data that will not add anything to the work. The data should be correctly formatted to suit the processing of the data that will take place and to suit the audience.

(iv) apply creative and technical skills, knowledge and understanding of ICT tools and methods to import and export data and create a suitable data structure for a task.

Candidates should show knowledge of data types and data processing and how data can be linked across and within software applications. They should use the solution they produce to change data and to model and test predictions.

(v) check data accuracy and plausibility

Candidates should use appropriate validation checks, etc to check data being entered into their system. They should also check that the data they have selected for use in their system is reliable. Candidates should save different versions of their file, retaining evidence of ongoing editing.

(vi) create a suitable data structure for a task

The final solution the candidate produces should be suited to the task. This will include use of appropriate software applications and features.

Present your solution

Candidates need to present their final solution to the intended audience in the form of a simple report or presentation that briefly shows what the solution does. This section should not include how the system was developed, only the final solution.

Candidates will also need to present a report recording the whole controlled assessment task, to be presented for assessment, which will document the development of the system, under the criteria above.

(i) use a range of ICT tools and media to communicate data and information effectively and in a form that demonstrates a clear sense of purpose and audience

Candidates should use appropriate software and software tools to communicate effectively with their audience about the final solution. They should extract appropriate but not excessive information and integrate it into their report to their audience. Appropriate formatting tools and graphical representation should be used to enhance key information.

(ii) understand how information should be interpreted and presented to suit purpose and audience
(iii) present information in ways that are fit for purpose and audience.

Candidates should show an understanding of how different methods of presenting information are appropriate to their audience by the method they choose.

Evaluation

(i) evaluate their own and others' contribution

Candidates should evaluate how they and others contributed to the group work in the research phase. They may need to talk to other members of their group to gain their opinions.

(ii) test their own solution

Candidates should carry out testing throughout the production of their system and amend their work as necessary; they should also include final testing of their solution using a test plan developed in the design stages, which tests against measurable success criteria.

(iii) create and review their own ICT-based solution
(iv) review and modify work as it progresses to improve the quality of the ICT-based solution

Candidates should include a log, recording what tasks were completed and when. In the evaluation section they should record alongside this log any problems/issues that arose and how they dealt with these.

(v) evaluate and amend their own solutions to a set problem

Candidates should evaluate their solution as it develops and amend it accordingly. These amendments, with reasons, should be recorded.

(vi) identify strengths and weaknesses
(vii) identify areas to improve and recommend and justify appropriate changes that could be made

Candidates should describe what their solution can do, identifying particular strengths and weaknesses and what their solution cannot do. They should identify areas to improve and they should recommend and justify appropriate changes that could be made for the future.

(viii) present their evaluation in a relevant, clear, organised, structured and coherent format
(ix) use specialist terms correctly and appropriately.

Candidates will be assessed on the quality of their written communication in the Evaluation section

4.2.2 Unit B064: Creative use of ICT

The guidance is based on the specimen task reproduced here:

Specimen Task

A chain of hairdressing salons has conducted a survey of its customers and has come to the conclusion that they are not attracting enough teenage customers. Your task is to produce multimedia solution suitable for a teenage audience.

You will need to:

- work with others to carry out an investigation to assess the value of advertising materials which you feel appeal to a teenage audience – they do not necessarily have to do with hairdressing
- clearly record and display your findings
- recommend a multimedia solution which will best advertise these salons to teenagers
- produce a list of success criteria you feel your solution will need to meet for your target audience and purpose
- produce a plan with recommended timescales for your solution
- produce designs of your solution including the elements which will make up your solution
- describe how the solution will be tested
- produce a solution
- create navigational aids to move from element to element
- combine these elements appropriately
- show how you have followed your original plan
- test your solution with the user, using a variety of tests and test data
- document actions taken following feedback from user
- evaluate your own and others' work.

Marking criteria guidance

The information below expands the bullet points contained within the specification under sections 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.5 and 2.4.6 of Unit B064.

Analysis

(i) identify and assess existing solutions to similar problems

With the help of others candidates should carry out research into similar problems. This can be carried out by using the internet to research similar situations or by using more traditional methods of analysis, such as interviews, questionnaires or examining existing documents. They should identify some images, animation, sound or video clips which are used in existing solutions together with multimedia presentations, web sites or games which are used in existing solutions. They should describe how these solutions are (or are not) fit for purpose.

This research element of the task could be carried out prior to the actual start of the controlled assignment.

For the specimen task, candidates should work together using search engines on the internet to find web sites which advertise to teenagers. They could each perhaps complete a short questionnaire on the efficacy of the materials. These could be hairdressing sites with special relevance to teenagers or perhaps more general fashion sites which are aimed at the teenage market. Candidates could make use of a small group of four year 11 pupils to carry out interviews of fellow pupils to identify the features of advertising materials which they find attractive. One or two of the small group would be responsible for devising the questions to appear on the interview script.

Candidates would be expected to complete a pro-forma listing the web sites visited and their relevance. They would also list their findings from the interviews.

(ii) produce a plan/design specification for the development of a multimedia solution

Candidates should list the steps that will have to be carried out in order to solve the problem. This plan should include timescales such that each step will have an identified length of time allocated to it as well as a due time and date of completion.

For the specimen task candidates would allocate a specific amount of time to each aspect of the solution. They should identify a period of time for each section and within each section will identify an approximate length of time to spend on each activity. This will require them to outline which of animation, video, sound or images they may be using as well as the navigation methods which might be employed.

(iii) specify the required hardware and software

Candidates should describe the hardware and software which will be necessary in order to successfully complete the solution.

Having decided whether they should produce a multimedia presentation, multimedia website, or computer game, they will need to identify the software which will be needed to produce the overall solution as well as the software necessary to create or modify the individual components

of their solution. Candidates should specify the hardware required in terms of computer and peripherals. They should identify the hardware required, for example, to import images, scan images, input sound etc.

(iv) specify the user requirements

Candidates should list, as a result of their findings in (i), what the requirements of the prospective users will be.

For the specimen task the prospective users would be teenagers. By using the results of the internet research and the interviews, candidates could identify the requirements of such a group. This could be the need for teenager-friendly screens. The features of the components which would satisfy such a user group would need to be listed.

(v) define the success criteria for a solution to a problem

With the help of others, or on their own, candidates will be expected to describe the features of the solution needed in order to fulfil the requirements of the problem.

Candidates could use the group of fellow students who helped them carry out their research to make suggestions for the success criteria. They would suggest features of the solution which would need to be present for the solution to be successful. Candidates would need to judge which of these would be most appropriate in their final selection of success criteria.

Design

(i) explain how the proposed multimedia solution will be fit for purpose

Candidates will be expected to describe how the features of the proposed solution meet the success criteria outlined in Analysis (v) above.

In producing a solution to the specimen task, candidates will have hopefully identified one of the features requiring the solution to appeal aesthetically to teenagers. Candidates should go into more detail identifying which components will be required to ensure that each feature is present. Candidates should do this for the other success criteria as well.

(ii) design individual components of the solution

Candidates should produce sketches of the images, video or animation to be produced. They will describe any sound clips which might be needed.

They should produce sketches of hairstyles, sketches or written descriptions of hair dressers in action, models walking down the street, the hairdresser talking about the styles etc. There could be ‘story-board’ sketches of any proposed animations. There could be descriptions of any sound clips which are going to be incorporated, such as suitable background music or voiceovers etc.

(iii) design screen layouts

Candidates should produce sketches of individual slides, web pages or games screens as appropriate.

(iv) design the overall solution incorporating navigational aids

Candidates should produce sketches of how individual slides, web pages or games screens are linked and showing the possible alternative pathways.

For the specimen task, candidates should show the links between slides, pages or game screens. They will need to indicate on their sketches of the individual slides/pages which icons, buttons, text or other hotspots are being used to link slides/pages/game screens and which pages or slides they are linked to (using arrows).

(v) design testing routines

Candidates should produce a test plan. Descriptions of the tests which will be employed will be required together with the expected results.

Candidates should produce a table which will indicate the proposed test to be carried out as well as columns for the expected results and the actual results. There will also be a column for comments on the results of the test. Proposed user testing should also be included. This table will be reproduced for completion at the testing stage. At this stage the candidate should only complete the description of the test and the expected results columns. Typical tests would obviously include each of the navigation paths as well as user testing and perceptions.

