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Information Technology

GCSE 2012

ICT

Specification

J461 – Full course
J061 – Short course

Version 2

August 2013

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1 Introduction to GCSE ICT

1.1 Overview of GCSE ICT

Unit B061	*ICT in today's world*
Written paper	Written paper
1 hour – 60 marks	Candidates answer **all** questions
20% of the GCSE	
40% of the GCSE Short Course	

+

Unit B062	*Practical applications in ICT*
Controlled assessment	Candidates create an ICT solution using ICT applications
60 marks	
30% of the GCSE	
60% of the GCSE Short Course	

+

Unit B063	*ICT in context*
Written paper	Written paper based on pre-release material
1 hour – 60 marks	Candidates answer **all** questions
20% of the GCSE	

+

Unit B064 *Creative use of ICT*	**Unit B065** *Coding a solution*
Controlled assessment	Controlled assessment
60 marks	60 marks
30% of the GCSE	30% of the GCSE
Candidates solve a problem by creating and developing a multimedia solution with appropriate creative elements	Candidates identify a potential coded solution to a problem and solve using basic programming techniques

or

Candidates taking the GCSE (Short Course) ICT J061 will need to complete units B061 and B062.

1.2 Guided learning hours

GCSE ICT requires 120–140 guided learning hours.

GCSE (Short Course) ICT requires 60–70 guided learning hours.

1.3 Aims and learning outcomes

1. GCSE specifications in ICT should help candidates to gain an insight into related sectors. They should prepare learners to make informed decisions about further learning opportunities and career choices.

2. GCSE specifications in ICT must enable candidates to:

   • become independent and discerning users of ICT, able to make informed decisions about its use and aware of its implications for individuals, organisations and society

   • acquire and apply creative and technical skills, knowledge and understanding of ICT in a range of contexts

   • develop ICT-based solutions to solve problems

   • develop their understanding of current and emerging technologies and their social and commercial impact

   • develop their understanding of the legal, social, economic, ethical and environmental issues raised by ICT

   • recognise potential risks when using ICT, and develop safe, secure and responsible practice

   • develop the skills to work collaboratively

   • evaluate ICT-based solutions.

1.4 Prior learning

Candidates entering this course should have achieved a general educational level equivalent to National Curriculum Level 3, or an Entry 3 at Entry Level within the National Qualifications Framework.

2 Content of GCSE ICT

2.1 Unit B061: *ICT in today's world*

Candidates study a range of ICT systems, as used in the home, at school, and in society. Candidates need to be aware of current and emerging technologies and the impact that advances in technology may have on themselves and others.

2.1.1 ICT systems

Systems

Candidates should have knowledge and understanding of:

- the main components of a computer system: Central Processing Unit (CPU), internal/main memory, backing storage, input and output devices and power supplies
- a range of common applications where microprocessor technology is used: personal computers, mainframe computers, super computers and embedded systems
- the difference between hardware and software.

Hardware

Candidates should have knowledge and understanding of:

- input devices and their appropriate use: keyboards and pads, specialist keyboards, mouse, joystick, tracker ball, touch pad, microphones, remote controls, scanners, digital cameras, webcams, touch screens, readers for bar codes, magnetic stripes and chip and pin, sensors, MIDI instruments
- output devices and their appropriate use: monitor/screens, printers, speakers, head/earphones, digital projectors, plotters, actuators
- storage devices and their appropriate use: hard disks, optical storage devices, magnetic tape, drives, flash memory devices
- communication devices and their appropriate use: modems, routers, hubs, network interface cards in fixed and mobile systems
- the advantages and disadvantages of a variety of input, output, storage and communication devices

Software

Candidates should have knowledge and understanding of:

- systems software: operating systems, utility software, drivers
- user interfaces: human-machine interfaces – graphical, command line, direct neural interface.
- applications software: word processors, desktop publishing software, spreadsheets, database management software, multimedia software, slideshow software, web authoring software, photo-editing software, video-editing software, graphics manipulation software, communications software (e.g. social networking software, chat, instant messaging, web browsers, file transfer and email clients), presentation software, gaming software
- programming software: compilers, debuggers, interpreters, linkers, editors
- appropriate uses of software
- the advantages and disadvantages of different software applications
- the different file types used to support software: image, audio, video, document and executable types.

2.1.2 Exchanging information

Communications

Candidates should have knowledge and understanding of:

- communication services: voice telephones, SMS (text messages), instant messaging, fax, email, chat rooms, forums, bulletin boards, Voice-over-IP (VoIP), video conferencing.

- advantages and disadvantages of using different methods of communication

- sharing, exchanging and managing information: sharing files, file naming conventions and online safety version control, the secure transfer of data and secure access, read/write permissions

- the safe and responsible use of communication services: showing respect towards others, complying with data protection regulations, staying safe (disclosure of personal data, using appropriate language, misuse of images)

- communications software: web browsers, email software, messaging and file transfer

- the use of the internet: communication, commerce, leisure and information retrieval

- controlling ICT systems remotely: remote controls, remote access to computer systems

- monitoring and tracking systems: monitoring or logging a workforce or member of the public, cookies, key logging, worker call monitoring/recording, electronic consumer surveillance, mobile phone triangulation, automatic number plate recognition, CCTV cameras

- applications software: word processors, desktop publishing, spreadsheets, database management, multimedia, slideshows, web authoring, photo-editing, video editing, graphics manipulation, communications (e.g. social networking, chat, instant messaging, web browsers, file transfer and email clients), presentation, gaming.

2.1.3 Presenting information

Candidates should have knowledge and understanding of:

- types and purposes of different ways of presenting information: word processing and desktop publishing (DTP) software, slideshow, multimedia and web authoring software

- the use of ICT tools and features/facilities for presenting information with regard to efficiency, and quality of work and ease of transfer

- integration between and within software applications: integrating sections from one application into another, charts, tables, original graphics from programs into word processing files.

2.1.4   Manipulating data

Data Management

Candidates should have knowledge and understanding of:

- different data types, alpha numeric text, numeric (integer, real for example currency, percentage, fraction), date/time, limited choice (e.g. drop down lists, radio buttons, tick list) object, logical/Boolean (e.g. yes/no true/false) types

- the main issues governing the design of file structures: folders, subfolders, filenames, file types, paths, how encoding affects data entry and retrieval

- the main issues governing the design of data capture methods – advantages and disadvantages of using different data capture and collection methods: forms questionnaires, online forms, chip and PIN, OMR, barcode reader, voice recognition, biometrics, and RFID tags

- validation: range checks, type checks, format checks, presence checks, check digits, parity checks

- verification: batch totals, hash totals, double keying, visual checks.

Data handling software

Candidates should have knowledge and understanding of:

- the features of spreadsheet software: cells, cell references, rows, columns (and their height and width), show row/column labels, enter and edit cell content, key fields, cell gridlines, cell ranges, replication, formatting, merging cells, formulae, functions, automatic recalculation, sorting rows/columns, graph/chart creation and development to suit numerical information (e.g. bar chart, pie chart, line graph, scattergram and the use of scales, a title, axis title and key/legend), layout of worksheets and linked sheets

- the features of modelling software: how a data model may be used to answer 'what if' questions and the benefit of being able to answer such questions using a data model

- use of data modelling, formulae, functions, variables, different scenarios, verification (accuracy and plausibility), graphs and charts for predicting trends

- the features of database software: field (column) and record (row), field names, key field (unique), primary key, file

- create a database, insert/delete field/record, enter and edit field contents, organise and select records, view database structure, control the content of reports by selection of fields and use of headings, control the format of reports (header and footer), creation and development of charts/graphs

- typical tasks for which data handling software can be used: organising data, collecting data, amending existing data, deleting redundant data, select/search/filter records, sort on one or more fields (in ascending and descending order), merging data, report production

- the use of relational databases and spreadsheets: flatfile vs relational databases

- emerging data handling applications: models for financial forecasting, queuing, weather forecasting, flight simulators, expert systems for decision making.

2.1.5   Keeping data safe and secure

Candidates should have knowledge and understanding of:

- secure and safe practices in the use of ICT: protecting data from accidental destruction, protecting data from deliberate damage; what is meant be data encryption and when and why is it used

- backups and archiving: taking backups of data/programs, keeping information/archives safe, use of backing storage media and protecting data from unauthorised access

- appropriate User Security methods and devices: user IDs, usernames, password, encryption, restricted physical access (e.g. biometric scans, electronic passes), restricted access to data (e.g. hierarchy of passwords, access rights, encryption), monitoring (e.g. transaction logs)

- malicious software (malware) and the damage it can cause: viruses, including key logging software

- the procedures users can take to minimise risks of damage caused by malicious software: anti-virus software, firewalls, malware detection

- how to avoid the loss/disclosure of personal data to unauthorised users.

