Design and Technology

GCSE 2012

D&T: Electronics and Control Systems

Guide to Controlled Assessment

J301

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OCR
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Contents

1 Introduction

1.1 What Is Controlled Assessment?

High, medium or limited 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 in the subject criteria and, depending on the subject, will be 25% or 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 (Limited 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 the Controlled Assessment units

Unit A511: Introduction to designing and making

This unit aims to give candidates an introduction to designing and making in electronics and control systems.

Candidates must select one of the published themes as a starting point for this unit, which forms a Controlled Assessment element of this specification. Once selected, the candidate will then need to identify a specific product or starting point that is associated with the theme.

Candidates then undertake research associated with the specific product before establishing their own design brief and detailed specification for an improved or similarly functioning prototype* product.

They then develop their design and use modelling before making and evaluating their prototype product. Throughout, the candidate will record research and design developments using portfolios.

Unit A511 makes up 30% of the total GCSE marks and is a 20 hour Controlled Assessment portfolio which is 60 marks in total.

*In this context a prototype is defined as the first example of a product that could be further developed or modified.

Unit A513: Making quality products

The main aim of this unit is to further develop skills and abilities gained from Unit A511, in order to design and make a fully functioning quality product.

In this unit candidates complete a 'design and make' Controlled Assessment using one of the OCR published themes as a starting point.

Candidates gain the knowledge, skills and understanding they need to design, plan, make, test and critically evaluate their final product. Candidates need to be able to:

- develop and demonstrate designing skills based around a design brief and specification, using annotated drawings to record original design ideas, appropriate making and trialling techniques, CAD/CAM/ICT and other digital technologies and by making reasoned decisions about materials and components to select a final design idea.

- demonstrate good making skills through a plan of action, the selection of appropriate materials and equipment, by working safely and skillfully with materials and components to

- produce a quality functional product and by demonstrating a practical and thorough understanding in solving technical problems effectively.

- demonstrate critical evaluation skills when evaluating the final product against the specification; through meaningful testing of the product and when suggesting modifications to improve the making process.

Unit A513 makes up 30% of the total GCSE marks and is a 20 hour Controlled Assessment portfolio which is 60 marks in total.

At the end of this unit most candidates will:

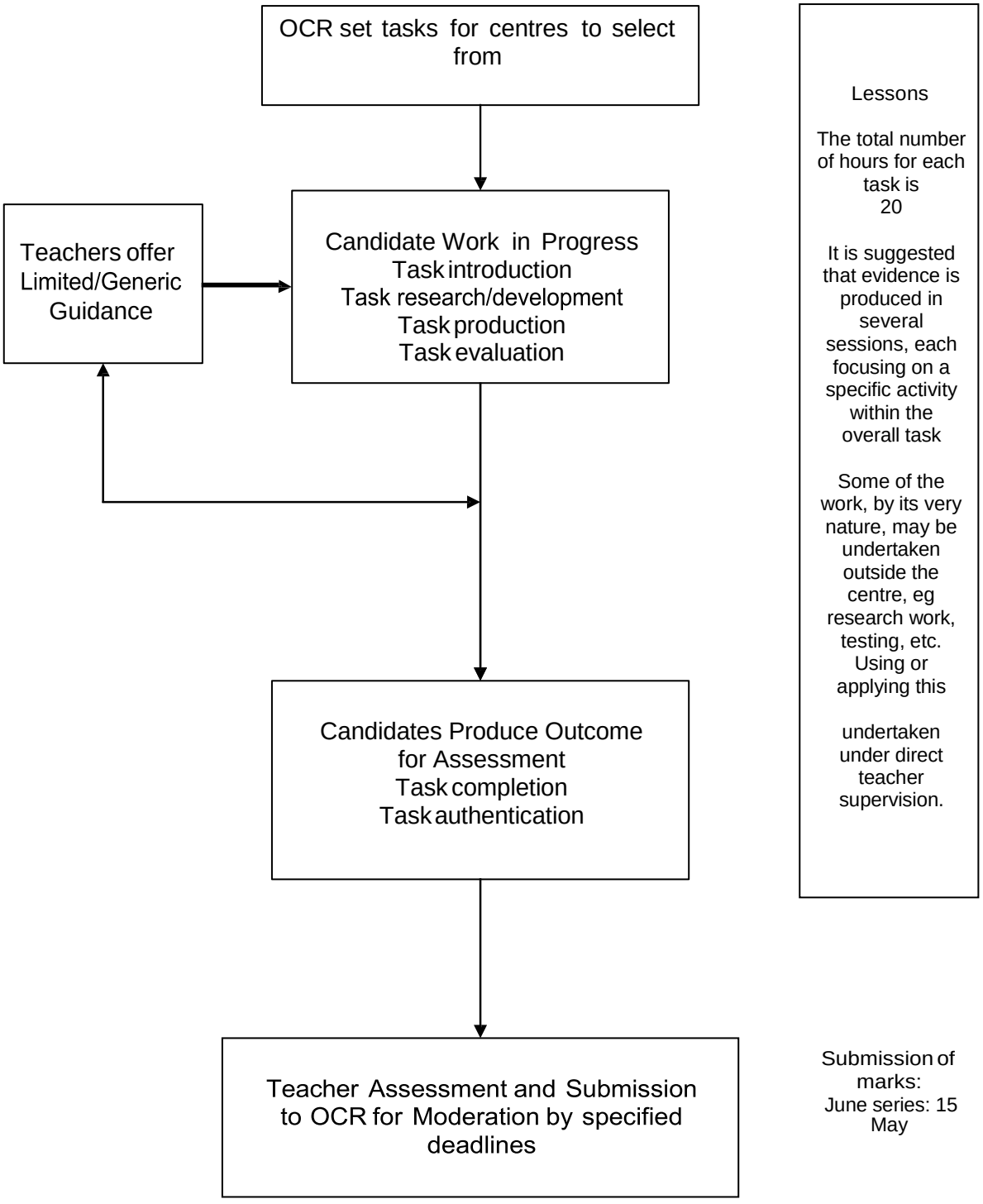
- be able to recall, select and communicate sound knowledge and understanding of textiles. They will be able to select appropriate materials and components for a particular need considering their working properties and select appropriate tools, equipment and processes.

- apply knowledge, understanding and skills in a range of situations to plan and carry out investigations and tasks. They test solutions, working safely and with precision.

- be able to review their work, analysing and evaluating information clearly and with some accuracy. They will be able to make judgements and draw appropriate conclusions.

3 Teacher guidance on how to plan Controlled Assessment

3.1 Controlled Assessment delivery flow chart



4 Controlled assessment in GCSE Design and Technology: Electronics and Control Systems

This section provides general guidance on controlled assessment: what controlled assessment tasks are, when and how they are available; how to plan and manage controlled assessment and what controls must be applied throughout the process. More support can be found on the OCR website.

Teaching and Learning

Controlled assessment is designed to be an integral part of teaching and learning. Activities which develop skills take place regularly in the workshop/studio, using a variety of appropriate resources (as chosen by the teacher). These opportunities will allow candidates to practise a wide range of tasks, which teachers can discuss with them and comment on their performance as appropriate. There are no restrictions regarding time or feedback to individual learners.

When all necessary teaching and learning has taken place and teachers feel that candidates are ready for assessment, candidates can be given the/should choose an appropriate controlled assessment task.