Development

(i) create new, or modify existing, components of a solution

Candidates should show how they have created new media elements such as images, video clips, animation or sound clips. They should show how they have created these or developed them from an existing element.

Candidates should find examples of images of hairstyles which they may feel they can enhance for inclusion in their solution. They should include pictures of the image before and after the modifications they have made. Where candidates have created their own they should include printouts of two or three versions. It is envisaged that no written descriptions will be required, providing the printouts are self explanatory. This should be done for all components used.

(ii) create screen layouts

Candidates should show how they have created individual web pages, presentation slides or games screens.

As the specimen task requires a multimedia solution, candidates will not need to show printouts of every individual page, slide or game screen. The finished product will suffice.

(iii) create navigational aids

Candidates should show how they have used buttons, hotspots, hyperlinks or other means to link the slides, pages or screens so that users can navigate between screens.

Two or three screenshots of the linking process can be shown as examples for a slideshow or, for a web page, before and after printouts of the HTML source code with some annotation will suffice.

(iv) create a working solution

Candidates should combine (i), (ii) and (iii) above into a multimedia solution which fulfils some or all of the success criteria outline in Analysis (v) above.

(v) adhere to the prepared solution plan

Candidates should have completed a time sheet which demonstrates how they have followed the original timescales they describe in Analysis (ii) above.

They should indicate on the time sheet any discrepancies between their actual timings and the original plan together with reasons why.

Testing

(i) test the solution they have produced

Candidates should use the test plan they designed in Design (iii) above to test their solution.

Candidates should test their navigation aids. They should complete the actual results column by describing how each test showed that the solution worked, or otherwise. They should comment on why the tests did not produce the results they had envisaged.

(ii) have potential users test their solution

Candidates should have identified potential users of the system and should now get these people to test the various pathways of the solution.

In this task, it is envisaged that teenagers will be the potential users. It is quite in order for fellow classmates to use the solution and make comments about how appropriate for a teenage audience the slide show/web pages were. They may also find faults with navigational aids that the candidate may not have noticed when they tested them themselves.

Evaluation

(i) use the results of testing, identify the limitations of their solution

Candidates should be able to analyse their test results. They could use the differences between their expected and actual results to identify those parts of the solution which have not worked as they expected.

This should be fairly straightforward as candidates can use the comments column in their test plan to identify those parts of the solution which did not work as planned whether this would be the navigational aids or the possible lack of appeal of some media elements.

(ii) use the results of testing, and recommend possible improvements to their solution

Candidates should be able to follow on from (i) above and from the listed limitations, recommend improvements to their solution

Candidates should describe the modifications to the navigational aids and paths which will be required together with other improvements.

(iii) evaluate the solution with regard to purpose

Candidates should be able to describe their solution in terms of how well it matches the original purpose and identify any shortcomings their solution has as well as recommending improvements which would make their solution more fit for purpose.

They should explain how well the solution does match the needs of the teenage audience and whether any changes to media elements are required or different elements are necessary.

(iv) evaluate the solution with regard to the success criteria

Candidates should re-list their success criteria and with regard to each one make a comment about whether the criterion has been met and if not why not.

(v) improve their solution

Candidates should now attempt to improve their solution in light of the limitations/improvements they have identified.

Candidates should now make the improvements to the solution whether they are changes to navigational aids or individual elements or both. They should produce before and after printouts to show the changes.

Working with others

(i) plan straightforward work with others, identifying objectives and clarifying responsibilities

Candidates should be able work as a team, allocating tasks to each other so that each is aware of their own and each other's roles. Each person should understand the objectives of their task.

This will be a brief summary related to the proposed activities to be carried out in Analysis (i) and Analysis (v) above, but at the planning stage.

(ii) work with others towards achieving given objectives, carrying out tasks to meet their responsibilities

Candidates should be able to complete their assigned tasks as well as working towards ensuring others complete their tasks.

This will be a brief summary related to the activities actually carried out in Analysis (i) and Analysis (v) above.

(iii) recommend ways of improving work with others to help achieve given objectives

Candidates should be able to identify any shortcomings in the way that work was shared out and make suggestions to and receive suggestions from others as to how this could have been achieved.

4.2.3 B065: Coding a solution

The following guidance is based on the specimen task reproduced below.

A teacher at a local primary school wants to help some students improve their spelling. These students will take time away from the class and work by themselves with a computer program that will help them to spell simple words from the class spelling lists for that week. The teacher wants to be able to specify the words for each student by entering them or by selecting them individually from a list.

The interface must be colourful and easy to use for the student; it needs to report back to the student on their success. The teacher also needs to know how well the student has done after each test by identifying words that caused problems and a score. The teacher interface needs to be simple to use.

Your task is to create a suitable solution with the basic functionality as a priority.

- Identify the teacher's requirements for this system.
- Identify existing programs suited to this audience.
- Identify existing programs which provide similar facilities required by the teacher and assess their value.
- Explain why you think these programs will appeal to the target audience.
- Recommend a solution based on this research.
- Produce a list of success criteria you feel your solution will need to meet.
- Produce a plan with recommended timescales for your solution.
- Produce designs of your solution including the modules which will make up your solution and the algorithms to describe your solution.
- Describe how the solution will be tested.
- Create a suitable program.
- Show how you have followed your original plan.
- Test your solution using a variety of tests and test data.
- Evaluate your own and others' work.
- Evaluate your solution.

Marking criteria guidance

The information below expands the bullet points contained within the specification under sections 2.5.2, 2.5.3, 2.5.4, 2.5.5 and 2.5.6 of Unit B065.

Analysis

The research element of the task could be carried out prior to the actual start of the controlled assignment.

With other candidates, carry out research into similar problems. This can be done by using the internet to research similar existing solutions or by more traditional methods such as interviews, questionnaires or examining existing documents. They should identify the general requirements for such a solution and describe how these solutions are (or are not) fit for purpose.

In the specimen task, candidates could work together to find and try out programmes designed for educational use in junior schools. They could each perhaps complete a review on the efficacy of the materials. They might look at programmes used to improve spelling or more general educational programmes aimed at the target audience. Candidates may have access to junior school teachers and/or students to complete other research into the requirements for their systems.

Candidates should produce a suitable list of web sites visited or software used and the suitability/relevance of each together with a summary of any other evidence identified its relevance and how this information was obtained.

The development phase needs to be carried out under controlled conditions.

Candidates need to analyse the evidence obtained in the research phase to create a design for their proposed solution, justifying the elements of their solution by reference to this research. Candidates will be expected to consider what hardware and software are required to ensure their proposed solution works effectively.

In the sample task they will need to use the evidence to clearly identify what the teacher wants the system to do and any requirements to make it appropriate to the target audience. They should also think about the recommended hardware and software. This might include references to the system requirements to enable the programme to run, the required operating system, access to printer or other devices, or any additional software requirements.

Candidates should produce the design specification to include user requirements with a detailed plan of the proposed solution including the time scales involved. The design specification would be the agreement between the developer (the candidate) and the end user (the teacher) about what the final solution will do and how it will perform.

For the specimen task candidates would allocate a specific amount of time to each aspect of the solution. They should identify a period of time for each section and within each section they should identify an approximate length of time to spend on each activity.

This design specification needs to be turned into a list of measurable success criteria against which the success or otherwise of the project will be judged.

For the sample task, this might include functional elements such as the behaviour of the user interface, the responses from the system to correct or incorrect responses, the way data is stored and modified, security of data etc as appropriate to the proposed solution and as a result of the research carried out.

Design

Candidates will be expected to describe how the proposed solution solves the problem.

In producing a solution to the specimen task, candidates will have identified the features required for the solution to complete the task identified by the teacher and to appeal to/ be appropriate for the junior school students. Now they will need to go into more detail showing how each element of the solution will work and how these elements work together to form a complete solution.

For the functional elements candidates should produce suitable algorithms describing the processes. These algorithms can be in any suitable format. Candidates can use flowcharts, numbered or bulleted steps, written sequences, diagrams, etc; the important point is that they demonstrate the logical processes within the proposed solution

The candidate should also identify what the solution will look like and should indicate this using appropriate methods.

