

Support for GCSE ICT 2010

GCSE ICT
(full and short course)



OCR. Providing full support for ICT

Our accredited GCSE ICT specification has been developed for first teaching from September 2010 following close consultation with key stakeholders in the ICT teaching community.

We want to provide you with everything you need to make the 2010 changes work for you, so we've carefully shaped our new ICT specification and support materials to help you do this.

You'll be able to pick from a practical toolkit of support, including a guide to controlled assessment, candidate style answers, specimen assessment materials and curriculum planning guidance – all designed to save you preparation time.

SCHEMES OF WORK

Topic outline of what can be covered.

Suggested teaching time.

Ideas for teaching and homework activities.

Suggested resources to help with teaching.



Sample GCSE Scheme of Work

OCR GCSE Information Technology Unit B064: Creative Use of ICT

Suggested teaching time	20 hours	Topic	Creating a computer game for the topic of recycling	
Topic outline		Suggested teaching and homework activities	Suggested resources	Points to note
Analysis 1 hour Coursework + 1 hour Homework Assessment 1-2 hours (Depending on ability)		<ul style="list-style-type: none"> Carry out a review as a class of 1 or 2 different internet games. If available review PS2/3, Wii or X Box 360 games Set up assessment of 3 games in controlled conditions (1-2 hours) 	<ul style="list-style-type: none"> Game review form.doc http://www.yovogames.com PC Pro Magazine contains a number of game reviews that can be compared to other type of reviews or tests There are also a number of gaming magazines that also offer reviews 	<ul style="list-style-type: none"> The game review form specified under suggested resources uses the most usual points of analysis but it is not an exhaustive list of review points Some suggested websites might be filtered by your network administrator or LA service in which case the use of PC games instead of internet games may be advisable
Analysis 1 hour Coursework + 1 hour Homework Assessment 1-2 hours (Depending on ability)		<ul style="list-style-type: none"> Game proposal and description linked to purpose and audience Game requirements: Graphics, Sound, Rooms, Objects and Behaviour Game scoring system Game success criteria including 3 SMART targets Students are given a range of multimedia/games products and comment on how the solution solves the problem or performs as a product. This may include commercial/army simulators, advertising using electronic signage 	<ul style="list-style-type: none"> The GameMaker Apprentice has a number of game specifications to use Game requirements form.doc 	<ul style="list-style-type: none"> SMART targets used for success criteria must be written in the context of purpose and audience of the game

= Innovative teaching idea
= ICT opportunity

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LESSON PLANS

Lesson objectives.

It takes you through the content to be delivered and the time this should take.



Sample GCSE Lesson Plan

OCR GCSE ICT J641 Unit B061: ICT in today's world

Exchanging information

OCR recognises that the teaching of this qualification above will vary greatly from school to school and from teacher to teacher. With that in mind this lesson plan is offered, as a possible approach but will be subject to modifications by the individual teacher.

Lesson length is assumed to be **one hour**.

Learning Objectives for the Lesson

Objective 1	To create a page for a website for revision purposes.
Objective 2	To understand why tracking and monitoring devices are important in today's world.
Objective 3	To develop an understanding of one tracking device in detail.

Recap of Previous Experience and Prior Knowledge

Content

Time	Content
5 minutes	Pupils to reassemble words to give dictionary definitions of the words tracking and monitoring. Pupils asked to try and define the key words for the lesson 'tracking' and 'monitoring'
10 minutes	Teacher to explain the use of tracking of examination papers. The examinations officer could be drafted in to answer questions here. Why is this needed and what advantages has it for the users. An alternative approach could be to ask pupils to draw a flowchart identifying the key stages in the tracking process used, for example, by Amazon, following receipt of an online order through to delivery of the goods by a courier. When pupils have attempted this, some of them could share their ideas with the class and, through Q&A, the teacher could elicit the advantages and disadvantages from the students by collecting ideas on the Smartboard or whiteboard.
5 minutes	Pupils to be given scenarios for them to explore. Explanation of data to be found and how it is to be presented (audience needs to be stated) using basic webpage layout provided.
25 minutes	Pupils researching and presenting the information in their own web page

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Sample GCSE Lesson Plan

Consolidation

Time	Content
5 minutes	Peer assessment, groups to move around the room assessing work using provided sheets.
10 minutes	Pupils to amend their pages in line with peer assessment and submit to the teacher for uploading.
5 minutes	Plenary activity. Ask students to identify 3 things they have learnt that they didn't know or be able to do at the beginning of the lesson.