4.1 Controlled assessment tasks

All controlled assessment tasks for units A511 and A513 are set by OCR. (See appendix A)

Controlled assessment tasks will be available on Interchange and will be reviewed every two years. Guidance on how to access controlled assessment tasks from Interchange is available on the OCR website.

Centres must ensure that candidates undertake a task applicable to the correct year of the examination.

Centres can choose one from a number of theme based tasks offered by OCR (see Appendix A). These tasks can be used with a minimum amount of adaptation or they can be adapted so that they allow the usage of local resources available to any centre. These tasks may also be set within overarching scenarios and briefs more relevant to centres' own environment and targeted at their particular cohorts of candidates.

Each controlled assessment theme (see Appendix A) includes a number of starting points which indicate the type and degree of contextualisation that is allowed. Controlled assessment themes must not be changed by centres. When contextualising starting points centres must be careful not to make changes which could put at risk the opportunity for candidates to meet the assessment criteria, including the chance to gain marks at the highest level.

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

Teachers can:

- explain the task
- advise on how the task could be approached
- advise on resources
- alert the candidate to key things that must be included in the final piece of work.

Teachers must not:

- comment on or correct the work
- practise the task with the candidates
- provide templates, model answers or feedback on drafts

4.2 Planning and managing controlled assessment

Controlled assessment tasks are available at an early stage to allow planning time. It is anticipated that candidates will spend a total of about 20 hours in producing the work for unit A511 and about 20 hours in producing the work for unit A513. Candidates should be allowed sufficient time to complete the tasks.

Suggested steps are included below, with guidance on regulatory controls at each step of the process. Teachers must ensure that the control requirements indicated below are met throughout the process.

4.2.1 Preparation and research time

Preparation (informal supervision)

Informal supervision ensures that the work of the individual candidates is recorded accurately and that plagiarism does not take place. Assessable outcomes may be informed by group work, but must be an individual response.

- Introduction to the task (teacher led) 1 hour

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

Research (limited supervision)

Limited supervision 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/or evidence all work individually.

During the research phase candidates can be given support and guidance.

Research material can include fieldwork, internet or paper-based research, questionnaires, audio and video files etc. 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.

4.2.2 Producing the final piece of work (formal supervision)

Formal supervision means under direct teacher supervision: the teacher must be able to authenticate the work and insist on acknowledgement and referencing of any sources used. Writing up is likely to be carried out over several sessions. Work must be collected and kept secure between sessions.

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.

Candidates must work independently to produce their own final piece of work.

4.2.3 Presentation of the final piece of work

Candidates must observe the following procedures when producing their final piece of work for the 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 or marking must include a completed coversheet giving the following information:

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

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

4.3 Marking and moderating controlled assessment

All controlled assessment units are marked by the centre assessor(s) using OCR marking criteria and guidance and are moderated by the OCR-appointed moderator. External moderation is either e-moderation where evidence is online or postal moderation.

4.3.1 Applying the marking criteria

The starting point for marking the tasks is the marking criteria (see section 4.3.4 Marking criteria for controlled assessments tasks). The criteria identify levels of performance for the skills, knowledge and understanding that the candidate is required to demonstrate. Before the start of the course, and for use at INSET training events, OCR provides exemplification through real or simulated candidate work which will help to clarify the level of achievement the assessors should be looking for when awarding marks.

4.3.2 Use of 'best fit' approach to marking criteria

The assessment task(s) 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 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 which fully meets that descriptor. This is work which 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, in most respects, meets the statement and work which 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 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 totaling the marks for each of the marking criteria strands.

There should be clear evidence that work has been attempted and some work produced. If a candidate submits no work for the internally assessed units, then the candidate should be indicated as being absent from that unit. If a candidate completes any work at all for an internally assessed unit, then the work should be assessed according to the marking criteria and the appropriate mark awarded, which may be zero.

4.3.3 Annotation of candidates' work

Each piece of internally assessed work should show how the marks have been awarded in relation to the marking criteria.

The writing of comments on candidates' work, and coversheet, provides a means of communication between teachers during the internal standardisation and with the moderator if the work forms part of the moderation sample.

4.3.4 Marking criteria for controlled assessment tasks

0 marks = no response or no response worthy of credit

Unit A511: CREATIVITY		
Basic ability	**Sound ability**	**High ability**
• Identifies basic links between principles of good design and technological knowledge. • Identifies basic trends in existing solutions and uses this limited understanding in a design context using appropriate techniques.	• Identifies sound links between principles of good design and technological knowledge. • Identifies and demonstrates the significance of trends in existing solutions; interprets and applies this understanding in a design context using appropriate techniques.	• Identifies complex links between principles of good design and technological knowledge. (AO1) • Identifies and demonstrates a thorough understanding of the significance of trends in existing solutions; reinterpret and applies this understanding in imaginative ways using appropriate techniques. (AO1)
[1– 3]	[4 – 7]	[8 – 10]
Unit A511: DESIGNING		
Basic ability	**Sound ability**	**High ability**
• Provides a limited response to a brief and produces a basic specification for a prototype product. • Produces basic design ideas and communicates these by using a limited range of strategies.	• Provides an appropriate response to a brief and produces a sound specification for a prototype product. • Produces a sound range of creative design ideas and communicates these by using appropriate strategies.	• Demonstrates an appropriate, detailed and considered response to a brief and produces a thorough specification for a prototype product. (AO2) • Produces a comprehensive range of creative, original and developed design ideas and communicates these using appropriate strategies. (AO2)
[1 – 4]	[5 – 10]	[11 – 14]

Unit A511: MAKING		
Basic ability	Sound ability	High ability
• Plans and organises basic activities. • Selects and uses components and materials that are not always appropriate. • Selects and uses hand and machine tools that are not always appropriate. • Works safely but with limited competence to assemble, construct and finish materials and components to generate a prototype. • Uses workshop/design studio facilities as instructed to realise the prototype product.	• Plans and organises sound activities. • Selects and uses components and materials that are mostly appropriate. • Selects and uses hand and machine tools that are mostly appropriate. • Works safely, effectively and with sound level of competence to assemble, construct and finish materials and components to achieve a good quality prototype product. • Selects and uses workshop/design studio facilities that are mostly appropriate to realise the prototype product.	• Plans and organises complex activities. • Selects and uses components and materials that are consistently appropriate. • Selects and uses hand and machine tools that are consistently appropriate. • Works consistently safely, skillfully and with competently to assemble, construct and finish materials and components to achieve a high quality prototype product. (AO2) • Consistently selects and uses workshop/design studio facilities appropriately to realise the prototype product. (AO1/AO2)
[1 – 6]	[7 – 13]	[14 – 20]
• Demonstrates limited and practical understanding and ability in solving a technical problem as it arises.	• Demonstrates a sound practical understanding and ability in solving technical problems as they arise.	• Demonstrate a thorough practical understanding and ability in solving technical problems effectively and efficiently as they arise. (AO2)
[1]	[2 – 3]	[4]
• Records the making of the prototype by providing limited notes and photographic evidence.	• Records key stages involved in the making of the prototype product by providing sound notes and photographic evidence.	• Records key stages involved in the making of the prototype product; by providing comprehensive notes and photographic evidence. (AO2)
[1]	[2 – 3]	[4]