The screen layouts may be simple sketches or more detailed drawings but may also be a list of requirements to be included in a prototype screen layout(s). For example those using Visual Basic may simply use the list of required features to inform their work whilst designing forms on screen. Candidates should retain sufficient evidence to demonstrate this process.

Candidates should show how the individual elements form a complete solution to the problem including how the functional elements are linked and how the other design elements eg screen layouts/forms relate to the design criteria.

Candidates should produce a test plan. Descriptions of the tests which will be employed will be required together with the expected results.

Candidates should produce a table which will indicate the proposed test to be carried out as well as columns for the expected results and the actual results. There will also be a column for comments on the results of the test. This table will be reproduced for completion at the testing stage. At this stage the candidate might only complete the description of the test and the expected results columns. Typical tests would obviously include each of the functional elements as well as final testing and perceptions by others at the end of the process. The proposed testing should cover as many paths through the system as required to show that the solution meets all of the success criteria identified earlier.

Development

There are four important aspects to this development section.

Standard programming techniques should be used effectively to produce an efficient solution to the problem.

While many of the techniques will be required, it is possible that the designed solution does not require one or two of them. Work will be assessed for effective and efficient use of the appropriate techniques from the list or techniques not in the list that make the solution more efficient. The key element is producing a functional solution to the problem using as many of the identified techniques as appropriate.

In the sample task it is possible to set up the system to run through a list of words until the end of the list regardless of how many items are in it, or until a number of errors has been recorded, or to select a set number of items from a list. The most appropriate loop control may therefore be conditional or count controlled depending upon the approach. Not including both loop controls does not affect the effectiveness of the solution. The data should be kept in a data file and read into the programme using a suitable method, keeping the data hard coded within the solution is not an efficient method and does affect the quality of the solution.

There should be fully detailed evidence of development for a fully functional solution and candidates should show how each of the elements of their solution has been developed and how these elements have been combined into a complete solution.

Depending upon the choice of programming language there should be procedures or modules which combine to form the solution. Key stages in the development should be identified and any development testing or modifications recorded.

There should be a full and critical discussion of how successful they were in following the plan and any modifications, improvements or other changes deemed necessary to this plan.

Candidates need to comment on how successful they were in following their plans and any changes they needed to make. Changes to the proposed solution or interruptions in the proposed timings may be the result of problems encountered during coding elements of the solution. These issues need to be explained and recorded.

A modified solution, if functional and efficient, may still be awarded full marks providing it is a solution to the problem and there is clear commentary on why and how the solution has been modified.

Testing

Testing the solution produced

Candidates should use the test plan they designed above to test their solution. The testing should cover as many paths through the system as possible covering all aspects of the success criteria. Test data should include normal, abnormal and extreme data.

It is appropriate to include references from testing carried out during development which led to the system being modified and to not include repetitive testing of elements that have already been covered effectively in other areas, for example buttons based upon the same code.

At the end of the process it is appropriate for other students to use the system as potential end users providing feedback on functional aspects and on other design elements, such as screen layouts, on screen instructions, user feedback etc. The candidate should respond to this testing in the evaluation. Evidence of this ‘end user’ testing should be provided if possible but must be described and user comments included.

It is likely the system will be developed on a single system and it is necessary to show that the solution will function in other circumstances, eg different computers with other OS versions, different plug ins, different screen resolutions, sound cards, video cards etc. The candidate should show that the solution works in the recommended hardware and software environment and in as many other situations as is reasonable. (It is clearly impossible to show that the system works in all possible configurations but the candidate needs to show that they are aware of the issues with other system configurations.)

Evaluation

Evaluating the solution

Candidates should be able to analyse their test results. They could use the differences between their expected and actual results to identify those parts of the solution which have not worked as they expected.

This should be fairly straightforward as candidates can use the comments column in their test plan to identify those parts of the solution which did not work as planned. Evidence of testing during development may also be included to explain how the system was modified to account for these limitations. Comments on end user feedback should also be included and any further modifications identified together with comments on how these might be approached. It is important that the candidate comments on how well the system matches the original requirements mentioning, if appropriate, how and why these might have changed during the development of the solution.

They should use this as an opportunity to note any aspects of their solution they consider to be particularly good or clever or efficient and should comment on their and any contributions from others to the whole process.

The evaluation is the candidate's opportunity to demonstrate their technical skills and knowledge. The evaluation report should be well-structured and use technical language appropriately.

4.3 Authentication of Controlled Assessment outcomes

Teachers must be confident that the work they mark is the candidate's own. This does not mean that a candidate must be supervised throughout the completion of all work but that the teacher must exercise sufficient supervision, or introduce sufficient checks, to be in a position to judge the authenticity of the candidate's work.

Wherever possible, the teacher should discuss work in progress with candidates. This will not only ensure that work is under way in a planned and timely manner but will also provide opportunities for assessors to check the authenticity of the work and provide general feedback.

Candidates must not plagiarise. Plagiarism is the submission of another's work as one's own and/or failure to acknowledge the source correctly. Plagiarism is considered to be malpractice and could lead to the candidate being disqualified. Plagiarism sometimes occurs innocently when candidates are unaware of the need to reference or acknowledge their sources. It is therefore important for centres to ensure that candidates understand that the work they submit must be their own and that they understand the meaning of plagiarism and what penalties may be applied. Candidates may refer to research, quotations or evidence but they must list their sources. The rewards from acknowledging sources, and the credit they will gain from doing so, should be emphasised to candidates as well as the potential risks of failing to acknowledge such material. Candidates may be asked to sign a declaration to this effect. Centres should reinforce this message to ensure candidates understand what is expected of them.

Please note: Centres must confirm to OCR that the evidence produced by candidates is authentic.

The Centre Authentication Form includes a declaration for assessors to sign and is available from the OCR website www.ocr.org.uk and Interchange https://interchange.oc.org.uk.

4.4 Internal Standardisation of Controlled Assessment

It is important that all internal assessors who are working in the same subject area work to common standards. Centres must ensure that the internal standardisation of marks across assessors and teaching groups takes place using an appropriate procedure.

This can be done in a number of ways. In the first year, Candidate Style Answers at high and medium banded responses (www.ocr.org.uk/ict/gcse2010/supportdocs) and OCR training meetings will provide a basis for centres' own standardisation. In subsequent years, this, or centres' own archive material, may be used. Centres are advised to hold preliminary meetings of staff involved to compare standards by cross-marking a small sample of work. After most marking has been completed, a further meeting at which work is exchanged and discussed will enable final adjustments to be made.

4.5 Moderation and Submission of Controlled Assessment

All work for controlled assessment is marked by the teacher and internally standardised by the centre. For January entries, marks are then submitted to OCR by 10 January. For June entries, marks are submitted to OCR by 15 May. After submission, moderation takes place in accordance with OCR procedures. The purpose of moderation is to ensure that the standard of the award of marks for work is the same for each centre and that each teacher has applied the standards appropriately across the range of candidates within the centre.

The sample of work that is presented to the Moderator for moderation must show how the marks have been awarded in relation to the marking criteria.

Each candidate's work should have a cover sheet attached to it with a summary of the marks awarded for the task. If the work is to be submitted in digital format, this cover sheet should also be submitted electronically within each candidate's files.

4.6 Minimum requirements for Controlled Assessment

There should be clear evidence that work has been attempted and some work produced. If a candidate submits no work for an internally assessed component, then the candidate should be indicated as being absent from that component on the mark sheets submitted to OCR. If a candidate completes any work at all for an internally assessed component, then the work should be assessed according to the internal assessment objectives and marking instructions and the appropriate mark awarded, which may be zero.

5 FAQs

5.1 Unit B062: Practical applications in ICT

Is this a compulsory unit?

This unit is compulsory for a GCSE in Information and Communication Technology.

What is this unit worth?

For the full GCSE this unit is worth 30% of the GCSE in Information and Communication Technology.

For the short course GCSE this unit is worth 60% of the GCSE in Information and Communication Technology.

What is the entry code for this unit?

The entry code for this unit is B062.

How is this unit assessed?

This unit is assessed by a controlled assessment which is set by OCR. It is internally assessed and externally moderated.

Candidates are required to create an ICT solution using ICT applications. Candidates will choose **one** task from a list provided by OCR.

Approximately 20 hours will be required for the assessment. Up to 8 hours will be required for research/preparation and up to 12 hours in producing the final outcome.