2.1.6   Legal, social, ethical and environmental issues when using ICT

Candidates should have knowledge and understanding of:

- the main aspects of legislation relating to the use of ICT: the Computer Misuse, Data Protection, Copyright Design and Patents Acts and other legislation as it applies to the use of ICT

- the potential health problems related to the prolonged use of ICT systems: stress, eye problems, wrist problems, Repetitive Strain Injury (RSI), back and neck problems, Carpal tunnel syndrome

- the need for good design of user interfaces and their impact on the health of users

- how ICT systems can affect the quality of life experienced by persons with disabilities: screen filters, voice recognition software, text to voice software, customised desktop environments, Braille keyboards, specialist input devices, communication and control device, software accessibility options

- a range of safety issues related to using computers and measures needed for prevention of accidents: taking breaks, appropriate lighting, eye tests, wrist rests and other support devices, adjustable seating, monitor positioning, avoiding hazards, electrical safety measures

- the environmental impact of digital devices: their use, deployment and eventual recycling and disposal

- the social and ethical implications of the electronic transmission of personal information: monitoring/detecting loss or corruption of information, preventing the abuse of personal information, the purpose and costing of national databases, security of public data, links between public and private databases, national identity cards, CCTV, government access to personal data, the surveillance society.

2.1.7 Using ICT systems

How ICT systems are used

Candidates should have knowledge and understanding of:

- the correct procedures to start, access, exit and shutdown ICT systems
- the selection and appropriate adjustment of system settings and user preferences
- the selection and use of the features of user interfaces
- the management of folder structures and files to ensure the safe storage and retrieval of information
- networking: the main types of network, the components and advantages and disadvantages of networked systems.

Troubleshooting

Candidates should have knowledge and understanding of:

- common problems encountered when using ICT systems: software freeze, error dialogues, storage full, paper jams, hardware malfunction
- troubleshooting activities: hardware troubleshooting, software troubleshooting
- the difference between hardware and software problems, and how these can be solved.

2.1.8 Monitoring, measurement and control technology

Candidates should have knowledge and understanding of:

- the different types of sensor and their suitable uses: sensors and actuators for visible, tactile, audible and other physical signals
- the advantages and disadvantages of computerised data logging
- writing a sequence of instructions to control a screen image or external device: light buzzers, sound or turtle, using repeated instructions, procedures and variables
- the use of ICT to control and monitor areas of everyday living: applications that utilise data logging and control, analogue-digital conversion, control and feedback loops and the associated hardware and software.

2.1.9 ICT and modern living

Candidates should have knowledge and understanding of:

- how ICT systems have changed the way people go about their daily lives: communication, shopping, gaming, entertainment, education and training, banking and financial services, social networking, online/remote working, the advantages/benefits and disadvantages/dangers of using ICT/the internet
- the impact of emerging technologies on organisations: artificial intelligence, robotics, biometrics, vision enhancement, computer-assisted translation, quantum cryptography, 3D and holographic imaging, 3D printing, virtual reality.

2.2 Unit B062: *Practical applications in ICT*

Candidates study a range of everyday software applications to be able to manipulate and process data and other information effectively and efficiently and to present information in a format suitable for purpose and audience.

Candidates will select from a range of set tasks written to enable them to demonstrate their practical ICT ability.

2.2.1 Investigating a need

Candidates should be able to demonstrate a practical ability to:

- research a given context documenting sources of information
- analyse systematically the information requirements to solve ICT problems
- think creatively, logically and critically throughout the development process of a set ICT-based solution
- find and select appropriate data and information that is fit for purpose, relevant and accurate
- work effectively with others to gain and share knowledge
- produce a design brief
- produce a design specification with a measurable success specification.

2.2.2 Practical use of software tools to produce a working solution

Candidates should be able to demonstrate a practical ability to:

- produce a fully working solution to a chosen set task
- select and use a range of ICT tools and techniques to develop effective solutions
- understand software features and their use
- create sequences of instructions
- manipulate and process data and other information effectively and efficiently
- integrate software tools and techniques to work efficiently and to meet user needs
- apply a wide range of software tools and techniques across one or more software applications
- understand and adopt safe, secure and responsible working practices when using ICT.

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

Candidates should be able to demonstrate a practical ability to:

- use software features
- model situations and data to explore and develop ideas
- enter, develop and format data to suit processing purpose and audience
- apply creative and technical skills, knowledge and understanding of ICT tools and methods
- check data accuracy and plausibility
- create a suitable data structure for a task.

2.2.4 Present their solution

Candidates should be able to demonstrate a practical ability to:

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

2.2.5 Evaluation

Candidates should be able to demonstrate a practical ability to:

- evaluate their own and others' contribution to group work
- test their own solution
- create and review their own ICT-based solution
- review and modify work as it progresses to improve the quality of the ICT-based solution
- evaluate and amend their own solutions to a set problem
- identify strengths and weaknesses of an ICT system
- identify areas to improve and recommend and justify appropriate changes that could be made
- present their evaluation in a relevant, clear, organised, structured and coherent format
- use specialist terms correctly and appropriately.

2.3   Unit B063: *ICT in context*

Candidates study a range of ICT systems in a business or organisational context. Candidates should be aware of current and emerging technologies and their impact on themselves and on others. The question paper is based upon pre-release material, relating to specified businesses or organisation(s) and its/their use of ICT. The pre-release material will be available to centres in the September of each year for the following June examination series. Candidates are not permitted to take any preparatory work into the examination room. This unit will incorporate and build on the knowledge and understanding gained in units B061 and B062. The pre-release material aims to extend the depth of study by focusing upon how the named organisation could use ICT.

2.3.1   ICT systems

Systems

Candidates should have knowledge and understanding of:

- specialist equipment used by organisations in defined contexts
- a range of commercial applications where microprocessor technology is used
- operating systems and applications software
- mobile, portable, and desktop ICT tools for a variety of tasks
- the fundamental differences between the technologies used and their appropriate commercial use.

Hardware

Candidates should have knowledge and understanding of:

- specialist input, output, storage and communication devices: personal computers, printers/plotters, monitors, netbooks, laptops, notebook computers, palmtops, desktop computers, tablet computers, PDAs and handhelds, WAP and smart mobile phones
- the advantages and disadvantages of a variety of input, output, storage and communication devices within a given context.

Software

Candidates should have knowledge and understanding of:

- different types of specialist software and their uses within organisations: system software, programming software, applications software
- the advantages and disadvantages of different software applications and their use in a defined context.

2.3.2   Networks

Candidates should have knowledge and understanding of:

- the main components of computer networks
- network topologies
- the advantages and disadvantages of using computer networks
- the use of internal and external networks.

2.3.3   Information Knowledge Based Systems (IKBS) and Expert Systems

Candidates should have knowledge and understanding of:

- the purpose of IKBS and Expert Systems and how they are used for diagnostic work and decision making.

2.3.4   Project planning

Candidates should have knowledge and understanding of:

- the way ICT facilitates collaboration and teamwork
- the main stages of the project management/systems lifecycle, including methods and processes used
- how ICT can be used to plan and manage projects
- a range of systems investigation methods
- systems implementation strategies.

2.3.5   Exchanging information

Communications

Candidates should have knowledge and understanding of:

- communication services used in organisations
- how organisations share, exchange and manage information
- sharing, exchanging and managing information with employees and with the wider customer base
- how organisations use the internet
- specialist hardware used in the organisation detailed in the pre-release material
- how developments in technology lead to new forms of communication.

Communications software

Candidates should have knowledge and understanding of:

- the appropriate use of software to communicate information to different audiences
- how organisations use data handling software
- how organisations use a data model
- the use and purpose of communication software for commercial purposes.

2.3.6   Presenting information

Candidates should have knowledge and understanding of:

- the integration of applications to achieve outcomes
- the use of the features of software used by organisations to present information.

2.3.7   Manipulating data

Data management

Candidates should have knowledge and understanding of:

- the purpose and methods of data management used by commercial organisations
- data management tools
- the use of relational databases, spreadsheets and other software used by businesses and organisations.