Unit A511: CRITICAL EVALUATION		
Basic ability	Sound ability	High ability
• Basic evaluation of the modelling and prototyping process.	• Sound evaluation of the making process which reflects on how to improve the modelling and prototyping process.	• Critical evaluation of the processes involved in designing and making the prototype which reflects and suggests modifications to improve the modelling and prototyping process. (AO3)
• Limited use of specialist terms.	• Some use of specialist terms, although these may not always be used appropriately.	• Specialist terms will be consistently used appropriately and correctly.
• Answers may be ambiguous or disorganised.	• Information presented for the most part in a structured format.	• Information consistently presented in a structured format.
• Errors of spelling, punctuation and grammar may be intrusive	• Occasional errors in spelling, punctuation and grammar that do not impede communication.	• Consistently accurate use of spelling, punctuation and grammar.
[1 – 2]	[3 - 5]	[6 – 8]

Marking Criteria for Controlled Assessment: Unit A513		
0 marks = no response or no response worthy of credit		
Unit A513: DESIGNING		
Basic ability	Sound ability	High ability
• Provides a limited response to a brief and produces a basic specification for a product.	• Provides an appropriate response to a brief and produces a sound specification for a product as a result of analysis.	• Provides an appropriate, detailed and considered response to a brief and produces a detailed specification for a product as a result of analysis. (AO2)
[1]	[2-3]	[4]
• Produces basic design ideas and communicates these by using a limited range of strategies including ICT	• Produces a sound range of creative design ideas and communicates these by using a range of strategies including ICT.	• Produces a wide range of creative, original and developed design ideas and communicates these by using a range of strategies including ICT. (AO2)
[1-5]	[6-8]	[9-12]

Unit A513: MAKING		
Basic ability	Sound ability	High ability
• Plans and organises basic activities. • Selects and uses materials that are not always appropriate • Selects and uses equipment that is not always appropriate to the material area • Works safely but with limited competence to shape, form, assemble and finish materials or components as appropriate to achieve a product. • Uses workshop facilities as appropriate to the material area. • The product is of a low quality of outcome and may not be successfully completed.	• Plans and organises sound activities. • Selects and uses materials that are mostly appropriate. • Selects and uses equipment that is mostly appropriate to the material area • Usually works safely, effectively and with a sound level of competence to shape, form, assemble and finish materials or components as appropriate to achieve a good quality product • Usually selects and uses workshop facilities as appropriate to the material area. • The product is completed to a good quality and meets most of the requirements of the final product specification.	• Plans and organises complex activities. • Selects and uses materials that are consistently appropriate. • Selects and uses equipment that is consistently appropriate to the material area. (AO2) • Works consistently safely, skillfully and competently to shape, form, assemble and finish materials or components as appropriate to achieve a high quality product. (AO2) • Consistently selects and uses workshop facilities as appropriate to the material area. (AO2) • The product is completed to a high standard and fully meets the requirements of the final product specification. (AO2)
[1-9]	[10-17]	[18-24]
• Demonstrates a limited practical understanding of how to solve technical problems as they arise.	• Demonstrates a sound practical understanding and ability in solving some technical problems as they arise.	• Demonstrates a thorough practical understanding and ability in solving technical problems effectively and efficiently as they arise. (AO2/AO3)
[1-2]	[3-4]	[5-6]
• Records the making of the product by providing limited notes and photographic evidence.	• Records key stages involved in the making of the product by providing sound notes and photographic evidence.	• Records key stages involved in the making of the product by providing comprehensive notes and photographic evidence. (AO2)
[1-2]	[3-4]	[5-6]

Unit A513: CRITICAL EVALUATION		
Basic ability	Sound ability	High ability
• Basic evaluation of the finished product with limited reference to the specification. • Undertakes limited testing of the product in use with limited reflection on how to improve the product. • Limited use of specialist terms. • Answers may be ambiguous or disorganised. • Errors of spelling, punctuation and grammar may be intrusive.	• Sound evaluation of the finished product with appropriate reference to the specification. • Undertakes some testing and usually reflects on how to improve the product. • Some use of specialist terms, although these may not always be used appropriately. • Information presented for the most part in a structured format. • Occasional errors in spelling, punctuation and grammar that do not impede communication.	• Critical evaluation of the finished product against the specification. (AO3) • Undertakes detailed testing and presents meaningful conclusions leading to proposals for modifications to improve the product. (AO3) • Specialist terms consistently used appropriately and correctly. • Information consistently presented in a structured format. • Consistently accurate use of spelling, punctuation and grammar.
[1-2]	[3-5]	[6-8]

4.3.5 Authentication of work

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 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 underway in a planned and timely manner but will also provide opportunities for assessors to check 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 that centres 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 and OCR Interchange.

4.3.6 Internal standardisation

It is important that all internal assessors, 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, reference material 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 through 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.

4.3.7 Moderation

All work for controlled assessment is marked by the teacher and internally standardised by the centre. Marks are then submitted to OCR, after which moderation takes place in accordance with OCR procedures: refer to the OCR website for submission dates of the marks to OCR. 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.

Each candidate's work should have a cover sheet attached to it with a summary of the marks awarded for the task in relation to the marking criteria defined in Section 4.3.4. If the work is to be submitted in digital format, this cover sheet should also be submitted electronically within each candidate's files.

4.4 Submitting the moderation samples via the OCR Repository

The OCR Repository is a secure website for centres to upload candidate work and for assessors to access this work digitally. Centres can use the OCR Repository for uploading marked candidate work for moderation.

Centres can access the OCR Repository via OCR Interchange, find their candidate entries in their area of the Repository, and use the Repository to upload files (singly or in bulk) for access by their moderator.

The OCR Repository allows candidates to send evidence in electronic file types that would normally be difficult to submit through postal moderation; for example multimedia or other interactive unit submissions.

There are three ways to load files to the OCR Repository:

1. Centres can load multiple files against multiple candidates by clicking on 'Upload candidate files' in the Candidates tab of the Candidate Overview screen.

2. Centres can load multiple files against a specific candidate by clicking on 'Upload files' in the Candidate Details screen.

3. Centres can load multiple administration files by clicking on 'Upload admin files' in the Administration tab of the Candidate Overview screen.

The OCR Repository is seen as a faster, greener and more convenient means of providing work for assessment. It is part of a wider programme bringing digital technology to the assessment process, the aim of which is to provide simpler and easier administration for centres.

Instructions for how to upload files to OCR using the OCR Repository can be found on OCR Interchange.

The OCR GCSE Design and Technology: Electronics and Control Systems units A511 and A513 can be submitted electronically to the OCR Repository via Interchange. Please check Section 7.4.1 for unit entry codes for the OCR Repository.

5 FAQs

Will candidates be able to re-enter units?

Yes. Control assessment units can be carried forward with the moderator mark from one session to the next i.e. June 2014 to June 2015. There is a separate 'carry over' code to re-enter the unit.

When can teachers and candidates access the material?

Controlled Assessment tasks will be available from Interchange on 1 June of the year prior to an assessment series, i.e. 1 June 2009 for assessment in June 2010 series.

Tasks will be reviewed every 2 years and it is the responsibility of centres to make sure that candidates are submitting the correct task.

Can any preparation work be done out of the classroom?

Yes. Controls are set at the level of tasks setting, task taking and task marking. Preparation work comes into the task taking level, under Research and Data Collection, which have a limited level of control i.e. work can be carried out without direct supervision.

Is there a minimum or maximum time that can be spent on the assessments?

20 hours on each unit – A571 and A573

Where can the Controlled materials be accessed and by whom?