When is this unit available for assessment?

This unit is available for assessment in both January and June series from January 2011.

Will there be a visiting moderator for this unit?

No. This is an internally assessed and externally moderated unit. Work is submitted either via the postal or OCR Repository options.

Will candidates be able to re-sit the unit?

Yes. Candidates may re-sit this unit once before entering for certification for a GCSE.

Is there a text book for this unit?

OCR Information and Communication Technology GCSE Student's Book, Steve Cushing, Brian Gillinder and George Rouse, Hodder Education, ISBN: 987-1-444-10864-4

Essential GCSE ICT for OCR, Stephen Doyle, Folens Publishing, ISBN: 978-1-85008-545-4

Is there training available for this unit?

Yes. OCR provides a full programme of training for the GCSE in Information and Communication Technology. Details are available on the OCR website.

How can the candidates' work under controlled conditions when they are carrying out research in groups?

The research phase, which is approximately 8 hours, is carried out at a low level of control and does not need to be in the classroom or under teacher supervision. Candidates can interview people and discuss their findings with other members of their group.

Do the candidates have to use more than one software application to gain the higher marks?

No. A candidate could use one software application at a high level, integrating data into different output formats. They may also use two or more software applications if they think it appropriate.

Does the candidate's work have to contain lots of screen shots to show each stage of the development?

No. This would be one way for the candidates to show their understanding of the software tools they have used, but they could present screen shots of the completed solution with annotation explaining the software tools used.

Do we need to have 12 continuous hours of controlled assessment or can we break the controlled assessment up into 'chunks'?

The controlled assessment does not have to be done in one continuous go. Short chunks interspersed with lessons to teach and revise skills, such as how to carry out and present test results, could be devised.

When marking the controlled assessment, does a candidate have to have completed every point in a mark band for me to award a mark at that level?

No. The 'best-fit' approach is to be used for marking controlled assessment. If a candidate has met most of the points in a band and their work fits that band the best, then award a mark from that band even if something is missing. How much and how well the work has been completed will determine the actual mark awarded.

Do I need to award a mark for the candidate's use of spelling and grammar?

The quality of written communication is assessed in the Evaluation section only.

What software will candidates be tested on during the controlled assessment for this unit?

Candidates are not tested on particular software but use everyday software applications to be able to manipulate and process data and other information effectively and to present information in a format suitable for purpose and audience in order to respond to the chosen OCR set task.

Where can I obtain further details about this unit?

Further details of the learning required for the B062 Practical Applications in ICT are contained in the specification. Specimen Controlled Assessment tasks, Schemes of Work, Lesson Plans, Candidate Style Answers are available on the OCR website.

5.2 Unit B064: Creative use of ICT

Is this a compulsory unit?

This is an optional unit for the full course GCSE in Information and Communication Technology.

What is this unit worth?

For the full GCSE this unit is worth 30% of the GCSE in Information and Communication Technology.

What is the entry code for this unit?

The entry code for this unit is B064.

How is this unit assessed?

This unit is assessed by a controlled assessment which is set by OCR. It is internally assessed and externally moderated.

Candidates solve a problem by creating and developing a multimedia solution with appropriate creative elements. Candidates will choose **one** task from a list provided by OCR.

Approximately 20 hours will be required for the assessment. Up to 8 hours will be required for research/preparation and up to 12 hours in producing the final outcome.

When is this unit available for assessment?

This unit is available for assessment in both January and June series from January 2011.

Will there be a visiting moderator for this unit?

No. This is an internally assessed and externally moderated unit. Work is submitted either via the postal or OCR Repository options.

Will candidates be able to re-sit the unit?

Yes. Candidates may re-sit this unit once before entering for certification for a GCSE.

Is there a text book for this unit?

OCR Information and Communication Technology GCSE Student's Book, Steve Cushing, Brian Gillinder and George Rouse, Hodder Education, ISBN: 987-1-444-10864-4

Essential GCSE ICT for OCR, Stephen Doyle, Folens Publishing, ISBN: 978-1-85008-545-4

Is there training available for this unit?

Yes. OCR provides a full programme of training for the GCSE in Information and Communication Technology. Details are available on the OCR website.

Do you have to use a particular type of software to create computer games?

No. However, the two most popular options are both freeware. Skratch can be downloaded from http://scratch.mit.edu/ and GameMaker7 can be downloaded from http://www.yoyogames.com/.

Are there any unit specific books?

Yes. The author of GameMaker published a book called The GameMaker Apprentice. The companion disc in the book also has GameMaker and a number of sample games.

Can you create games using other software?

Yes. It is possible to create games with Macromedia Flash and other more formal software like Visual Basic, although the latter would not be the easiest of options.

Do you have to do lots of print screens to show how the game was made?

No. Most of the components of the game would have been documented in the specification and design. A print screen of the assets of the game with annotations would be sufficient. Further evidence would also come from the testing. If students' work is submitted via the repository, it would be very easy for the moderator to see the source file of the game and therefore confirm the marks awarded.

Do you have to make mistakes on the design on purpose so that students can add improvements to get better marks?

No. The specification has been redesigned to award higher marks for competent, solutions including their justification in terms of purpose and audience.

Do students have to do every point in a band to score in that mark band?

No. Students are awarded marks from a particular mark band on the best fit principle. Once, the correct mark band has been established for a piece of work, it is the quality of the work and the number of points covered that will decide what marks are awarded.

Can students do coursework at home?

No. Students' work must be completed under controlled conditions; therefore, it must be completed in school. Coursework has now been replaced by Controlled Assessment.

How many hours do students have to complete their assessment?

The specification provides a suggestion of the suitable number of hours recommended to complete the assessment. This is not mandatory and therefore should be used as a guideline.

The mark scheme mentions collaborative work. What does that mean?

Collaborative work means that students need to involve others in their assessment. This can be done through requests for feedback in the design or testing sections of the assessment.

Is the OCR Repository compulsory for this unit?

No. It would certainly be beneficial to submit this unit via the OCR Repository but it is not essential as postal submission is also available. However, it is important to remember that students' work can only be submitted either via the postal or OCR Repository options. It is not possible to use a combination of these methods for a particular cohort of candidates.

Can you submit this unit in January and May?

Yes

Will there be a visiting moderator for this unit?

No. This is an internally assessed and externally moderated unit. Work is submitted either via the postal or OCR Repository options.

Our network has very high restrictions of internet games or any games. How do students get to review games for their research?

Internet or PC games are not the only game platforms that students can use. Games on mobile phones, playstations like PS2 or PS3, Xbox or gamecube, the Wii or the DS can also be utilised. It is also possible for students to look at or play games at home and write the review of the games in school under controlled assessment conditions.

In the evaluation, do they have to pretend they are the customer for the game?

Not really. The main focus of this unit is producing a high quality product that provides the best solution for the scenario. In the initial part of the assignment, students are required to set measurable success criteria for their product in line with audience and purpose. Evaluation uses testing feedback and the initial success criteria to evaluate the solution, its merits and weaknesses.

Are the scenarios provided the only ones?

Each year new scenarios will be added to those already available. There will be plenty of notice if a scenario is to be removed from the list.

Where can I obtain further details about this unit?

Further details of the learning required for the B064 Creative use in ICT are contained in the specification. Specimen Controlled Assessment tasks, Schemes of Work, Lesson Plans, Candidate Style Answers are available on the OCR website.

5.3 Unit B065: Coding a solution

Is this a compulsory unit?

This is an optional unit for the full course GCSE in Information and Communication Technology.

What is this unit worth?

For the full GCSE this unit is worth 30% of the GCSE in Information and Communication Technology.

What is the entry code for this unit?

The entry code for this unit is B065.

How is this unit assessed?

This unit is assessed by a controlled assessment which is set by OCR. It is internally assessed and externally moderated.

Candidates identify a potential coded solution to a problem and solve it using basic programming techniques. Candidates will choose **one** task from a list provided by OCR.

Approximately 20 hours will be required for the assessment. Up to 8 hours will be required for research/preparation and up to 12 hours in producing the final outcome.

When is this unit available for assessment?

This unit is available for assessment in both January and June series from January 2011.

Will there be a visiting moderator for this unit?

No. This is an internally assessed and externally moderated unit. Work is submitted either via the postal or OCR Repository options.