Data handling software

Candidates should have knowledge and understanding of:

- commonly used features of data handling software and their purpose
- how a data model may be used for project planning and costing.

2.3.8   Legal, social, ethical and environmental issues when using ICT within context

Candidates should have knowledge and understanding of:

- the main aspects of legislation relating to the use of ICT within a defined context
- the changes in working practices due to the use of ICT within a defined context: advantages (collaborative workers may work from home: home working allows more time to be spent on tasks, reduces travelling costs, and protects the environment due to fewer carbon emissions; allows tailored working conditions) and disadvantages (working from home limits face-to-face contact with colleagues, does not prevent distractions from affecting work, removes regular social interaction with work colleagues, leads to isolation) of home/remote working
- the use of ICT for security, monitoring, surveillance and data security
- environmental issues connected to the production, use and disposal of ICT systems, the effect on natural resources of the creation and use of ICT systems.

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2.3.9 Managing data/keeping data safe and secure when using ICT within a given context

Candidates should have knowledge and understanding of:

- appropriate methods that could be used to make backups and archives
- appropriate secure and safe practices that could be used
- appropriate user security methods and devices that could be used: restricted physical access (e.g. biometric scans, electronic passes), restricted access to data (e.g. hierarchy of passwords, access rights, encryption), monitoring (e.g. transaction logs)
- the procedures that could be used to minimise the risks of security breaches
- how data encryption could be used within a defined context
- the need for security of data and personal information when using ICT.

2.3.10 Current and emerging technologies

Candidates should have knowledge and understanding of:

- changes in everyday ICT use
- evolving communication systems and how they affect the way people live
- how emerging technologies affect the way companies and their staff operate and work together: employment patterns, retraining, changes in working practices, teleworking, videoconferencing, remote/home working
- how new and emerging technologies could assist organisations.

2.4   Unit B064: *Creative use of ICT*

Candidates study a range of creative software applications in order to create a multimedia solution to a given problem. They should be aware of how to analyse the problem as well as the steps needed to design, develop, test and evaluate the solution to the problem.

Candidates will be required to complete a task by creating and developing a multimedia solution with appropriate elements such as:

- sound clips

- video

- animation

- graphics.

Solutions may include but are not limited to:

- a multimedia presentation

- a multimedia website

- a computer game.

The problem will be set by OCR and will require the candidate to create a multimedia solution that combines a number of elements. Candidates will need to provide evidence of the analysis of the problem as well as the design, development, testing and evaluation of the solution. Candidates will take part in group work and their contribution to the group will be assessed. It is expected that a number of skills will be demonstrated, including appropriate editing skills.

Candidates' solutions will be marked against the marking criteria using the 'best fit' approach.

This unit will incorporate and build on knowledge and understanding gained in units B061 and B062.

2.4.1   Analysis

Candidates should be able to:
- identify and assess existing solutions to similar problems
- produce a plan for the development of a multimedia solution
- specify the required hardware and software
- specify the user requirements
- define the success criteria for a solution to a problem.

2.4.2 Design

Candidates should be able to:

- explain how the proposed solution will be fit for purpose
- design individual components of the solution
- design screen layouts
- design the overall solution incorporating navigational aids
- design testing routines.

2.4.3 Development

Candidates should be able to:

- create new, or modify existing, components of a solution
- create screen layouts
- create navigational aids
- create a working solution
- adhere to a prepared plan for their solution.

2.4.4 Testing

Candidates should be able to:

- test the solution they have produced
- have potential users test their solution
- test solutions that other people have produced.

2.4.5 Evaluation

Candidates should be able to:

- use the results of testing and identify the limitations of their solution
- use the results of testing and recommend possible improvements to their solution
- evaluate the solution with regard to purpose
- evaluate the solution with regard to the success criteria
- improve their solution.

2.4.6 Working with others

Candidates should be able to:

- plan work with others, identifying objectives and clarifying responsibilities
- work with others towards achieving given objectives, carrying out tasks to meet their responsibilities
- recommend ways of improving work with others to achieve given objectives.

2.5 Unit B065: *Coding a solution*

There will be an OCR set scenario within which the candidates identify a potential coded solution to a problem using basic programming techniques. The scenario will be sufficiently open to allow a variety of viable solutions. This unit will incorporate and build on the knowledge and understanding gained in units B061 and B062.

2.5.1 Programming techniques

Candidates should be able to:

- identify and use the three basic programming constructs used to control the flow of a program: sequence, select, iterate
- understand and use suitable select statements
- understand and use suitable loops including count and condition controlled loops
- use different data types, including Boolean, String, Integer and Real, appropriately in solutions to problems
- define and use arrays as appropriate when solving problems.

2.5.2 Analysis

Planning the development of a coded solution to a problem.

Candidates should be able to:

- identify the information required to solve a problem
- produce a plan for the development of the solution
- specify the required hardware and software
- define the success criteria for later reference during evaluation
- participate in group work.

2.5.3 Design

Design a coded solution to a problem by developing suitable algorithms and test procedures.

Candidates should be able to:

- describe how the proposed solution will be fit for purpose
- design individual components of the solution
- design input and output formats
- design an overall solution using suitable algorithms
- design testing routines.

2.5.4 Development

Create a coded solution showing how each sub-section is completed and forms part of the whole solution, fully annotating the developed code to explain its function.

Candidates should be able to:

- create a coded solution
- create systems for input to and output from the solution
- create navigational paths and methods
- create a working solution
- adhere to a prepared plan for their solution.

2.5.5 Testing

Test the solution to show functionality and how it matches the design criteria. Identify success and any limitations, describing ways the solution can be improved.

Candidates should be able to:

- test the solution they have produced
- have potential users test their solution
- test solutions that other people have produced.

2.5.6 Evaluation

Candidates should be able to:

- use the results of testing and identify the limitations of their solution
- use the results of testing and recommend possible improvements to their solution
- evaluate the solution with regard to purpose
- evaluate the solution with regard to the success criteria
- improve their solution.

Assessment of GCSE ICT

3.1 Overview of the assessment in GCSE ICT – J461

For GCSE ICT candidates must take units B061, B062, B063 and **either** B064 **or** B065.

Unit B061:	*ICT in today's world*
20% of the total GCSE 1 hour written paper 60 marks	Candidates answer **all** questions. This unit is externally assessed.

Unit B062:	*Practical applications in ICT*
30% of the total GCSE Controlled assessment Approx 20 hours 60 marks	Candidates choose **one task** from a list provided by OCR. In addition to the formal 20 hours of controlled assessment, there should also be further teaching time to increase candidates' depth of knowledge and understanding in preparation for the controlled assessment. (Up to 8 hours in research/preparation and up to 12 hours in producing the final outcome.) This unit is internally assessed and externally moderated.

Unit B063:	*ICT in context*
20% of the total GCSE 1 hour written paper based on pre-release material 60 marks	Candidates answer **all** questions. This unit is externally assessed.

Unit B064:	*Creative use of ICT*
30% of the total GCSE Controlled assessment Approx 20 hours 60 marks	Candidates choose **one task** from a list provided by OCR. In addition to the formal 20 hours of controlled assessment, there should also be further teaching time to increase the candidates' depth of knowledge and understanding in preparation for the controlled assessment. (Up to 8 hours in research/preparation and up to 12 hours in producing the final outcome.) This unit is internally assessed and externally moderated.

Unit B065:	*Coding a solution*
30% of the total GCSE Controlled assessment Approx 20 hours 60 marks	Candidates choose **one task** from a list provided by OCR. In addition to the formal 20 hours of controlled assessment, there should also be further teaching time to increase the candidates' depth of knowledge and understanding in preparation for the controlled assessment. (Up to 8 hours in research/preparation and up to 12 hours in producing the final outcome.) This unit is internally assessed and externally moderated.

3.2 Overview of the assessment in GCSE (Short Course) ICT – J061

Candidates taking the GCSE (Short Course) ICT J061 will need to be entered for units B061 and B062.

Unit B061:	*ICT in today's world*
40% of the total GCSE (Short course) 1 hour written paper 60 marks	Candidates answer **all** questions. This unit is externally assessed.