Controlled Assessment tasks and other documents are accessed via Interchange.

Centre access to the Interchange Controlled Assessment area will be available to the registered Centre User (normally the Examinations Officer). However, the Centre User can set access permissions to others within their centre, e.g. HODs, subject leaders or subject teachers.

How long is each assessment valid for i.e. can we use last year's assessment this year?

Tasks will be reviewed every two years and it is the responsibility of centre to make sure that candidates are submitting the correct task.

Where can the Mark Schemes be accessed?

Mark Schemes are included in the specifications and can also be accessed from the OCR website: Mark Schemes are attached at the end of each Sample Assessment Material.

Do we have to take the Controlled Assessment under exam conditions/teacher supervision?

Yes, but only for task taking, i.e. the last part of Controlled Assessment when candidates are producing their final piece of work – note that this can be over more than one supervised session. More guidance on this can be found in Section 5: Controlled Assessment of all revised GCSE Specifications (first teaching in September 2009).

Are materials sent based on estimated entries or can we download them from Interchange?

Tasks will only be available as downloads from Interchange: they will not be sent in hard copy to centres.

Do we mark them or do OCR?

Controlled Assessment tasks for ALL subjects are internally marked by centres and externally moderated by OCR.

When do we start and finish the Controlled Assessment?

Controlled Assessment is a form of internal assessment and as such there isn't a specified date in which Controlled Assessment has to be taken.

Can I devise my own Tasks?

No. OCR has chosen a high level of control for task setting giving centres much more freedom to decide for themselves how candidates approach their work and centres manage facilities.

5.1 Unit A511: Introduction to designing and making

Is this a compulsory unit?

This unit is compulsory for a GCSE in Design and Technology: Electronic and Control Systems (J301).

What is this unit worth?

This unit is worth 30% of the GCSE in Design and Technology: Electronic and Control Systems (J301) qualification.

What is the entry code for this unit?

The entry code for this unit is A511.

How is this unit assessed?

This unit is internally marked and externally moderated. Teachers should use the published marking criteria for Unit A511.

Are the timings conducted by a stop watch?

No. The timings are recommended. Although OCR cannot monitor application, it is expected that candidates from a range of centres are given the same time exposure and opportunities as other candidates. It does however need to be flexible and accommodate candidate illness etc.

Is teaching time included in the 20 hour time allowance?

No, see OCR sample scheme of work for this unit to see how teaching can run alongside the Controlled Assessment and not be recorded.

Can staff still run after school workshops to make sure practical work is completed?

Skills can be developed after school however; the work must be completed in lesson time to make the assessment fair and equal.

Are candidates free to make what they want?

Candidates must select one of the published themes as a starting point. Once selected, the candidate needs to choose a specific product for design development.

Can all candidates from one centre work on the same theme?

Yes, but candidates need to identify their own brief, user group and how the product will be developed and the prototype manufactured

Can candidates develop the outcome from Unit A511 in Unit A513?

No. These are two separate units, each of which has its' own theme list to select from.

Will the theme lists change each year?

No. Every two years the themes will be reviewed. Initially it is anticipated that extra themes will be added. Centres will always have two years notice of any change.

Can candidates work in teams to produce one product?

Yes, as long as work from each candidate is clearly identifiable and assessed appropriately.

Can candidates be entered for a short course in year 10?

Yes. The GCSE Short Course is both a 'stand-alone' qualification and also the first half of the Full GCSE. Candidates would need to be entered for this unit and Unit A512 (Sustainable Design)

Can candidates complete the whole portfolio on a power point and not print the design sheets saving on paper and ink?

Yes. Individual candidates are free to select the way in which they wish present their portfolio which can be in either be on paper or in a digital form. Hand sketching and design solutions are expected to form part of the range of design skills shown, and must be scanned into an electronic portfolio. It is expected that digital work will be sent to the moderator in an approved format, such as a CD / pen drive, or posted directly into OCR's digital repository. Photos of the finished prototype product (minimum 2 photos) should be included in paper and digital portfolios. A list of acceptable digital file formats is included in the specification.

Can the candidate handwrite the whole portfolio?

Yes, but the examination actively encourages the candidate to be confident and effective users of ICT. Where appropriate candidates should be given the opportunity to use ICT to further their experience of CAD CAM, data handling and word processing and digital presentation. These sheets can be printed and included in a paper portfolio.

Can the centre produce framework sheets for the candidates to complete?

These need to be limited in their use. They are very helpful for SEN and EAL candidates, but need to be used with caution for high achievers as 'filling in boxes' can limit their thinking and creativity.

To avoid a lot of writing can candidates use sound bites and video clips?

Yes, but they need to be focused, precise and relevant. This facility is only available to candidates producing a digital portfolio.

In this unit, there is not much time to produce a quality outcome capable of testing. What are you expecting from candidates?

That candidates use a range of skills and processes to work skillfully and safely to shape, form and finish materials and assemble components.

The specification refers to candidates producing a prototype in A511 and producing a product in A513. What is the difference?

A prototype might be used to demonstrate an understanding of the manufacture of a product, to test its effectiveness to a limited degree, might be made of materials that are less durable, easier to work, but otherwise similar to the product. Scale models are unlikely to satisfy these criteria.

Is there a limit to the number of photographs used in a portfolio?

No. Photographs are a very efficient and effective may of monitoring progress and showing the quality and success of the prototype product. It is recommended that photographs are used within the portfolio to show how the practical progresses throughout the various stages of construction and at the end of the process, to show details of the completed prototype product.

Do teaching staff still mark the candidates work?

Yes. It is still the responsibility of the centre to standardise the marks in the cohort and submit the marks to the board. A sample will be requested for moderation.

How does this sit with the timed activities?

The evidence must still represent 20 hours work. Certain sections may be replaced with better quality work.

Is there a text book for this unit?

Yes. The recommended text book is GCSE Design and Technology: Electronics and Control Systems published by Hodder. This book covers all three units of the GCSE in Design and Technology: Electronic and Control Systems (J301) qualification.

5.2 Unit A513: Making quality products

Is this a compulsory unit?

This unit is compulsory for a GCSE in Design and Technology: Electronic and Control Systems (J301).

What is this unit worth?

This unit is worth 30% of the GCSE in Design and Technology: Electronic and Control Systems (J301) qualification.

What is the entry code for this unit?

The entry code for this unit is A513.

How is this unit assessed?

This unit is assessed by a 20 hour Controlled Assessment task.

The assessment scheme refers to "response to a brief" but OCR provides a set of themes. What is the candidate's starting point?

The assessment will start from a simple brief. The teacher may choose to set a single brief or allow candidates to develop their own brief from the theme. This allows the teacher to adjust the exercise to local conditions, facilities, candidates' capabilities and time. Evolution of the brief is not part of the timed assessment.

What about research?

Local conditions will apply here: candidates may be asked to conduct their own research outside the timed assessment or the centre may provide research materials around a theme. Candidates will be assessed on developing a specification as a result of analysis; this must be his/her own work.

How many design ideas would be appropriate?

There can be no fixed answer to this question – it depends on the type and scale of the design exercise.

What is "a range" of appropriate strategies for communication?

This is an opportunity for candidates to demonstrate competence using various media and candidates will be rewarded for doing so. Discernment should be shown in using strategies that are appropriate and assist communication.

Is a written plan required?

No, a record of the key stages of making will be sufficient. However without some form of planning it is unlikely that a candidate will succeed in making a quality product. This plan can be a working, evolving document.