Will candidates be able to re-sit the unit?

Yes. Candidates may re-sit this unit once before entering for certification for a GCSE.

Is there a text book for this unit?

OCR Information and Communication Technology GCSE Student's Book, Steve Cushing, Brian Gillinder and George Rouse, Hodder Education, ISBN: 987-1-444-10864-4

Essential GCSE ICT for OCR, Stephen Doyle, Folens Publishing, ISBN: 978-1-85008-545-4

Is there training available for this unit?

Yes. OCR provides a full programme of training for the GCSE in Information and Communication Technology. Details are available on the OCR website.

What programming languages do we require to take this course?

There is no specific programming language specified for this unit and those freely available for free download are acceptable. Visual Basic Express has all the features you will require, and, depending upon the solution identified by the student, Small Basic may be a suitable solution. If your candidates choose to program in any of the other commonly available languages we are confident we can find a moderator to assess your marking of the controlled assessment. If you decide to use something unusual it would be wise to let us know in advance, in case we need to re-direct your work to a specific moderator.

Can we use applications such as Excel or Access instead to create a solution?

No. It is a coding task and the primary purpose is to produce a coded solution to a problem. If data handling forms part of the controlled assessment it may be acceptable to include database or spreadsheet modules into the coded solution, but these must be the add-ins, not the primary element in the solution.

Can we modify the controlled assessment to make it more appropriate to our candidates?

You may make some modifications to the scenario to make it more appropriate to your students but these changes should not modify the nature of the underlying programming task, these are set to provide opportunities to use the main programming features identified in the specification. If these are modified, candidates may not be able to access the full range of marks.

Does this mean candidates have to use ALL of the programming features in the specification in order to access the full range of marks?

No. The full range of marks will be available to candidates who use the most appropriate features effectively and efficiently. Which features they use will depend upon their solution to the problem and there will be features that are not required for their solution. The tasks are set to ensure most of the features will be required, but a student may not need to use, for example both a CASE statement and an IF THEN. In some languages the CASE statement does not exist so cannot be used.

What do you mean by effective and efficient?

There are different levels at which a solution may be produced. A solution that provides a form of solution may be very badly coded with many loose ends, extra modules that serve no purpose, circuitous routes to a solution, in short, a clumsy but largely functional solution. An effective solution will function as required and be coded using the right techniques, though not efficiently, for example lots of IF THEN statements when a CASE or IF THEN ELSEIF structure would produce a tidier and more efficient solution. The efficient solution will be well structured and well coded with few extra elements, clear pathways through the code with the most appropriate techniques used throughout.

Does the work have to be printed out with all the evidence?

No. The work can be submitted electronically through the OCR Repository but you must not rely on the moderator having any specific software on their computer to be able to view the work. You may assume they can read a standard .doc file or view a .avi file etc but you may not assume they have a copy of any specific programming language or application to view the work. Students may keep diaries in a web log. Please make sure all links are included and that the moderator can access these web logs without recourse to passwords or signing up to specific sites, they will not do this.

6 Guidance on downloading Controlled Assessment tasks from Interchange

Before you start

Controlled Assessment materials are available to download from OCR Interchange.

In order to use Interchange for the first time, you just need to register your centre by returning the Interchange Agreement. This can be downloaded from the OCR website at http://www.ocr.org.uk/interchange

If your centre already has an Interchange user account, you will need to be assigned the 'Tutor/teacher' Interchange role to access Controlled Assessment materials. Your Interchange Centre Administrator can assign this for you.

Step 1 – Log into Interchange

Click on the following link https://interchange.ocr.org.uk

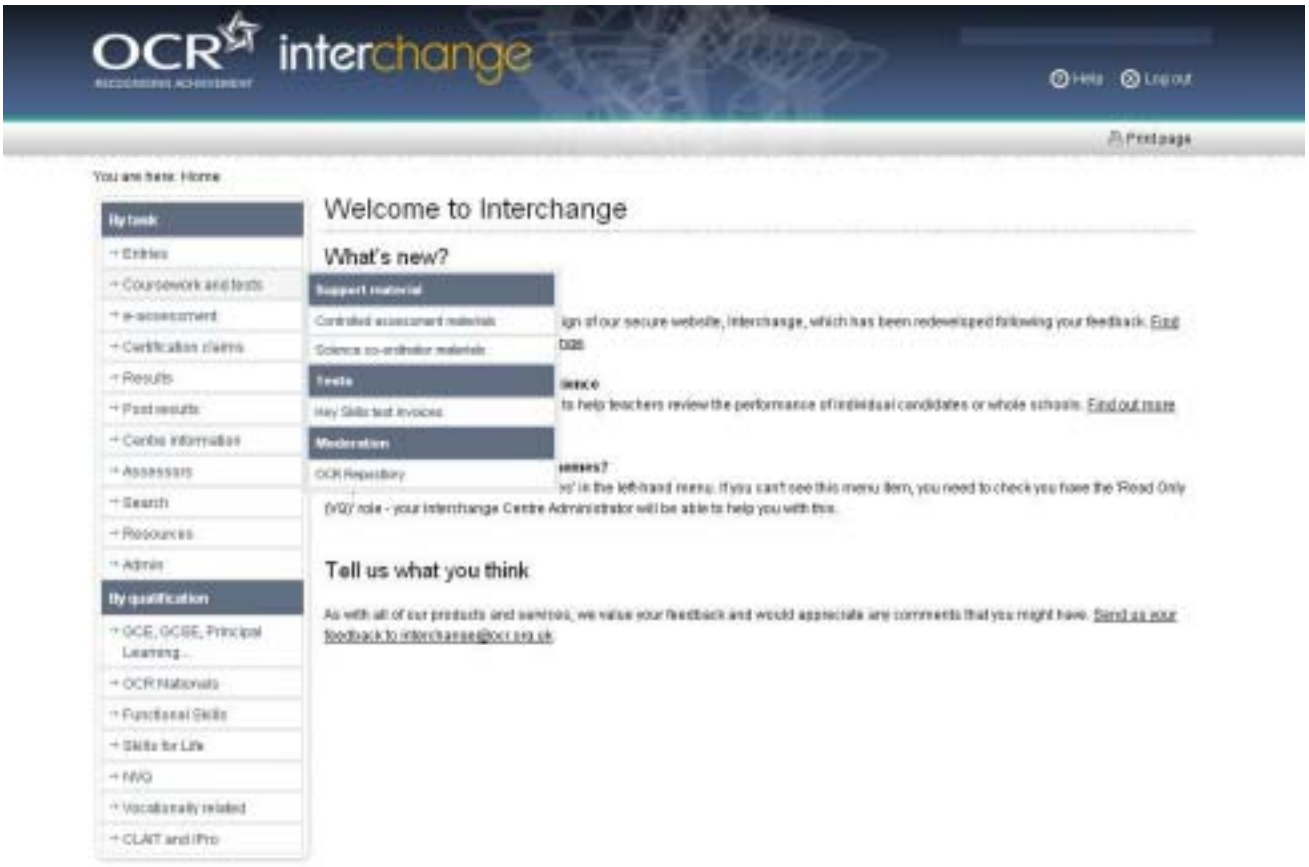
Enter your log in details

Step 2 – Navigate to Controlled Assessment materials area

Click on ‘Coursework and tests’

Click on ‘Controlled Assessment materials’

** If you are unable to see either of these menu items then it is likely that you do not have the ‘Tutor/teacher’ role assigned to you.