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SPECIMEN ASSESSMENT MATERIALS

Shows the layout of our examination papers and the style of questions you can expect to see.

2

Section A
Answer all questions.

1 A mobile phone is shown below. Some components are labelled.

Tick one box in each row to show whether the component is input, output or storage.

Component	Input (✓)	Output (✓)	Storage (✓)
camera			
ear phone			
flash memory card			
keypad			
microphone			
speaker			

[6]

6

8 What is a computer virus?
.....
.....
..... [2]

9 A computer system uses sensors to monitor the water in a school swimming pool.

(a) Explain why the sensors are connected to the interface box and not directly to the computer.
.....
..... [2]

(b) State one disadvantage of using a computer system to monitor the water.
..... [1]

(c) The data from the sensors is collected and stored by the computer.
Describe how the collected data could be used to improve the cleanliness of the pool.
.....
.....
..... [5]

SPECIMEN ASSESSMENT MATERIALS FOR CONTROLLED ASSESSMENT

Shows the layout of our controlled assessment tasks and the style of questions you can expect to see including enquiry questions, key ideas and what you should expect from candidates.

4

Specimen Task 2

A local agency would like to commission the development of a computer game for teenagers in order to promote one of the following aspects:!

- healthy eating
- or
- recycling.

You will need to:

- work with others to carry out an investigation to assess the value of computer games which you feel appeal to a teenage audience.
- clearly record and display your findings
- recommend a computer game solution which will best promote your chosen aspect
- produce a list of success criteria you feel your computer game will need to meet for your target audience and purpose
- produce a plan with recommended timescales for producing your game
- produce designs of your game
- describe how the solution will be tested and user input
- produce a game
- create levels to move from element to element
- show how you have followed your original plan
- test your game on others, using a variety of tests and test data
- document actions taken following feedback from testing
- evaluate your own and others' work



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GUIDE TO CONTROLLED ASSESSMENT

Shows how to plan for controlled assessment.

When and how to give controlled assessment tasks to learners.

Teacher guidance on task marking.

Candidate guidelines.

2 Summary of the Controlled Assessment units

Unit B182: Moving forward in leisure and tourism

This unit represents 60% of the total GCSE (Single Award) marks and 30% of the total GCSE (Double Award) marks. It has a maximum of 60 marks.

Candidates will choose **one type of leisure and tourism facility** from a list of four. They then choose a local facility on which to base their subsequent investigations and complete all the tasks.

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

Task setting: high level of control in relation to the setting of tasks.

Task taking: this stage is divided into 2 different stages, each with a different level of control:

- research/data collection: low level of control
- action planning/write-up: high level of control.

Task marking: medium level of control.

Unit B184: Meeting customer needs in the leisure and tourism industries

This unit represents 30% of the total GCSE (Double Award) marks and has a maximum of 60 marks.

Candidates will choose **one customer brief** from a list of six. They will then complete all the tasks.

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.

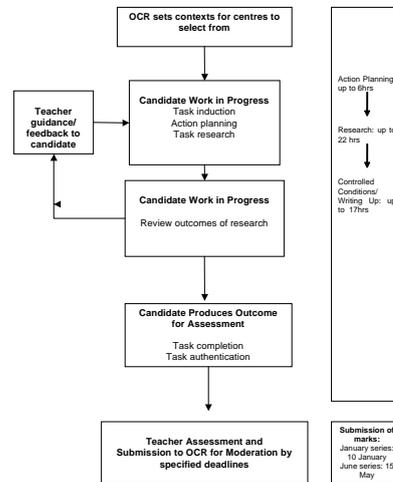
Task taking: this stage is divided into 2 different stages, each with a different level of control:

© OCR 2009
Guide to Controlled Assessment GCSE Leisure and Tourism

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3 Teacher guidance on how to plan Controlled Assessment

3.1 Controlled Assessment delivery flow chart



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Guide to Controlled Assessment GCSE Leisure and Tourism

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CANDIDATE STYLE ANSWERS

In order to inform your understanding of what examiners are looking for in candidate answers, we are producing candidate style answers (CSAs) as part of our support offering.