How many materials/processes should a candidate use?

There is no fixed number of materials or processes, but candidates should be encouraged to demonstrate skill and competence commensurate with the programme of study for this specification.

What are the limits of teacher intervention?

Teachers and support staff have a duty to ensure good Health and Safety practices. Work can be discussed but candidates must reach their own judgements and conclusions; staff cannot provide specific advice on improvements to meet assessment criteria. See Section 5.3.2 Feedback Control. If direct assistance is given this must be clearly recorded and not included within assessment.

A candidate needs to test his/her work outside the controlled environment. Is this permissible?

There will be circumstances where testing is most appropriate outside the controlled environment. In this case the teacher must be satisfied that the work submitted is the candidate's own and be able to authenticate it using the specified procedure.

The sample Scheme of Work subdivides the 20 hour time allocation for this assessment. How closely can candidates be guided on use of time?

As with any Controlled Assessment, use of time is in the candidate's control. While the sample scheme intersperses assessment sessions with teaching sessions, candidates may choose to extend or contract the time on different sections as they see fit.

6 Guidance on downloading Controlled Assessment task from Interchange

Before you start

Controlled Assessment materials will be available to download from OCR Interchange from June 2009.

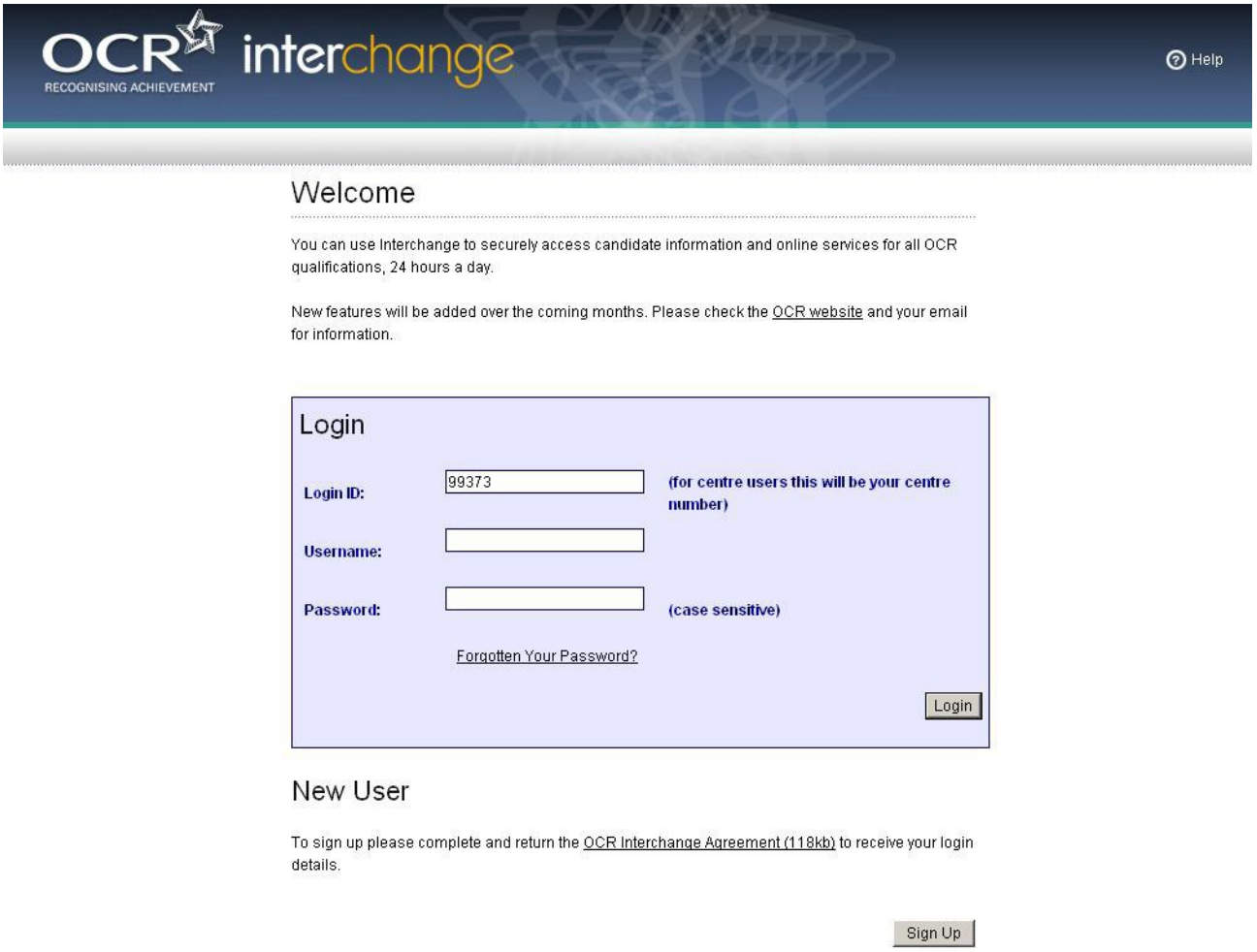
In order to use Interchange for the first time, you just need to register your centre by returning the Interchange Agreement. This can be downloaded from the OCR website at http://www.ocr.org.uk/interchange