Unit B062:	*Practical applications in ICT*
60% of the total GCSE (Short course) Controlled assessment Approx 20 hours 60 marks	Candidates choose **one task** from a list provided by OCR. In addition to the formal 20 hours of controlled assessment, there should also be further teaching time to increase candidates' depth of knowledge and understanding in preparation for the controlled assessment. (Up to 8 hours in research/preparation and up to 12 hours in producing the final outcome.) This unit is internally assessed and externally moderated.

3.3 Assessment objectives

Candidates are expected to demonstrate the following in the context of the content described:

AO1	Recall, select and communicate their knowledge and understanding of ICT
AO2	Apply knowledge, understanding and skills to produce ICT-based solutions
AO3	Analyse, evaluate, make reasoned judgements and present conclusions

AO weightings – GCSE ICT
The relationship between the units and the assessment objectives of the scheme of assessment is shown in the following grid:

Unit	% of GCSE			Total %
	AO1	AO2	AO3	
Unit B061: *ICT in today's world*	11	7	2	**20**
Unit B062: *Practical applications in ICT*	4	17	9	**30**
Unit B063: *ICT in context*	11	7	2	**20**
Unit B064: *Creative use of ICT* Unit B065: *Coding a solution*	4	17	9	**30**
	30	48	22	**100**

AO weightings – GCSE (Short Course) ICT

The relationship between the units and the assessment objectives of the scheme of assessment is shown in the following grid:

Unit	% of GCSE			Total %
	AO1	**AO2**	**AO3**	
Unit B061: *ICT in today's world*	22	14	4	**40**
Unit B062: *Practical applications in ICT*	8	34	18	**60**
	30	48	22	**100**

3.4 Grading and awarding grades

GCSE results are awarded on the scale A* to G. Units are awarded a* to g. Grades are indicated on certificates. However, results for candidates who fail to achieve the minimum grade (G or g) will be recorded as unclassified (U or u) and this is **not** certificated.

Most GCSEs are unitised schemes. When working out candidates' overall grades OCR needs to be able to compare performance on the same unit in different series when different grade boundaries may have been set, and between different units. OCR uses a Uniform Mark Scale to enable this to be done.

A candidate's uniform mark for each unit is calculated from the candidate's raw mark on that unit. The raw mark boundary marks are converted to the equivalent uniform mark boundary. Marks between grade boundaries are converted on a pro rata basis.

When unit results are issued, the candidate's unit grade and uniform mark are given. The uniform mark is shown out of the maximum uniform mark for the unit, e.g. 40/60.

The specification is graded on a Uniform Mark Scale. The uniform mark thresholds for each of the assessments are shown below:

GCSE Unit Weighing		Maximum unit uniform mark	Unit Grade								
GCSE	**GCSE (short course)**		**a***	**a**	**b**	**c**	**d**	**e**	**f**	**g**	**u**
20%	40%	60	54	48	42	36	30	24	18	12	0
30%	60%	90	81	72	63	54	45	36	27	18	0

A candidate's uniform marks for each unit are aggregated and grades for the specification are generated on the following scale:

Qualification	Maximum unit uniform mark	Qualification Grade								
		A*	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**U**
GCSE (Short Course)	150	135	120	105	90	75	60	45	30	0
GCSE	300	270	240	210	180	150	120	90	60	0

The written papers will have a total weighting of 40% and controlled assessment a weighting of 60%.

A candidate's uniform mark for each paper will be combined with the uniform marks for the controlled assessments to give a total uniform mark for the specification. The candidate's grade will be determined by the total uniform mark.

3.5   Grade descriptions

Grade descriptions are provided to give a general indication of the standards of achievement likely to have been shown by candidates awarded particular grades. The descriptions must be interpreted in relation to the content in the specification; they are not designed to define that content. The grade awarded will depend in practice upon the extent to which the candidate has met the assessment objectives overall. Shortcomings in some aspects of the assessment may be balanced by better performance in others.

The grade descriptions have been produced by the regulatory authorities in collaboration with the awarding bodies.

Grade F

Candidates recall, select and communicate a basic knowledge and understanding of aspects of ICT, including its use in the wider world.

They apply limited knowledge, understanding and skills to address simple problems and create basic solutions using ICT tools. They select and present data and information, and use simple models and instructions. They demonstrate some awareness of the need for safe, secure and responsible practices.

They respond to needs using ICT. They sometimes review and provide comments on the way they and others use ICT. They make simple modifications to their work in the light of progress.

They use ICT to communicate, demonstrating limited awareness of purpose and audience.

Grade C

Candidates recall, select and communicate a good knowledge and understanding of ICT, including the impact of its social and commercial use.

They apply knowledge, understanding and skills in a range of situations, applying ICT tools appropriately to address problems and provide ICT-based solutions. They select information and process data. They model situations, sequence instructions, select and use information and explore ideas. They work using safe, secure and responsible practices.

They analyse ways of addressing needs using ICT. They review and evaluate the way they and others use ICT. They review their work and make improvements where appropriate. They use ICT to communicate, demonstrating consideration of purpose and audience.

Grade A

Candidates recall, select and communicate a thorough knowledge and understanding of a broad range of ICT including the impact of its social and commercial use.

They apply knowledge, understanding and skills to a variety of situations, selecting and using arange of ICT tools efficiently to solve problems and produce effective ICT-based solutions. They manipulate and process data efficiently and effectively. They effectively model situations, sequence instructions, interpret information and creatively explore and develop ideas. They work systematically and understand and adopt safe, secure and responsible practices.

They systematically analyse problems, identifying needs and opportunities. They critically analyse and evaluate the way they and others use ICT. They iteratively review their work and make improvements where appropriate. They use ICT to communicate effectively, demonstrating a clear sense of purpose and audience.

3.6   Quality of written communication

Quality of written communication is assessed in all units.

Candidates are expected to:

- ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear

- present information in a form that suits its purpose

- use an appropriate style of writing and, where applicable, specialist terminology.

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 in the Guide to controlled assessment.

Teaching and Learning

Controlled assessment is designed to be an integral part of teaching and learning. Activities which develop skills and knowledge take place regularly in the classroom, using a variety of appropriate resources (as chosen by the teacher). These opportunities allow candidates to practise the skills that will be necessary to complete the chosen controlled assessment task. Whilst teachers may discuss and comment on the development of skills during the learning activities, they may not give feedback to an individual learner once the write-up to the chosen task has begun.

When all necessary teaching and learning has taken place and teachers feel that candidates are ready for assessment, candidates can be given the appropriate controlled assessment task. Guidance regarding this will be found in the Guide to controlled assessment.

4.1   Controlled assessment tasks

All controlled assessment tasks are set by OCR.

Controlled assessment tasks will be available on Interchange from 1 June for the following academic year and will be reviewed every two years. Tasks will remain live for the duration of the specification and will only be removed with ample notice to centres. Guidance on how to access controlled assessment tasks from Interchange is available on the OCR website.

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.

OCR live controlled assessment tasks must NOT be used as practice material. Centres should devise their own practice material using the OCR specimen controlled assessment task as guidance.

Centres must ensure that candidates undertake a task applicable to the correct year of the examination by checking carefully the examination dates of the tasks on Interchange.

The candidate can complete the research phase in a group with limited teacher supervision. The carrying out of the task must be completed individually and under direct supervision. The teacher must be able to authenticate the work.

Feedback to the candidate will be permissible but tightly defined. Within these specifications, OCR expects teachers to equip the candidate with the knowledge, understanding and skills before they begin the controlled assessment task. It should be remembered that candidates are required to reach their own judgements and conclusions without any guidance or assistance. When supervising the controlled assessment task, teachers are expected to:

- offer candidates advice on how best to prepare for the research/data collection elements of this unit. Additional guidance may be provided if necessary, and this should be reflected In the marks given for the research part of the task

- 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.

It is the responsibility of the Head of Centre to ensure that the controls set out in the specification and the individual units are imposed.

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 this unit. Candidates should be allowed sufficient time to complete the tasks.

Suggested steps and timings 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 (limited/low level supervision)

- 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.

Research (limited/low level 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. Any evidence must also be the individual candidate's own work. However, when producing their final piece of work, candidates must complete all work individually.

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

During the research phase candidates can be given support and 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

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

Producing the final piece of work (informal/medium level supervision)

Informal/medium level supervision means under direct teacher supervision: teachers must be able to authenticate the work and there must be acknowledgement and referencing of any sources used. If writing up is carried out over several sessions, work must be collected in between sessions.

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.

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 and the internet. Teachers must not provide templates, model answers or feedback on drafts. 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.