Candidate Style Answers/Exemplar Candidate Work

In order to inform teachers' understanding of what examiners are looking for in candidate answers, OCR will be producing candidate style answers (CSAs) as part of our support offering.

The purpose of CSAs is to offer teachers and other staff sample responses to the type of questions that will be asked in an examination, based on some of the questions from the sample assessment materials. The CSAs aim to illustrate the depth and breadth of information needed to fully respond to an assessment question, as well as the style of answer that is appropriate.

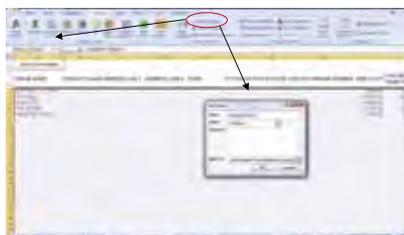
Written by subject specialists and supported by expert commentary, the content will fill the gap between first teaching and the availability of actual moderated candidate work from examination sessions. As the CSAs have not undergone the full moderation process and there is no single way of achieving a given grade, we have not graded the CSAs but banded the responses as either "medium ranking" or "high ranking".

This material will be published on our website and included in our INSET events.

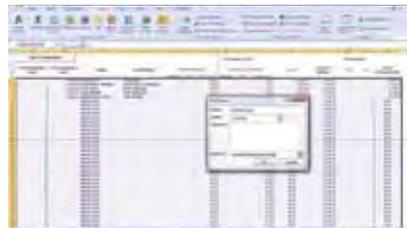
The material below is an example of a high ranking response.

NAMING CELL RANGES

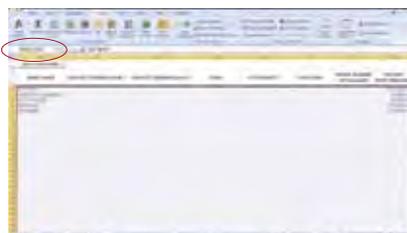
I needed to name some cell ranges so that I could use them in VLOOKUP functions – this is easier than using absolute cell references and I can use a named range more than once. I named the cells in the Database of Customers as VENUE_DETAILS.



I named the cells in the Expenditure sheet EXPENDITURE.



I named the cells in the Database of Bands sheet as BAND_FEES



For each range of cells, the software automatically knows how many columns of data there are and will number them from 1 onwards. So if I need a value in column 10 of a named range, then I use this in my VLOOKUP function.

Comment: The solution shows understanding and appropriate use of advanced software features.

GCSE ICT AND FUNCTIONAL SKILLS - CURRICULUM GUIDANCE

Aimed at heads of department and teachers.

Provides general background information, guidance and a range of possible models to deliver GCSE ICT and functional skills across your school's curriculum.

2.3.1 Two year course: Year 1 of 2 OR one year short course

Term	Week	Theory	Practical Activity	Comments	Functional Skills	
Autumn	1	2.1.1		Unit 2.1.1 introduces basic concepts including the range of software available. Practical experience of this will be essential.	The basic concepts learned and the practical experience gained in ICT systems provides the basis of FS2.2 and FS2.3. Practical experience is essential for Functional Skills.	
	2		Practical experience with range of software			
	3					
	4					
	5	2.1.2		Unit 2.1.2 covers exchanging information and practical experience of this, and the implications is useful.	FS2.8 requires learners to use communication software. Practical experience is, therefore, essential.	
	6		Practical experience			
	7					
	8					
	9	2.1.3		Unit 2.1.3 covers presenting information and will be part of the controlled assessment; practical delivery is appropriate.	FS2.6 and FS2.9 requires learners to combine and present information in ways that are fit for purpose and audience. Practical delivery is essential.	
	10		Practical delivery			
Spring	11	2.1.4		Unit 2.1.4 covers manipulating data. A good theoretical appreciation of the concepts can best be delivered through practical experience. This is also good preparation for the controlled assessment.	FS2.7 requires learners to use software to meet the requirements of a complex data handling task. Practical ability is essential.	
	12		Practical delivery of content			
	13					
	14					
	15	2.1.5		2.1.5 - 2.1.7 may be relevant preparation for the controlled assessment.	These units provide the learner with the knowledge required when using ICT systems, in particular FS2.3, FS2.4 and FS2.5.	
	16					
	17	2.1.6				
	18					
	19	2.1.7				
	20					
Summer	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29	2.1.8 and 2.1.9		Depending upon the nature of the chosen assessment these units can be interchanged with any of 2.1.5 - 2.1.7 above.	The time from mid April to mid May is reserved for teacher assessment of controlled assessments.	Not applicable to Functional Skills.
	30					
31						
32						
33						
34						