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

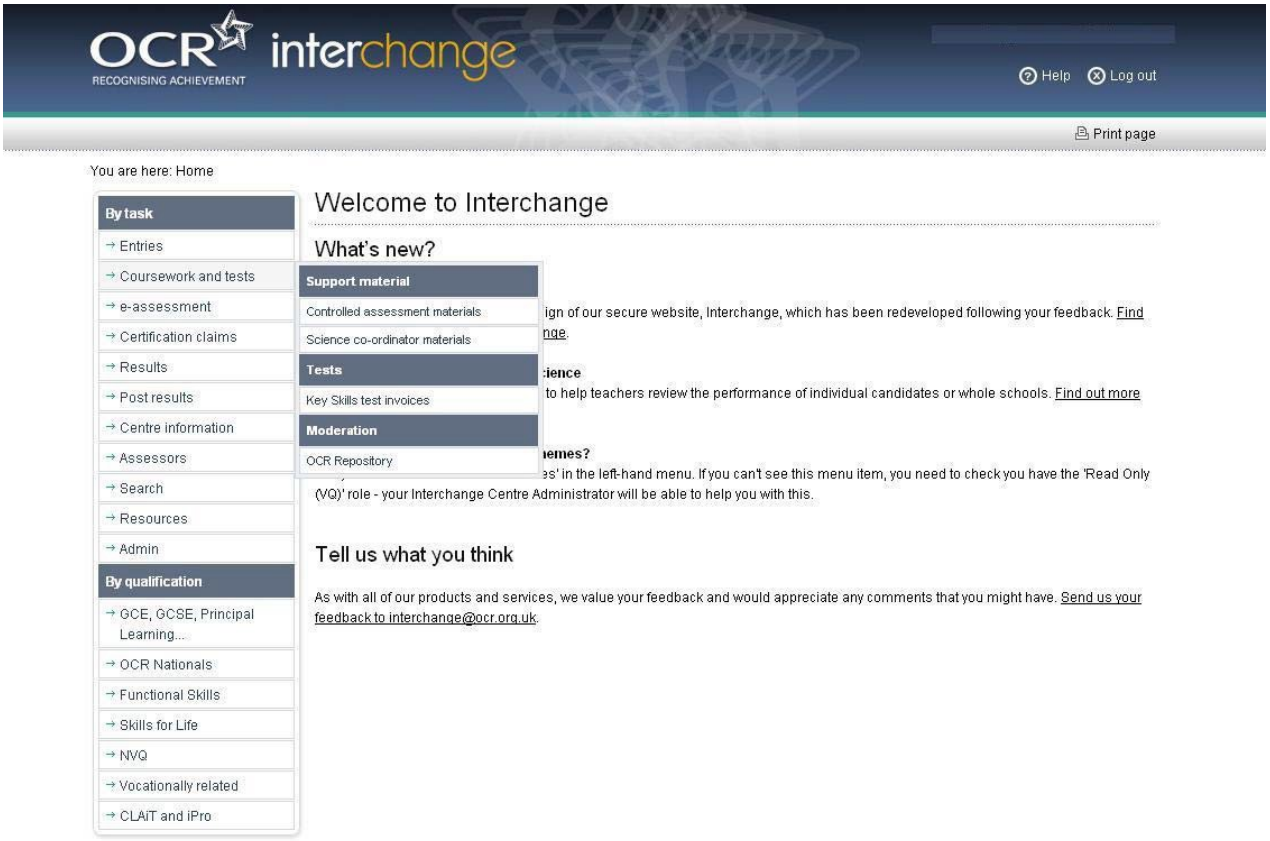


Step 2 – Navigate to Controlled Assessment materials area

Click on ‘Coursework and tests’

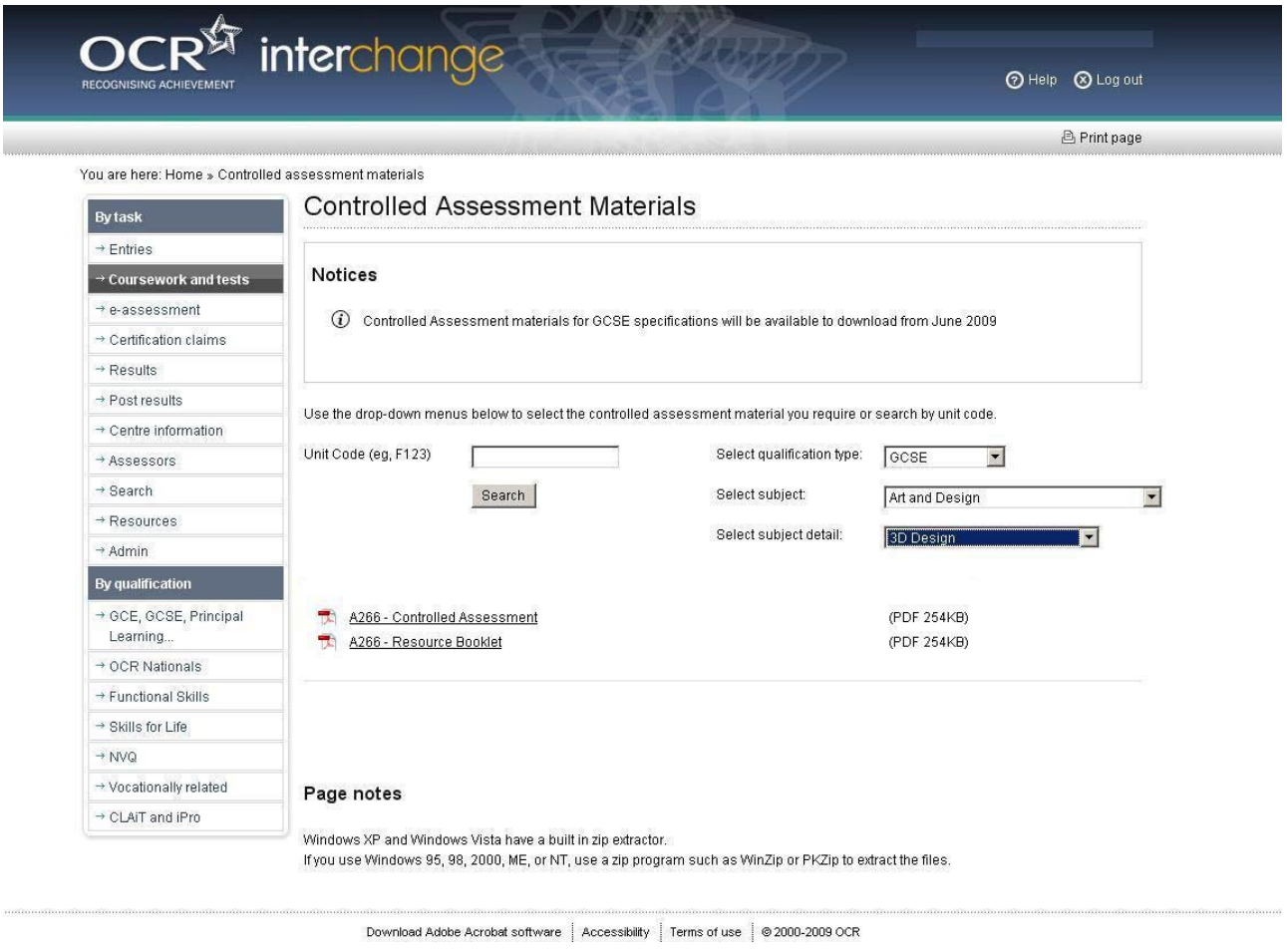
Click on ‘Controlled Assessment materials’