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 be marked with the:
  - centre number
  - centre name
  - candidate number
  - candidate name
  - unit code and title
  - assignment title.

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

4.3 Marking and moderating controlled assessment

All controlled assessment units are marked by the centre assessor(s) using OCR marking criteria, found on each unit's specific Unit Recording Sheet (URS), and are moderated by the OCR-appointed moderator. External moderation is either e-moderation where evidence in a digital format is supplied or postal moderation. The centre assessor should clearly identify on the URS where the evidence for the chosen mark band is located within the candidate's work.

4.3.1 Applying the marking criteria

The starting point for marking the tasks is the marking criteria (see section 4.3.3 Marking criteria for controlled assessment tasks below). 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 will provide 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 totalling 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 unit(s), 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 Annotations 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

Unit B062: Practical applications in ICT

Investigating a need
 	
AO1 – 2
 	
AO2 – 4
 	
AO3 – 4
	• Shows evidence of working with others to investigate similar problems/solutions.
	
	• States what they intend to do.
	
	• Some evidence of low level planning.
	
	• Basic information about existing solutions will have been identified.
	
	• A simple design specification with requirements of the solution identified.
		• Researches the requirements for a solution.
		
		• Works collaboratively.
		
		• Produces a workable design brief.
		
		• Identifies a target audience.
		
		• Records their findings.
		
		• Evidence of planning.
		
		• Detailed information about existing solutions will have been identified.
		
		• A solution to the problem will be recommended.
		
		• Planning and a design specification explaining how the proposed solution matches the requirements of the problem.
		
		• Some mention of success criteria.
			• Researches the requirements and context for a solution documenting sources of information.
			
			• Works effectively with others to gain and share knowledge.
			
			• Produces a design brief incorporating:
			  i timescales
			  ii purpose
			  iii target audience.
			
			• Produces a design specification.
			
			• Existing solutions will have been identified and analysed thoroughly.
			
			• A solution will be recommended with justification for the recommendation.
			
			• The design specification will include detailed measurable success criteria.
			
			• The design specification will include user requirements with a detailed plan of the proposed solution.

	[1 - 3]	**[4 - 7]**	**[8 - 10]**

0 marks = no response or no response worthy of credit

Practical use of software tools to produce a working solution **AO1 – 4** **AO2 – 14** **AO3 – 2**	• Produces a basic working solution to the task using common software tools within a single application. The solution may contain some minor errors or omissions. • Demonstrates a basic working knowledge of some common software tools. • Works with limited support. • Uses automated software features such as spell checkers to check their own work. • Demonstrates an ability to develop their own work as a result of trial and error. • Models alternative solutions using the basic features found in common software applications. • The design specification demonstrates little or no understanding of safe, secure and responsible practice.	• Pproduces a fully working solution to the tasks using more advanced features such as wizards and linking data across/within applications. • Uses software features effectively. • Works independently. • Demonstrates an ability to exchange/integrate data from one part of a system to another. • Modifies their own work as a result of testing. • Uses planning and proofing tools. • Creates a solution to the set problem which is user-friendly and is appropriate for the audience and purpose. • Models alternative solutions using a range of the features found in common software applications. • Demonstrates a basic understanding of how rules in any model can be changed and modified. • The design specification demonstrates an understanding of safe, secure and responsible practice.	• Produces an enhanced solution with a clear sense of purpose making full use of a wide range of advanced software features appropriately, for example, data integration and exchange across and/ or within different software applications. • A solution is produced which shows a good understanding of the software options and tools including advanced features. • Uses a range of advanced software features efficiently. • Demonstrates a good understanding of the purpose and needs of user for the task. • Creates a solution which takes full account of audience and purpose. • Models/designs alternative solutions using a wide range of software applications and their features demonstrating knowledge of how changes in both the data and the rules governing any computer model can affect the final solution. • Develops an effective solution making good use of efficiency tools such as wizard options. • Produces a detailed evaluation at each step of the development process making amendments to their own work as a result of this evaluation. • Tests the final solution and documents the next steps. • The design specification demonstrates a good understanding of safe, secure and responsible practice.
	[1 - 6]	**[7 - 14]**	**[15 - 20]**

0 marks = no response or no response worthy of credit

Practical use of file and data structure to produce a working solution **AO2 – 10**	• Demonstrates an understanding of a simple data or file structure. • Copies files and directories/ folders to another location. • Demonstrates basic knowledge of data types and simple calculations when required. • Uses data structures to produce a basic solution. • Changes the data within a computer model. • Suitable data types selected. • Saves data in an appropriate way.	• Creates a suitable data or file structure for the task. • Organises data or information found in a format suitable for processing. • Can modify data to suit the needs of the task. • Demonstrates an awareness of data appropriateness and format. • Develops simple ict systems for situations using suitable data structures. • Uses data from one part of an ict system within another part. • Saves different versions of the same document. • Demonstrates an understanding of data formats. • Integrates files/data from more than one source.	• Designs a file or data structure. • Structures data and/or files to make them suitable for audience. • Explores alternative data or information sources. • Selects appropriate data and/or information and can justify the appropriateness of data/information for the situation and audience. • Creates detailed ict systems using a range of techniques to develop a solution to the problem. • Demonstrate the use of software to model test ideas, predictions and/or hypotheses e.G. By modelling 'what if' situations or changing query criteria. • Changes both the data and rules within a model to achieve an enhanced solution. • Demonstrates knowledge of how data can be dynamically linked across and within applications. • Retains evidence of the editing process so that it can be traced back if needed. • Uses format options effectively to highlight retrieved information.
	[1 - 3]	**[4 - 7]**	**[8 - 10]**

0 marks = no response or no response worthy of credit

Present their solution AO1 – 2 AO2 – 8	• Presents information of what they have done. • Makes effective use of formatting options to enhance their work eg justification, borders, shading etc. • Uses some graphical representations to enhance communication, meaning and understanding of any data they present. **[1 - 3]**	• Presents information in the form of reports, making use of appropriate formatting features to enhance presentation. • Makes use of formatting options to enhance key information. • Uses appropriate graphical representation appropriate for the audience to enhance communication and meaning when presenting data/information. • Shows a sense of audience. **[4 - 7]**	• Integrates information from many sources and can show how data can be presented on screen and in printed form. • Makes full use of appropriate advanced formatting options to enhance their work. • Makes full use of design features such as master pages, templates, house styles. • Uses graphical representation appropriately and correctly to enhance communication and meaning when presenting data/information. • Demonstrates a detailed understanding of audience to produce an effective solution to the set problem. **[8 - 10]**

0 marks = no response or no response worthy of credit

Evaluation AO3 – 10	• Some description of what the system can do. • Limited, if any, reference to test evidence. • A commentary on others' and their own input to group work or on systems produced by others. • A basic record of what was done and possibly when it was done. • An evaluation which may be simplistic with little or no relevance. • Little or no use of specialist terms. • Errors of grammar, punctuation and spelling which may be intrusive. **[1 - 3]**	• Identifies at least one strength and weakness in the work. • Identifies areas to improve but recommendations may be weak. • Includes a description of the limitations of the system supported by test evidence and referring back to the original task requirements. • Includes some evidence to show that the system has been modified to deal with limitations. • Comments on their own and others' contribution to any group work and whether it was useful. They will also have participated and commented upon the solutions produced by others. • Includes a record showing the stages in the process with comments on what was completed and some mention of issues that have arisen. • For the most part will be relevant to, and refer back to, the set task. • Will, for the most part, be presented in a structured and coherent manner. • Includes specialist terms used appropriately and for the most part correctly. • May contain occasional errors in grammar, punctuation and spelling. **[4 - 7]**	• Identifies strengths and weaknesses in the work. • Identifies areas to improve and recommends appropriate changes that could be made. • Includes evidence to show how the limitations have been, or could be, dealt with following the testing stage. • Includes an evaluation on their own and others' contribution to any group activities and will have provided constructive feedback on the work of others. • Includes a detailed record of what tasks were completed, when, issues that arose and how these were dealt with. • Will be relevant, clear and organised showing evidence of how the solution relates to the design success criteria. • Will be presented in a structured and coherent manner. • Includes specialist terms which will be used correctly and appropriately. • Contains few, if any, errors in grammar, punctuation and spelling. **[8 - 10]**