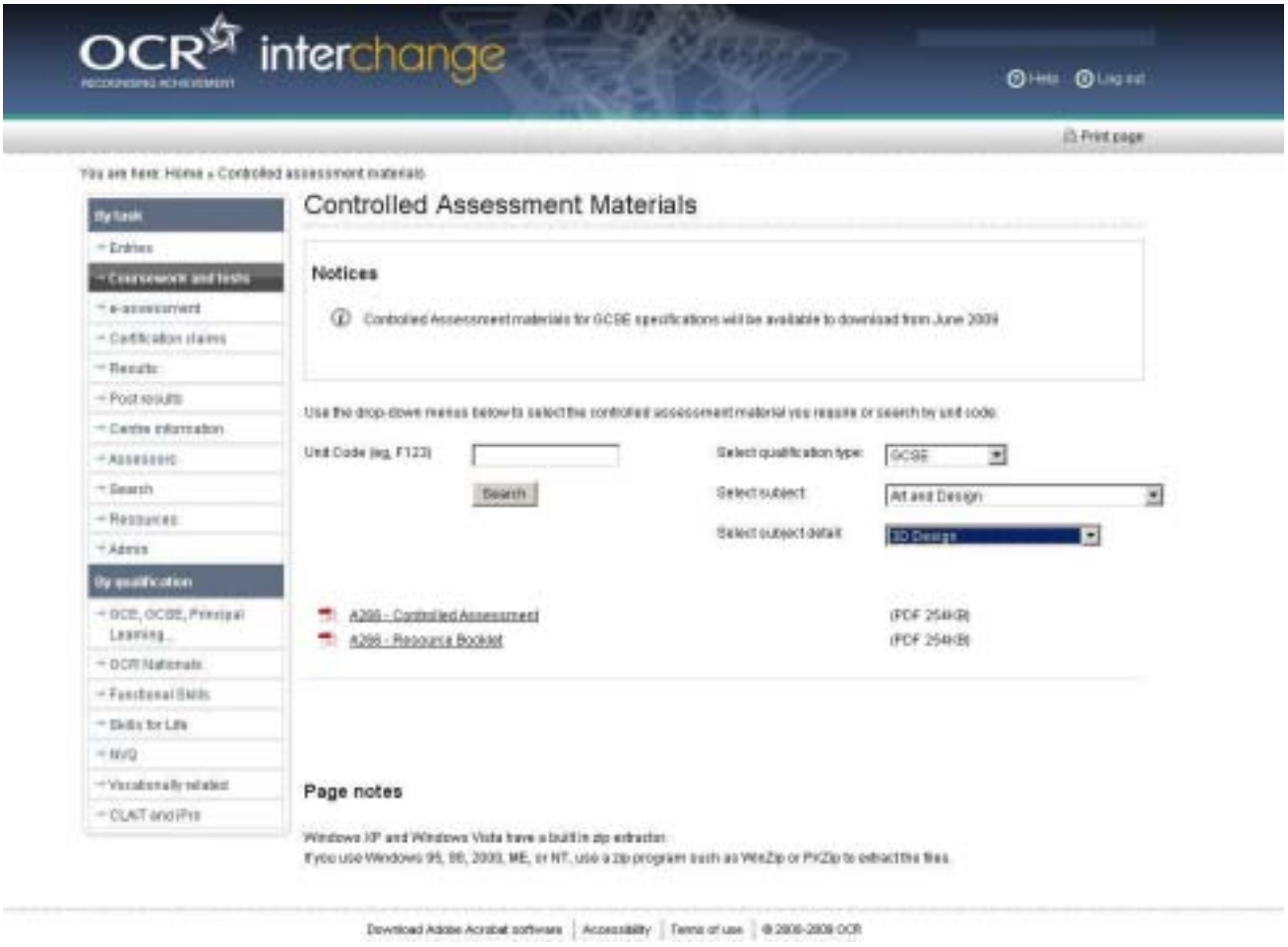


Step 3 – Search for materials

You can search for materials by unit code. Enter the unit code and click on the ‘search’ button.

Or, you can search for materials by subject information by selecting from the ‘drop down’ options.

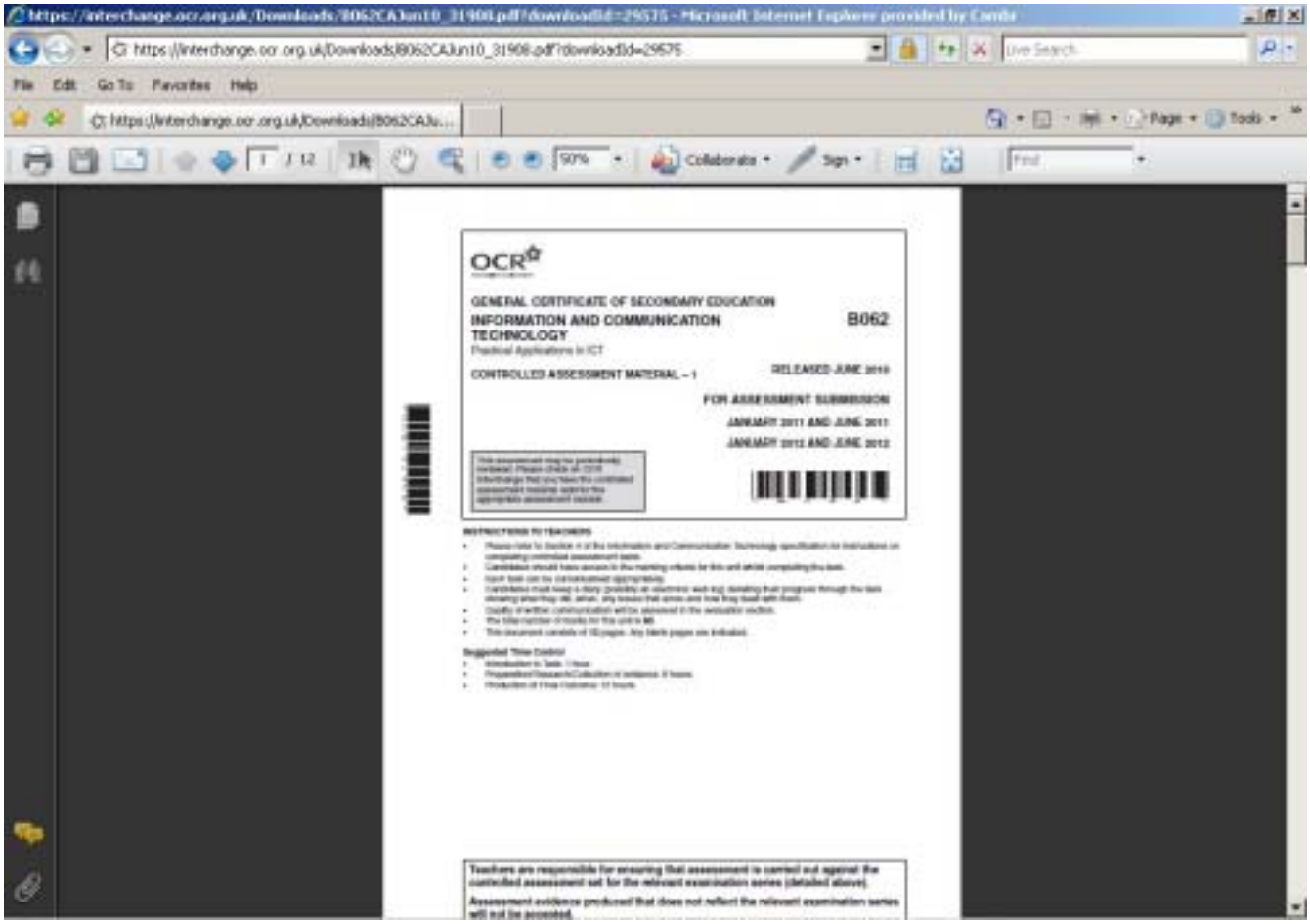
All available documents will be displayed below the search.