** 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

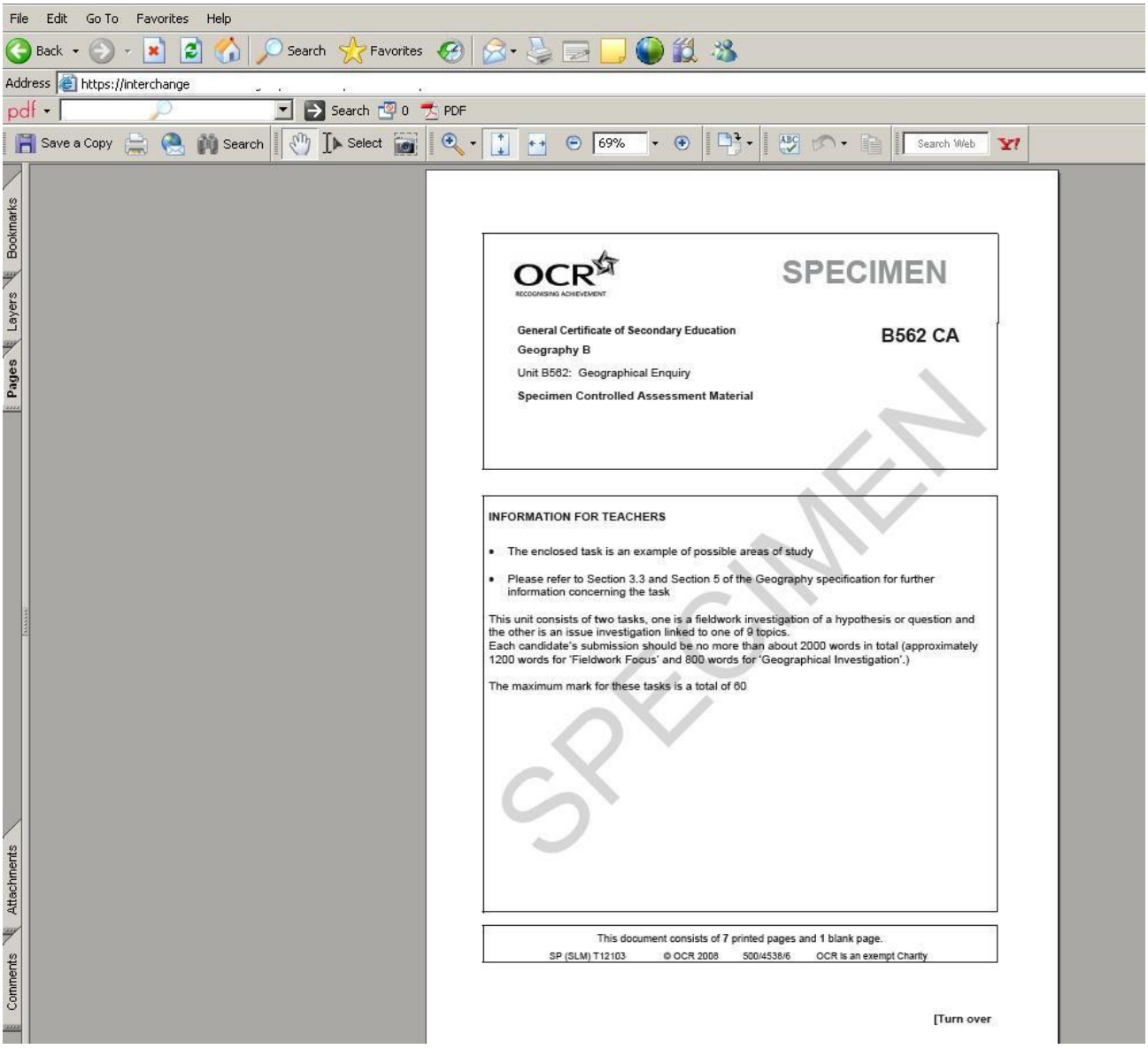
You can search for materials by unit code. Enter the unit code and click on the ‘search’ button. Or, you can search for materials by subject information by selecting from the ‘drop down’ options. All available documents will be displayed below the search.



Step 4 – Open materials

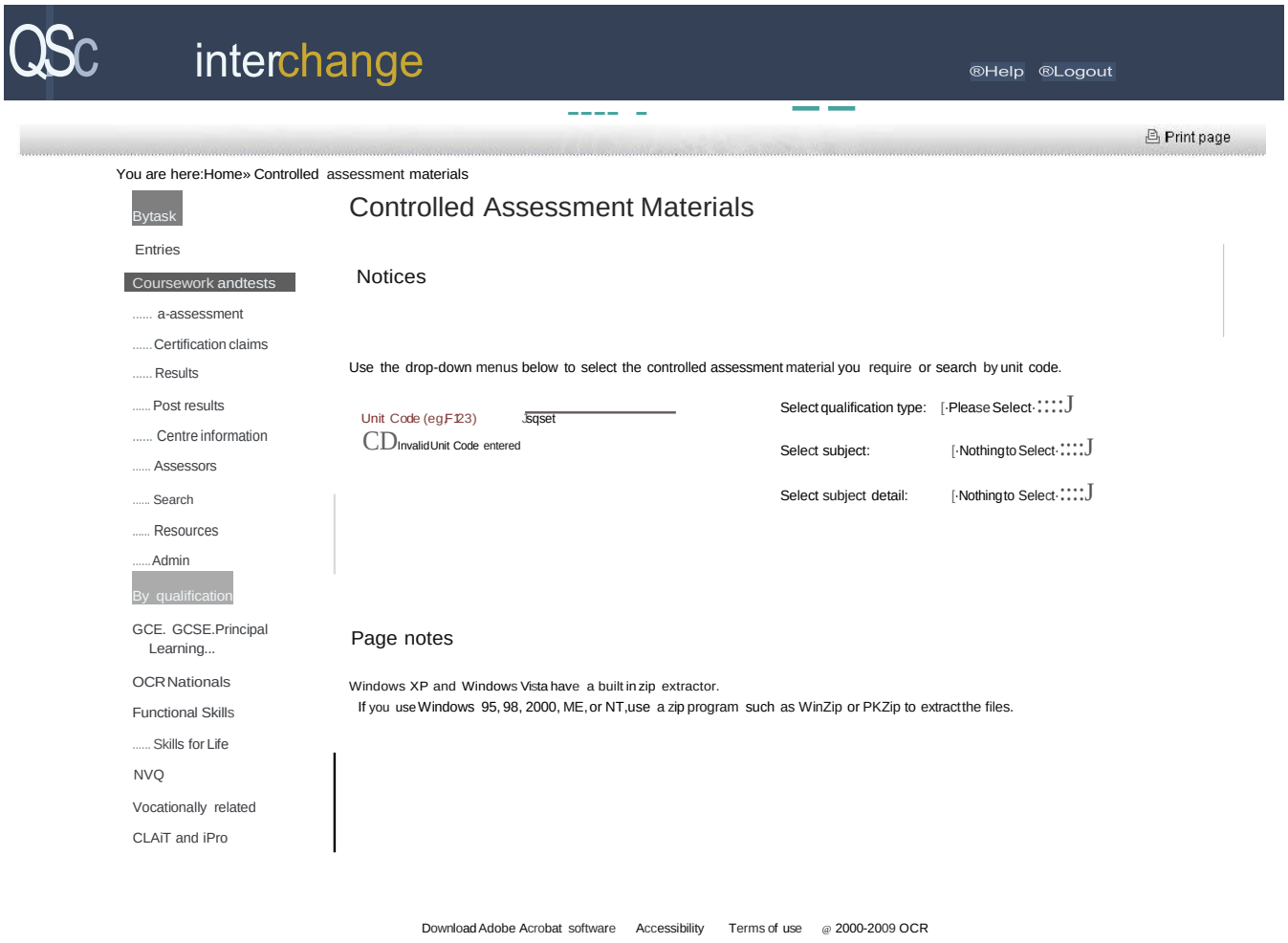
Click on the document link, the document will open in your browser