Two year course: Year 2 of 2

Term	Week	Theory	Practical Activity	Comments	Functional Skills	
Autumn	1	2.3.1		Unit 2.3.1 covers pre-release material and teaching should focus on application of the general concepts to the chosen area. This unit covers networking concepts.	Functional Skills is about the use of ICT in everyday situations at work, study or life in general. The level of knowledge required in the GCSE far exceeds the demands of the Functional Skills. However, Level 2 learners are expected to demonstrate their use of ICT to solve complex problems in familiar and non-routine situations. The analysis of the use of ICT in context would enable learners to transfer their ICT skills to a range of situations.	
	2					
	3	2.3.2				
	4					
	5					
	6	2.3.3			Unit 2.3.3 covers Information Knowledge Based Systems	
	7	2.3.4		Practical delivery using ideas for controlled assessment tasks as a basis for project development concepts.	This is a good time to introduce the final controlled assessment so students can think about possible routes they might take.	FS2.8 requires learners to use communication software.
	8					
	9	2.3.5		Exchanging information is a key concept and candidates should have experience using suitable applications.		
	Spring	10				
11						
12		2.3.6		Allocate these key thematic concepts. It is time to plan for the final controlled assessment unit and develop those skills that will be required to complete the chosen task. Introduce the key skills sets.	Units 2.3.6 and 2.3.7 have been introduced in B001 but students need to be aware of how these are used in the area covered by the pre-release material.	As in B001 the skills required in presenting and manipulating data references to FS2.6, FS2.7 and FS2.9.
13		2.3.7				
14						
15						
16						
17		2.3.8		Key preparation time for the controlled assessment unit to develop skills in the chosen area. Multi-Media, Game writing or Computer programming.	Once again it is important the legal and social and data security are discussed with reference to the area covered by the pre-release material.	No explicit evidence of planning is required for Functional Skills, however, the skill of analysing how ICT can be used to solve a complex task is covered by FS2.1 and FS2.2.
18						
19		2.3.9				
Summer	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29	2.3.10			The time from mid April to mid May is reserved for teacher assessment of controlled assessments.	The level of analysis required for the GCSE far exceeds that required in the Functional Skills.
30						
31						
32						
33						
34						

GUIDE TO CURRICULUM PLANNING

Outlines possible pathways you could use at your school between Years 9 and 13.

Shows guidance and benefits to each pathway.

Shows how you can use different pathways simultaneously.