0 marks = no response or no response worthy of credit

4

Unit B064: Creative Use of ICT Marking Criteria

Analysis AO2 – 4 AO3 – 6	• Basic information about existing solutions will have been identified. • A solution will be identified. • A plan or simple design specification will be identified. • Some hardware or software requirements may be specified. • Some user requirements will be identified. **[1 - 3]**	• Existing solutions will have been identified and analysed. • A solution will be recommended with limited justification/reasons. • Planning and a design specification explaining how the proposed solution matches the requirements of the problem. • Hardware and/or software requirements will be specified. • Most user requirements will be identified. • Some mention of success criteria. **[4 - 7]**	• Existing solutions will have been identified, analysed and assessed. • A multimedia solution will be recommended with justification. • The design specification will include a detailed plan of the proposed solution. • User requirements will be identified. • Detailed measurable success criteria, appropriate for target audience and purpose. **[8 - 10]**

0 marks = no response or no response worthy of credit

Design AO1 – 4 AO2 – 8	• A few comments on the proposed overall solution. • Evidence of design for at least some of the elements. • Some comments on how the solution will be tested. **[1 - 4]**	• A description of how the proposed solution solves the problem. • Evidence of design eg screen layouts; navigation paths/navigation methods/user interaction. • A description of how the solution will be tested. **[5 - 8]**	• An explanation of how the proposed solution solves the problem. • Detailed designs for a range of elements as well as screen layouts, navigation paths and methods/user interaction. • A clear test plan explaining how the solution will be tested against the success criteria. **[9 - 12]**
Development of elements AO1 – 2 AO2 – 5	• Some evidence of development for one or more elements for the proposed solution. • Basic software features will have been used. **[1 - 3]**	• Evidence to show development for a range of elements for the proposed solution of which most are fit for purpose including screen layouts. • Software features will have been used effectively to produce elements for the solution. **[4 - 5]**	• Evidence to show development for a range of elements that are fit for purpose and contribute to a working solution to the stated problem, including screen layouts. • A wide range of software features will have been used efficiently to produce all the elements for a solution. **[6 - 7]**

0 marks = no response or no response worthy of credit

4

Development of overall solution **AO1 – 2** **AO2 – 9**	• Some evidence of development of navigation paths/user interaction elements matching the design. • A basic, partially functional overall solution. • Basic software features will have been used to create the overall solution. **[1 - 3]**	• Evidence to show the development of a range of navigation paths and navigation methods/user interaction elements. • A partially functional overall solution where most of the paths/elements work. • They will have commented on how successful, or otherwise, they were in following their plan. • A range of software features will have been used, some effectively, to produce the overall solution. **[4 - 7]**	• Evidence to show the development of a fully functional multi-faceted solution. • The solution will include a range of elements and effective navigation paths and navigation methods/user interaction elements. • They will describe the success or otherwise in following the plan and any modifications to that plan during the development phase. • A wide range of software features will have been used effectively to produce an efficient solution to the problem. **[8 - 11]**
Testing **AO2 – 10**	• Some evidence of testing in the form of output from the system with limited structure. • Limited evidence of testing by others. • Testing evidence restricted to a single situation. **[1 - 3]**	• Evidence of testing covers most aspects of the design specification. • Some evidence of testing by others. • Test evidence will cover some other possible situations (eg different screen resolutions/web browsers/ hardware/media players etc). **[4 - 7]**	• Testing covers as many different paths through the system as is feasible, including normal, abnormal and extreme cases. • Testing covers all aspects of the design. • Clear evidence of testing by others. • Test evidence covers a realistic range of alternative situations. **[8 - 10]**

0 marks = no response or no response worthy of credit

| Evaluation AO3 – 10 | • Some description of what the system can do with limited reference to test evidence.

• Some comments on others' and their own input into group work.

• The evaluation may be simplistic with limited relevance.

• Little or no use of specialist terms.

• Errors of grammar, punctuation and spelling may be intrusive.

[1 - 3] | • Identifies at least one strength and one weakness in the work.

• Identifies areas to improve but recommendations may be weak.

• Includes a description of the limitations of the system supported by test evidence. This description will be related back to the design specification.

• Includes some evidence to show that the system has been modified to deal with limitations.

• Comments on their own, and others', contribution to any group work and whether it was useful.

• For the most part includes information that will be relevant and presented in a structured and coherent format.

• Specialist terms will be used appropriately and for the most part correctly.

• May contain occasional errors in grammar, punctuation and spelling.

[4 - 7] | • Identifies strengths and weaknesses in the work.

• Identifies areas to improve and recommends appropriate changes that could be made.

• Includes evidence to show how limitations have been, or could be, dealt with following the testing stage.

• Provides an evaluation on their own and others' contribution to any group activities.

• The evaluation will be relevant, clear, organised and presented in a structured and coherent format.

• Specialist terms will be used correctly and appropriately.

• Few, if any, errors in grammar, punctuation and spelling.

[8 - 10] |

0 marks = no response or no response worthy of credit

4

Unit B065: Coding a solution			
Analysis AO2 – 4 AO3 – 6	• Basic information about existing solutions will have been identified. • A solution will be identified. • A plan or simple design specification will be identified. • Some hardware or software requirements may be specified. • Some user requirements will be identified. **[1 - 3]**	• Existing solutions will have been identified and analysed. • A solution will be recommended with limited justification/reasons. • Planning and a design specification explaining how the proposed solution matches the requirements of the problem. • Hardware and/or software requirements will be specified. • Most user requirements will be identified. • Some mention of success criteria. **[4 - 7]**	• Existing solutions will have been identified, analysed and assessed. • A multimedia solution will be recommended with justification. • The design specification will include a detailed plan of the proposed solution. • User requirements will be identified. • Detailed measurable success criteria, appropriate for target audience and purpose. **[8 - 10]**
Design AO1 – 4 AO2 – 8	• Comments on some of the elements of the proposed solution and how it solves the problem. • Evidence of design for at least some of the elements. • Some mention of how the solution will be tested. **[1 - 4]**	• A description of how the solution solves the problem but with incomplete or faulty algorithms. • Some evidence of design eg screen layouts or user interaction. • Some evidence of how the solution will be tested to be fit for purpose. **[5 - 8]**	• A description of how the solution solves the problem including detailed algorithms. • Detailed designs for a range of elements as well as screen layouts. • A clear test plan explaining how the solution will be tested against the success criteria. **[9 - 12]**

0 marks = no response or no response worthy of credit

Use of coding Features AO1 – 2 AO2 – 9	• Some evidence that some of the standard structures and variables have been used to produce a limited attempt at a solution to the problem. • The code will not form a working solution to the problem; there may be a functional solution to a small part of the problem. **[1 - 4]**	• Evidence of standard constructs being used but these may not be used efficiently and not always the most appropriate choice. • A range of variable types will be used but not always the most appropriate choice. • Loop conditions may not be appropriate leading to inefficient or partially functional solutions. **[5 - 8]**	• Standard programming constructs will be used effectively, with evidence of suitable select statements and loop structures used appropriately. • Variables will be given meaningful names and the type will be appropriate to the use. • Suitably typed and named arrays will be used appropriately in the solution. **[9 - 11]**
Development of overall solution AO1 – 2 AO2 – 5	• Some evidence of development of a partial solution related to the design. **[1 - 3]**	• Evidence to show the development of a solution. • They will have commented on how successful, or otherwise, they were in following their plan including sufficient detail to demonstrate the process. • The code will provide a partially functional solution to the whole problem, but with significant inefficiencies or minor error. **[4 - 5]**	• Fully detailed evidence of development for a fully functional solution. • 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. • Provide a clear and detailed commentary on the process. • The code will produce an efficient solution to the problem. **[6 - 7]**

0 marks = no response or no response worthy of credit

Testing **AO2 – 10**	• Some evidence of testing in the form of output from the system but with no real structure. • Limited evidence of testing by others. • Testing will be limited to a single situation. **[1 - 3]**	• There is evidence of testing covering aspects of the design specification. • There is some evidence of testing by others. • The system will have been tested in more than one situation. **[4 - 7]**	• The testing covers as many different paths through the system as is feasible, including normal, abnormal and extreme cases. • The testing covers all aspects of the design. • There is clear evidence of testing by others. • The system will have been tested in various situations and evaluated for use in the target situation. **[8 - 10]**
Evaluation **AO3 – 10**	• Some description of what the system can do with limited reference to test evidence. • There will be some comments on others' and their own input into group work. • The evaluation may be simplistic with little or no relevance. • Little or no use of specialist terms. • Errors of grammar, punctuation and spelling may be intrusive. **[1 - 3]**	• There is some description of what the system can do and limitations of the system supported by test evidence. • This description will be related back to the design specification. • They will have commented on their own and others' contribution to any group work and how it was useful. • For the most part the information will be relevant and presented in a structured and coherent format. • Specialist terms will be used appropriately and for the most part correctly. • There may be occasional errors in grammar, punctuation and spelling. **[4 - 5]**	• There is a full description of what the system can do covering all aspects of the design specification. • Limitations of the system will be identified and there will be evidence to show how these have been, or could be, dealt with following the testing stage. • They will provide an evaluation on their own and others' contribution to any group activities. • The evaluation will be relevant, clear, organised and presented in a structured and coherent format. • Specialist terms will be used correctly and appropriately. • There will be few, if any, errors in grammar, punctuation and spelling. **[6 - 7]**

0 marks = no response or no response worthy of credit

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.