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

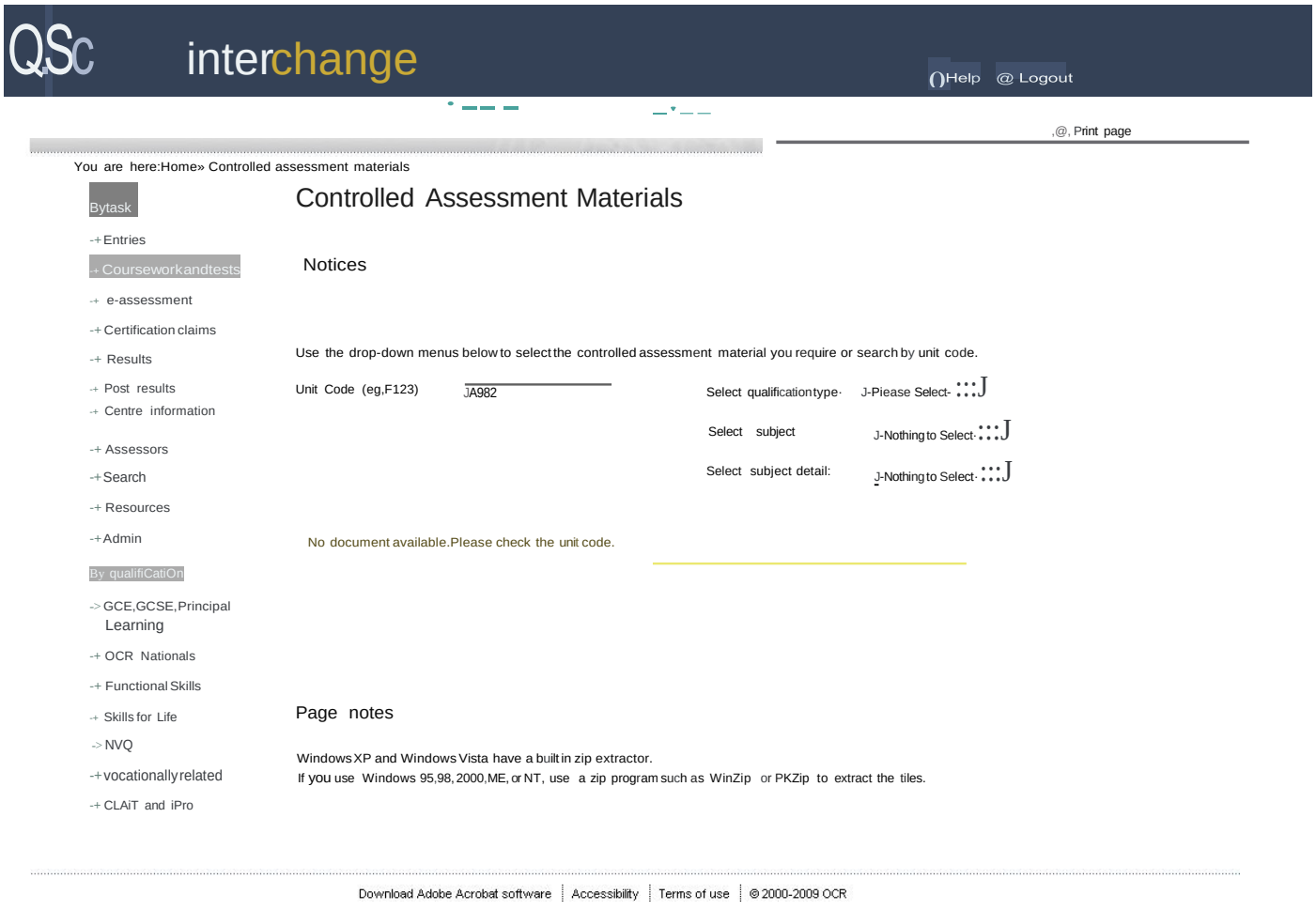


Step 5 – Troubleshooting

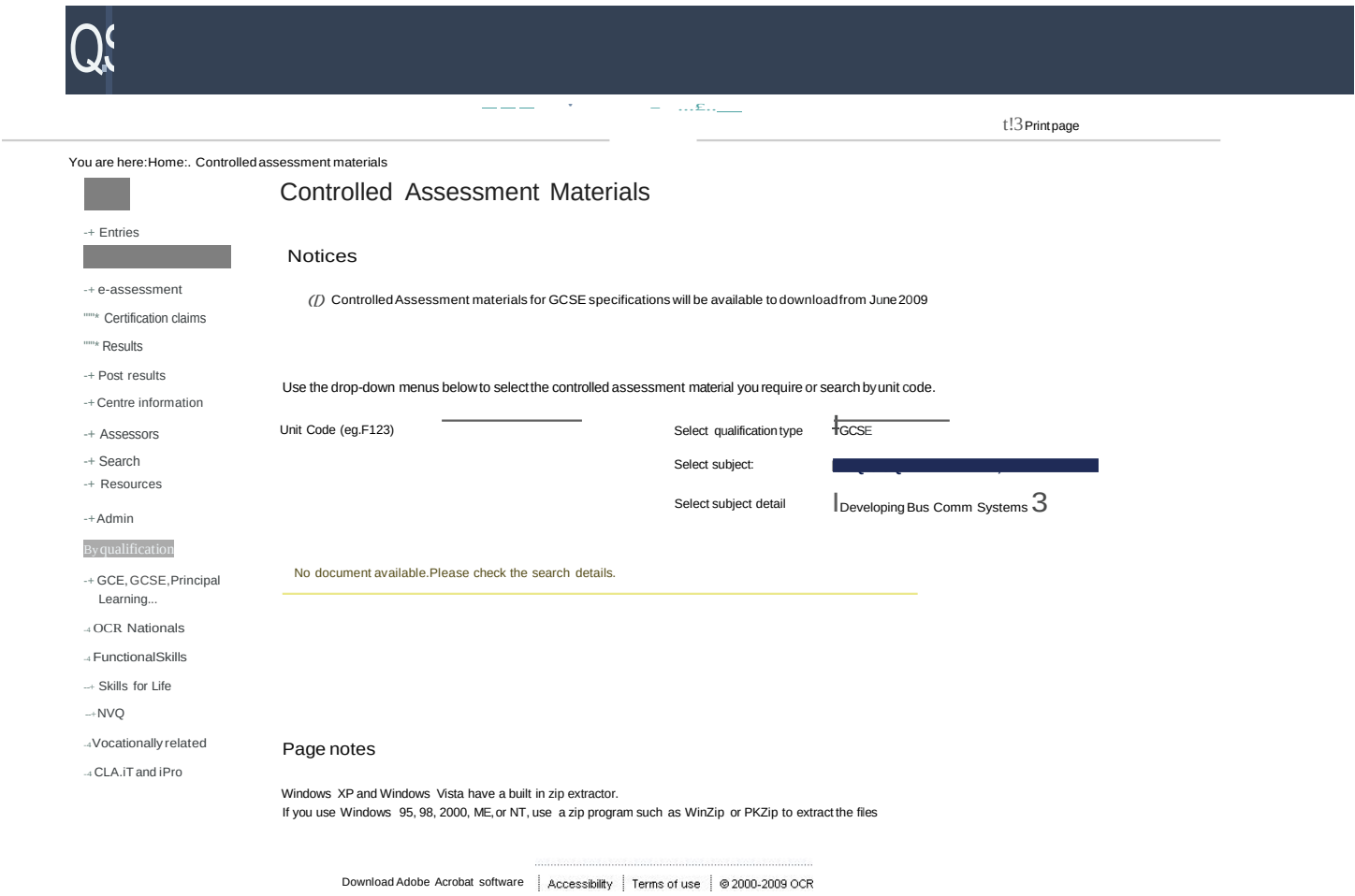
If you search for an invalid unit code, the following error message will be displayed.



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

The materials produced for Controlled Assessment in Units A511 and A513 form a Controlled Assessment portfolio, stored electronically.

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 Unit code, e.g. A511, so that the portfolio is clearly identified as the work of one candidate.

Each candidate produces evidence for the Controlled Assessment. The evidence for each element of the Controlled Assessment should be contained within a separate folder within the portfolio. Each of these folders is likely to contain separate files.

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

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 that the document was originally created in. 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)
JPEG (*.jpg)
Graphics file (*.pcx)
MS bitmap (*.bmp)
GIF images (*.gif)
Animation formats
Macromedia Flash (*.fla)
XML (*xml)
PDF (.pdf)
Comma Separated Values (.csv)
Rich text format (.rtf)
Text document (.txt)
PowerPoint (.ppt)
Word (.doc)
Excel (.xls)
Visio (.vsd)
Project (.mpp)

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