Step 4 – Open materials

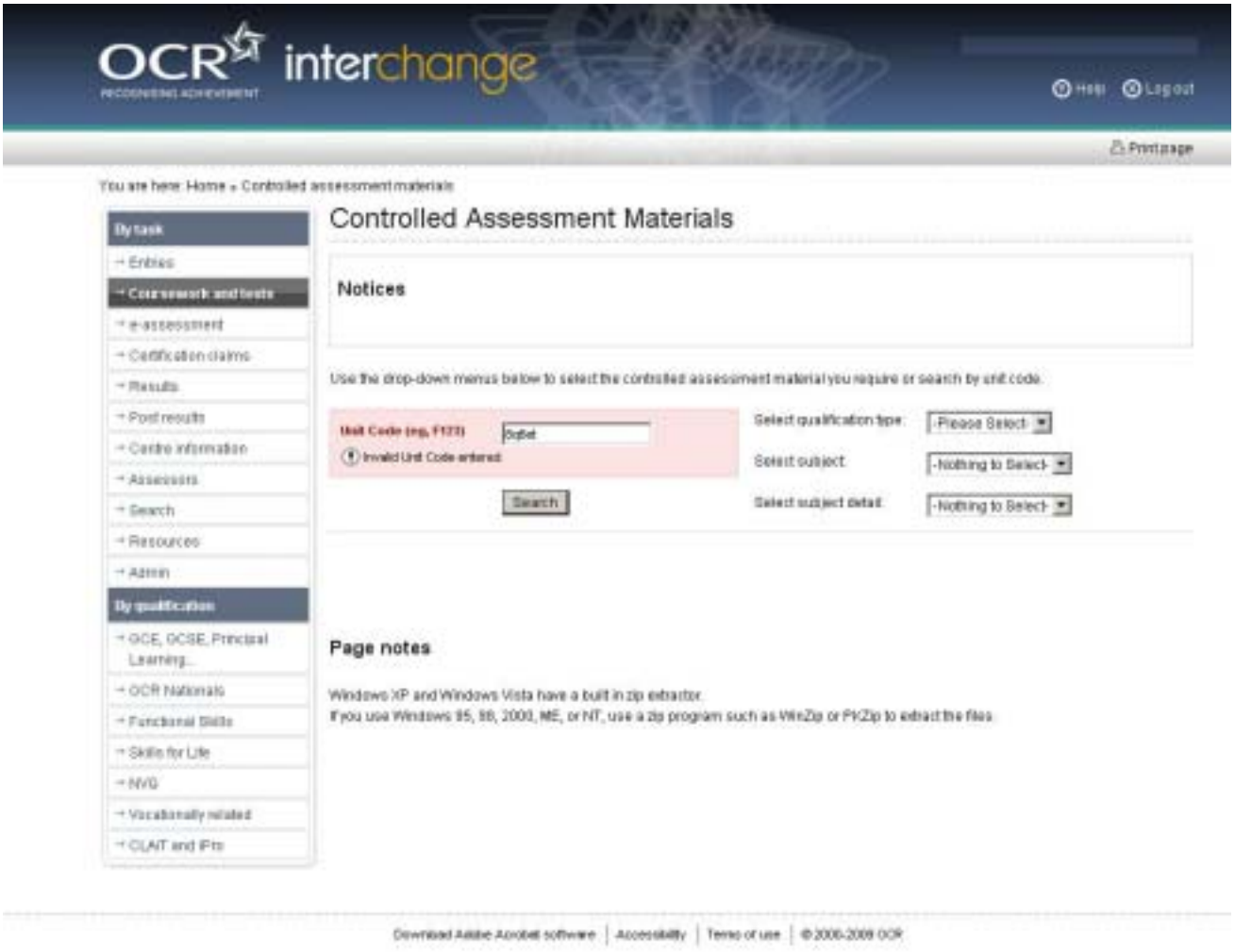
Click on the document link, the document will open in your browser

Click on ‘Save As’ to save to a location of your choice.