The sample of work which is presented to the moderator for moderation must show how the marks have been awarded in relation to the marking criteria defined in Section 4.3.3.

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.

4.4 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.

The OCR GCSE ICT units B062, B064 and B065 can be submitted electronically to the OCR Repository via Interchange: please check Section 7.4 or unit entry codes for the OCR Repository.

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.

5.1   Free resources available from the OCR website

The following materials will be available on the OCR website.

- GCSE ICT Specification
- specimen assessment materials for each unit
- Guide to controlled assessment
- Teacher's Handbook
- sample schemes of work and lesson plans for each unit.

5.2   Other resources

OCR offers centres a wealth of high quality published support with a fantastic choice of 'Official Publisher Partner' and 'Approved Publication' resources, all endorsed by OCR for use with OCR specifications.

OCR works in close collaboration with three Publisher Partners – Hodder Education, Heinemann and Oxford University Press (OUP) – to ensure centres have access to:

- published support, available when it is needed, tailored to OCR specifications
- high quality resources produced in consultation with OCR subject teams, which are linked to OCR's teacher support materials
- more resources for specifications with lower candidate entries
- materials that are subject to a thorough quality assurance process to achieve endorsement.

OCR | HODDER EDUCATION
RECOGNISING ACHIEVEMENT
Official Publisher Partnership

Hodder Education is the publisher partner for OCR GCSE ICT.

OCR still endorses other publisher materials, which undergo a thorough quality assurance process to achieve endorsement. By offering a choice of endorsed materials, centres can be assured of high quality support for all OCR qualifications.

5.3   Training

OCR will offer a range of support activities for all practitioners throughout the lifetime of the qualifications to ensure they have the relevant knowledge and skills to deliver the qualification.

Please see Event Booker for further information.

5.4 OCR support services

5.4.1 Active Results

Active Results is available to all centres offering OCR's GCSE ICT specifications.

activeresults

Active Results is a free results analysis service to help teachers review the performance of individual candidates or whole schools.

Data can be analysed using filters on several categories such as gender and other demographic information, as well as providing breakdowns of results by question and topic.

Active Results allows you to look in greater detail at your results:

- richer and more granular data will be made available to centres including question level data available from e-marking

- you can identify the strengths and weaknesses of individual candidates and your centre's cohort as a whole

- our systems have been developed in close consultation with teachers so that the technology delivers what you need.

Further information on Active Results can be found on the OCR website.

5.4.2 OCR ICT support team

A direct number gives access to a dedicated and trained support team handling all queries relating to GCSE ICT - 0300 500 4848.

5.4.3 OCR Interchange

OCR Interchange has been developed to help you to carry out day-to-day administration functions online, quickly and easily. The site allows you to register and enter candidates online. In addition, you can gain immediate and free access to candidate information at your convenience. Sign up on the OCR website.

6.1   Equality Act information relating to GCSE ICT

GCSEs often require assessment of a broad range of competences. This is because they are general qualifications and, as such, prepare candidates for a wide range of occupations and higher level courses.

The revised GCSE qualification and subject criteria were reviewed by the regulators in order to identify whether any of the competences required by the subject presented a potential barrier to any disabled candidates. If this was the case, the situation was reviewed again to ensure that such competences were included only where they were essential to the subject. The findings of this process were discussed with disability groups and with disabled people.

Reasonable adjustments are made for disabled candidates in order to enable them to access the assessments and to demonstrate what they know and can do. For this reason, very few candidates will have a complete barrier to the assessment. Information on reasonable adjustments is found in *Access Arrangements, Reasonable Adjustments and Special Consideration* by the Joint Council www. jcq.org.uk

Candidates who are unable to access part of the assessment, even after exploring all possibilities through reasonable adjustments, may still be able to receive an award based on the parts of the assessment they have taken.

The access arrangements permissible for use in these specifications are in line with Ofqual's GCSE subject criteria equalities review and are as follows:

	Yes/No	Type of assessment
Readers	Yes	All written and practical assessments
Scribes	Yes	All written and practical assessments
Practical assistants	Yes	For written assessments only. The practical assistant may switch on the computer and insert a disk at the candidate's instruction but must not perform any skill for which marks are credited.
Word processors	Yes	All written and practical assessments
Transcripts	Yes	All written and practical assessments
Oral language modifiers	Yes	All written and practical assessments
BSL signers	Yes	All written and practical assessments
Modified question papers	Yes	All written and practical assessments
Extra time	Yes	All written and practical assessments

6.2   Arrangements for candidates with particular requirements (including special consideration)

All candidates with a demonstrable need may be eligible for access arrangements to enable them to show what they know and can do. The criteria for eligibility for access arrangements can be found in the JCQ document *Access Arrangements, Reasonable Adjustments and Special Consideration*.

Candidates who have been fully prepared for the assessment but who have been affected by adverse circumstances beyond their control at the time of the examination may be eligible for special consideration. Centres should consult the JCQ document *Access Arrangements, Reasonable Adjustments and Special Consideration*.

In December 2011 the GCSE qualification criteria were changed by Ofqual. As a result, all GCSE qualifications have been updated to comply with the new regulations.

The most significant change for all GCSE qualifications is that, from 2014, unitised specifications must require that 100% of the assessment is terminal.

Please note that there are no changes to the terminal rule and re-sit rules for the January 2013 and June 2013 examination series:

- At least 40% of the assessment must be taken in the examination series in which the qualification is certificated.

- Candidates may re-sit each unit once before certification, i.e. each candidate can have two attempts at a unit before certification.

For full information on the assessment availability and rules that apply in the January 2013 and June 2013 examination series, please refer to the previous versions of these specifications GCSE ICT and GCSE (Short Course) ICT (November 2009) available on the website.

The sections below explain in more detail the rules that apply from the June 2014 examination series onwards.

7.1 Availability of assessment from 2014

There is one examination series available each year in June (all units are available each year in June).

GCSE ICT certification is available in June 2014 and each June thereafter.

GCSE (Short Course) ICT certification is available in June 2014 and each June thereafter.

	Unit B061	Unit B062	Unit B063	Unit B064	Unit B054	Certification availability
June 2014	✓	✓	✓	✓	✓	✓
June 2015	✓	✓	✓	✓	✓	✓

7.2 Certification rules

For GCSE ICT and GCSE (Short Course) ICT, from June 2014 onwards, a 100% terminal rule applies. Candidates must enter for all their units in the series in which the qualification is certificated.

GCSE ICT and GCSE (Short Course) ICT can be certificated concurrently if all units are taken in the same series.

Candidates who have claimed GCSE (Short Course) ICT and decide to move on to GCSE ICT will need to re-take all of the GCSE (Short Course) ICT units alongside the additional units required for GCSE ICT. The new results for the units that have been re-taken will then be used to calculate the GCSE ICT grade. Any results previously achieved cannot be re-used.

7.3   Rules for re-taking a qualification

Candidates may enter for the qualification an unlimited number of times.

Where a candidate re-takes a qualification, **all** units must be re-entered and all externally assessed units must be re-taken in the same series as the qualification is re-certificated. The new results for these units will be used to calculate the new qualification grade. Any results previously achieved cannot be re-used.

For each of the controlled assessment units, candidates who are re-taking a qualification can choose either to re-take that controlled assessment unit or to carry forward the result for that unit that was used towards the previous certification of the same qualification.