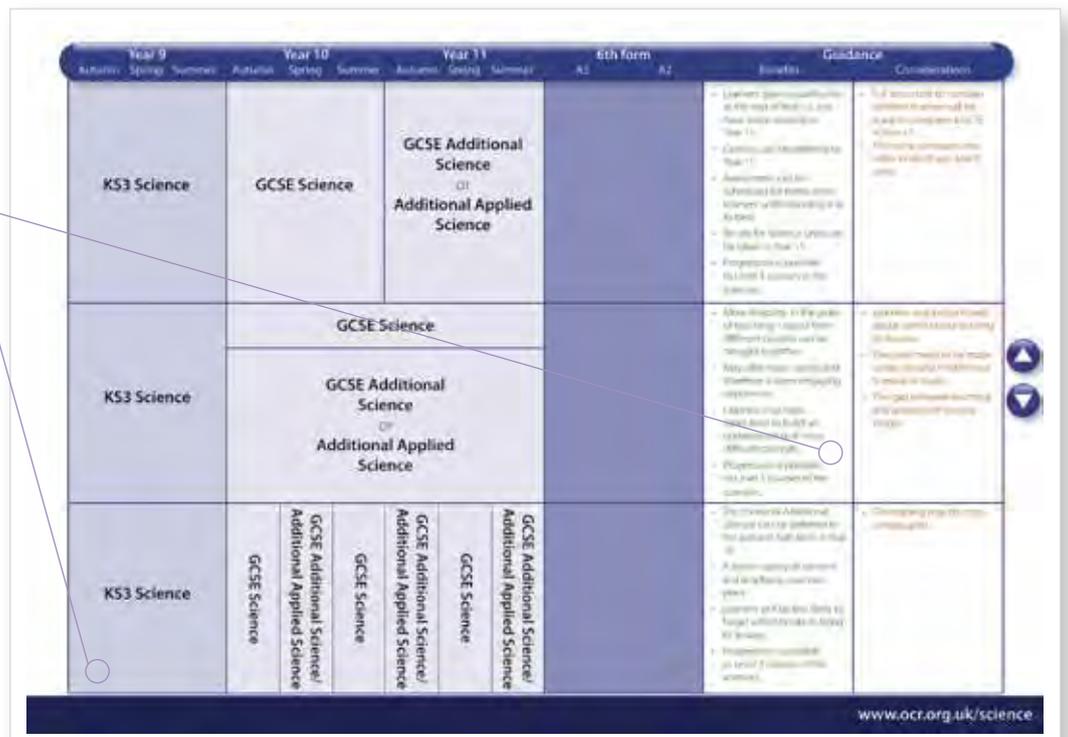


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TEACHERS' HANDBOOK

A helpful guide to accompany the specification; this includes subject specific guidance, information about functionality within GCSE, an overview of our support and frequently asked questions.

Subject specific guidance.

Resource list.

Publisher partner resources.

Frequently asked questions.

And other forms of support.

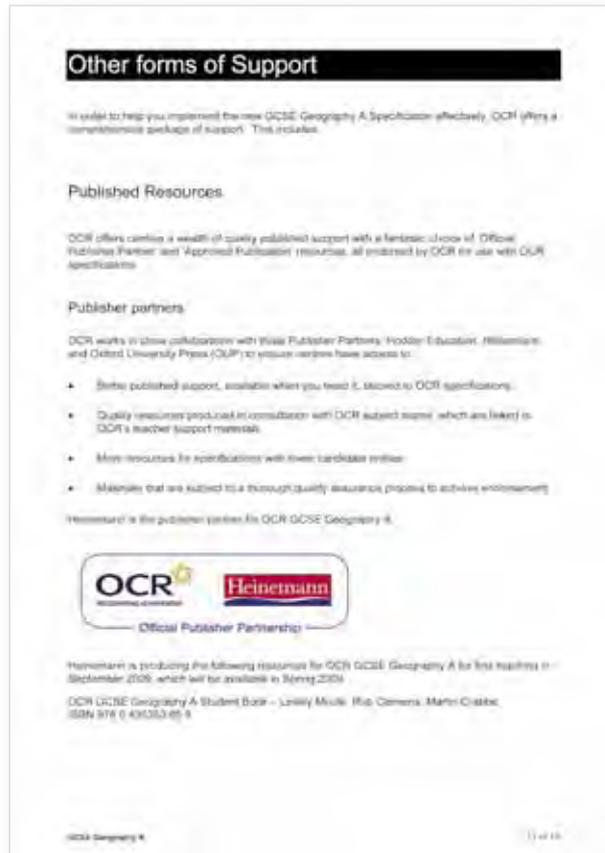


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OPTION EVENING LEAFLET

Provides a tool to use with parents and learners to highlight the benefits of the course.



Image for illustrative purposes only

toolkit of support.



We're here to help you with specialist advice, guidance and support for those times when you simply need a more individual service. You can call our dedicated subject specialist support team if you have any queries relating to ICT 2010 qualifications on

0300 500 4848 or email
ict@ocr.org.uk

www.ocr.org.uk

OCR customer contact centre

Vocational qualifications

Telephone 024 76 851509

Facsimile 024 76 851633

Email vocational.qualified@ocr.org.uk

General qualifications

Telephone 01223 553998

Facsimile 01223 552627

Email general.qualified@ocr.org.uk

For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored.

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