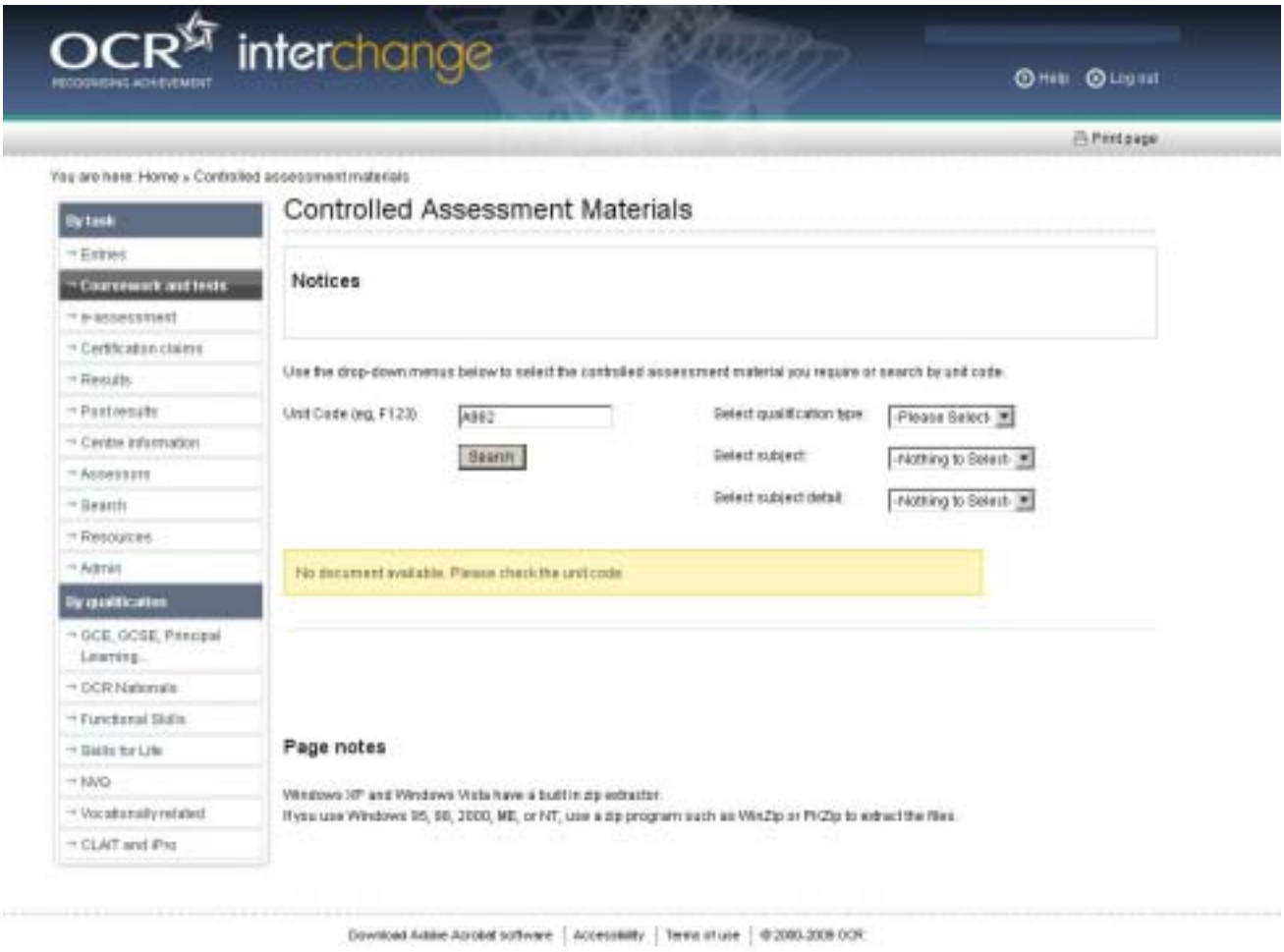


Step 5 – Troubleshooting

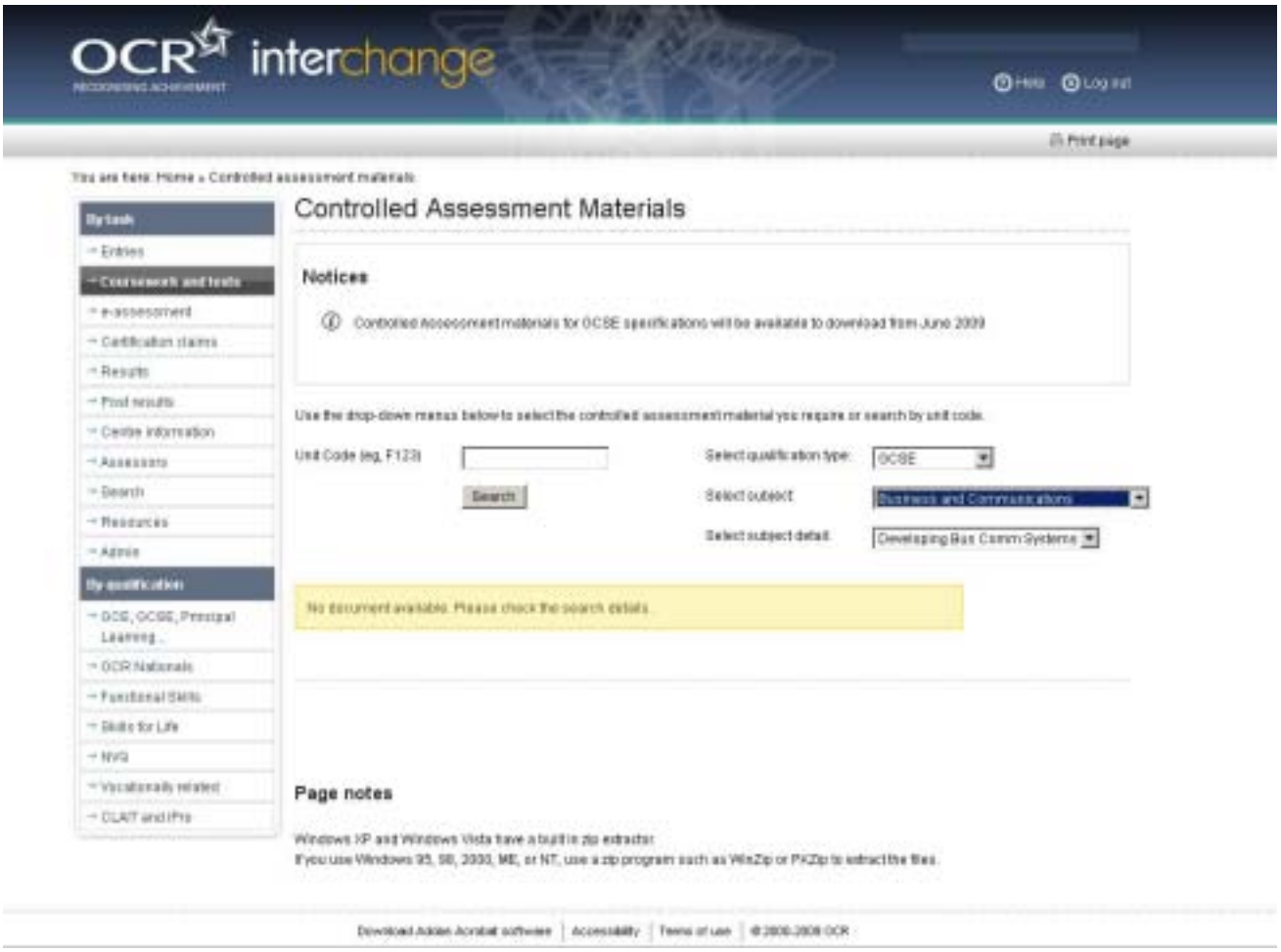
If you search for an invalid unit code, the following error message will be displayed.



If you search for a valid unit code but there is no document currently available, the following message will be displayed.



If you search via the ‘drop down’ menus but there is no document currently available, the following message will be displayed.



7 Guidance for the Production of Electronic Controlled Assessment

Structure for evidence

A Controlled Assessment portfolio is a collection of folders and files containing the candidate's evidence. Folders should be organised in a structured way so that the evidence can be accessed easily by a teacher or moderator. This structure is commonly known as a folder tree. It would be helpful if the location of particular evidence is made clear by naming each file and folder appropriately and by use of an index called 'Home Page'.

There should be a top level folder detailing the candidate's centre number, candidate number, surname and forename, together with the relevant unit code, so that the portfolio is clearly identified as the work of one candidate.

Each candidate produces an assignment for Controlled Assessment. The evidence should be contained within a separate folder within the portfolio. This folder may contain separate files.

Each candidate's Controlled Assessment portfolio should be stored in a secure area on the centre's network. Prior to submitting the Controlled Assessment portfolio to OCR, the centre should add a folder to the folder tree containing Controlled Assessment and any appropriate forms.

Data formats for evidence

In order to minimise software and hardware compatibility issues it will be necessary to save candidates' work using an appropriate file format.

Candidates must use formats appropriate to the evidence that they are providing and appropriate to viewing for assessment and moderation. Open file formats or proprietary formats for which a downloadable reader or player is available are acceptable. Where this is not available, the file format is not acceptable.

Electronic Controlled Assessment is designed to give candidates an opportunity to demonstrate what they know, understand and can do using current technology. Candidates do not gain marks for using more sophisticated formats or for using a range of formats. A candidate who chooses to use only Word documents will not be disadvantaged by that choice.

Evidence submitted is likely to be in the form of word-processed documents, PowerPoint presentations, digital photos and digital video.

To ensure compatibility, all files submitted must be in the formats listed below. Where new formats become available that might be acceptable, OCR will provide further guidance. OCR advises against changing the file format in which the document was originally created. It is the centre's responsibility to ensure that the electronic portfolios submitted for moderation are accessible to the moderator and fully represent the evidence available for each candidate.

Accepted File Formats
Movie formats for digital video evidence
MPEG (*.mpg)
QuickTime movie (*.mov)
Macromedia Shockwave (*.aam)
Macromedia Shockwave (*.dcr)
Flash (*.swf)
Windows Media File (*.wmf)
MPEG Video Layer 4 (*.mp4)
Audio or sound formats
MPEG Audio Layer 3 (*.mp3)
Graphics formats including photographic evidence
JPEG (*.jpg)
Graphics file (*.pcx)
MS bitmap (*.bmp)
GIF images (*.gif)
Animation formats
Macromedia Flash (*.fla)
Structured markup formats
XML (*xml)
Text formats
Comma Separated Values (.csv)
PDF (.pdf)
Rich text format (.rtf)
Text document (.txt)
Microsoft Office suite
PowerPoint (.ppt)
Word (.doc)
Excel (.xls)
Visio (.vsd)
Project (.mpp)

8 Controlled Assessment student guidelines

8.1 Task setting

For Units B062, B064 and B065 OCR will provide a list of tasks for you to select from. The task will be set, however you may be able to adapt the task in consultation with your teacher.

8.2 Task taking

8.2.1 What can I do in relation to research, drafting and re-drafting?

Your teacher will discuss the tasks on offer and the proposed areas of enquiry and the resources available. An introduction to research methods, sourcing and the use of equipment may also take place. The time constraints surrounding each task and the formulation of a programme should be adopted. Your teacher will help you with this.

Your research and planning may involve any of the following: interviews, fieldwork, visits, library research, internet research, questionnaires. You should keep a record of the sources you have consulted at this stage and this will form part of your controlled assessment. You should provide a plan of action to your teacher which can be discussed. Your teacher will inform you as to what materials are appropriate and inappropriate.

Your draft work will be discussed with your teacher who may offer advice, answer any questions and give feedback. Throughout this process your teacher will supervise to ensure there is no plagiarism and will ensure all your work is within the Health and Safety requirements and that all work is in accordance with the Controlled Assessment regulations. At no stage will model answers be provided. You should reach your own conclusions and make your own judgements and any teacher support will be recorded.

You may be given the opportunity to edit, check, redraft and reorganise your work. During this period your teacher may make general observations but will not give any specific advice.

8.2.2 How much teacher support can I expect?

During your work for Controlled Assessment you must produce work/evidence independently but your teacher will be able to give you some advice, support, guidance and feedback but the amount will vary depending upon the type of task you are doing.

You must make your own judgements and draw your own conclusions but your teacher will:

- offer advice about how best to approach a task
- offer guidance on the way you work in groups so that you all have an opportunity to tackle your tasks
- offer guidance about the availability and choice of materials and resources, although how these are eventually used must be your responsibility
- offer advice to help your research, possibly arranging visits to place of interest, if this is appropriate
- monitor your progress to make sure your work gets underway in a planned and timely manner
- ensure that your work meets the Specification requirements
- keep a log of the feedback they give you
- supervise any practical work you do to ensure you receive advice about health and safety.

The support given by your teacher will be to make sure you understand what it is you have to do. Your teacher will not be allowed to provide model responses for you or work through your responses or outcomes in detail.

8.2.3 What can I expect in the supervised sessions?

This period should include some form of evaluation either in the written form, in a teacher interview or a presentation to the group. For the last two, your teacher may record these sessions. This is particularly essential in group work where the teacher will ascertain your individual contribution within the group.

You should reference all sources used and any materials you have used in the whole piece whether in supervised or unsupervised sessions. Quotations should be clearly marked and referenced to ensure all intellectual property rights are maintained. It is unlikely that complete downloaded documents from the internet are suitable. Your teacher will sign an authentication form to complete the process and confirm your submission. You may also be asked to sign the form.

www.ocr.org.uk

OCR customer contact centre

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FS 27093

J461/J061/CA/10