•   Where a candidate decides to re-take the controlled assessment, the new result will be the one used to calculate the new qualification grade. Any results previously achieved cannot be re-used.

•   Where a candidate decides to carry forward a result for controlled assessment, they must be entered for the controlled assessment unit in the re-take series using the entry code for the carry forward option (see section 7.4).

7.4   Making entries

7.4.1   Unit entries

Centres must be approved to offer OCR qualifications before they can make any entries, including estimated entries. It is recommended that centres apply to OCR to become an approved centre well in advance of making their first entries. Centres must have made an entry for a unit in order for OCR to supply the appropriate forms and administrative materials.

It is essential that correct unit entry codes are used when making unit entries.

For the controlled assessment units, centres can decide whether they want to submit candidates' work for moderation through the OCR Repository or by post. Candidates submitting controlled assessment must be entered for the appropriate unit entry code from the table below. Candidates who are re-taking the qualification and who want to carry forward the controlled assessment should be entered using the unit entry code for the carry forward option.

Centres should note that controlled assessment tasks can still be completed at a time which is appropriate to the centre/candidate. However, where tasks change from year to year, centres would have to ensure that candidates had completed the correct task(s) for the year of entry.

Unit entry code	Component code	Assessment method	Unit title
B061B	02	Written paper	*ICT in today's world*
B062A	01	Moderated via OCR Repository	*Practical applications in ICT*
B062B	02	Moderated via postal moderation	
B062C	80	Carried forward	
B063B	02	Written paper	*ICT in context*
B064A	01	Moderated via OCR Repository	*Creative use of ICT*
B064B	02	Moderated via postal moderation	
B064C	80	Carried forward	
B065A	01	Moderated via OCR Repository	*Coding a solution*
B065B	02	Moderated via postal moderation	
B065C	80	Carried forward	

7.4.2 Certification entries

Candidates must be entered for qualification certification separately from unit assessment(s). If a certification entry is **not** made, no overall grade can be awarded.

Candidates may be entered for one or both of the following:

- GCSE ICT certification code J461

- GCSE (Short Course) in ICT certification code J061.

7.5 Enquiries about results

Under certain circumstances, a centre may wish to query the result issued to one or more candidates. Enquiries about results for GCSE units must be made immediately following the series in which the relevant unit was taken and by the relevant enquiries about results deadline for that series.

Please refer to the JCQ *Post-Results Services* booklet and the OCR *Admin Guide: 14–19 Qualifications* for further guidance on enquiries about results and deadlines. Copies of the latest versions of these documents can be obtained from the OCR website at www.ocr.org.uk.

7.6 Prohibited qualifications and classification code

Every specification is assigned a national classification code indicating the subject area to which it belongs. The classification code for these specification is 2650.

Centres should be aware that candidates who enter for more than one GCSE qualification with the same classification code will have only one grade (the highest) counted for the purpose of the School and College Performance Tables.

Centres may wish to advise candidates that, if they take two specifications with the same classification code, colleges are very likely to take the view that they have achieved only one of the two GCSEs. The same view may be taken if candidates take two GCSE specifications that have different classification codes but have significant overlap of content. Candidates who have any doubts about their subject combinations should seek advice, either from their centre or from the institution to which they wish to progress.

8.1 Overlap with other qualifications

This qualification includes an optional unit that allows candidates to carry out some computer programming. There is consequently an overlap with OCR's GCSE in Computing. These are, however, distinct qualifications and the optional programming unit within this ICT qualification does not appear within the OCR Computing specification. Candidates may wish to take both specifications.

There are a number of other qualifications that share some common content with these specifications, but which have distinct purposes and contexts. OCR's Level 1 and 2 Nationals in ICT provide accreditation for ICT skills with a greater emphasis on the practical, rather than the theoretical. OCR's Principal Learning qualifications in IT at Levels 1 and 2 (which can form part of the Levels 1 and 2 Diplomas in IT) provide a more contextualised, applied and business-focused approach to IT. OCR also offers a range of IT qualifications aimed specifically at skills for the workplace, such as iMedia, ITQ, CLAIT and iPro. Centres are encouraged to consult the OCR website in order to identify the best ICT qualification for their particular candidates.

8.2 Progression from this qualification

GCSE qualifications are general qualifications that enable candidates to progress either directly to employment or to proceed to further qualifications.

Progression to further study from GCSE will depend upon the number and nature of the grades achieved. Broadly, candidates who are awarded mainly Grades D to G at GCSE could either strengthen their base through further study of qualifications at Level 1 within the National Qualifications Framework or could proceed to Level 2. Candidates who are awarded mainly Grades A* to C at GCSE would be well prepared for study at Level 3 within the National Qualifications Framework.

8.3 Avoidance of bias

OCR has taken great care in preparation of these specifications and assessment materials to avoid bias of any kind. Special focus is given to the 9 strands of the Equality Act with the aim of ensuring both direct and indirect discrimination is avoided.

8.4 Code of Practice/Common criteria requirements/Subject criteria

These specifications comply in all respects with the current: *General Conditions of Recognition; GCSE, GCE, Principal Learning and Project Code of Practice; GCSE Controlled Assessment Regulations* and the *GCSE subject criteria for ICT*. All documents are available on the Ofqual website.

8.5 Language

These specifications and associated assessment materials are in English only. Only answers written in English will be assessed.

8.6   Spiritual, moral, ethical, social, legislative, economic and cultural issues

The short course specification offers opportunities that can contribute to an understanding of these issues in the following topics:

Issue	Opportunities for developing an understanding of the issue during the course
Spiritual issues	Unit B061 Section 2.1.9
Moral issues	Unit B061 Sections 2.1.1; 2.1.2; 2.1.5; 2.1.6; 2.1.9
	Unit B062 Sections 2.2.1; 2.2.2; 2.2.5
Ethical issues	Unit B061 Section 2.1.6
Social issues	Unit B061 Sections 2.1.6; 2.1.8; 2.1.9
	Unit B062 Sections 2.2.1; 2.2.2
Legislative issues	Unit B061 Section 2.1.6
Economic issues	Unit B061 Section 2.1.9
Cultural issues	Unit B061 Section 2.1.9

The full course specification offers opportunities which can contribute to an understanding of these issues in the following topics:

Issue	Opportunities for developing an understanding of the issue during the course
Spiritual issues	Unit B061 Section 2.1.9
	Unit B063 Section 2.3.8 and 2.3.10
Moral issues	Unit B061 Sections 2.1.1; 2.1.2; 2.1.5; 2.1.6; 2.1.9
	Unit B062 Sections 2.2.1; 2.2.2; 2.2.5
	Unit B063 Sections 2.3.8; 2.3.9; 2.3.10
Ethical issues	Unit B061 Section 2.1.6
	Unit B063 Section 2.3.8
Social issues	Unit B061 Sections 2.1.6; 2.1.8; 2.1.9
	Unit B062 Sections 2.2.1; 2.2.2
	Unit B063 Sections 2.3.4; 2.3.5; 2.3.8; 2.3.10
	Unit B064 Section 2.4.6
	Unit B065 Section 2.5.6
Legislative issues	Unit B061 Section 2.1.6
	Unit B063 Section 2.3.8
Economic issues	Unit B061 Section 2.1.9
	Unit B063 Section 2.3.8
Cultural issues	Unit B061 Section 2.1.9
	Unit B063 Sections 2.3.8; 2.3.10

8.7 Sustainable development, health and safety considerations and European developments, consistent with international agreements

The short course specification supports these issues, consistent with current EU agreements, as outlined below.

Issue	Opportunities for developing an understanding of the issue during the course
Sustainable development	Unit B061 Section 2.1.6
Health and safety considerations	Unit B061 Sections 2.1.2; 2.1.6, Unit B062 Section 2.2.2
European developments	Unit B061 Sections 2.1.5; 2.1.6

The full course specification supports these issues, consistent with current EU agreements, as outlined below.

Issue	Opportunities for developing an understanding of the issue during the course
Sustainable development	Unit B061 Section 2.1.6 Unit B063 Section 2.3.1
Health and safety considerations	Unit B061 Sections 2.1.2; 2.1.6, Unit B062 Section 2.2.2 Unit B063 Section 2.3.9 Unit B064 Section 2.4.2 Unit B065 Section 2.5.3
European developments	Unit B061 Sections 2.1.5; 2.1.6 Unit B063 Section 2.3.8

8.8 Key Skills

These specifications provides opportunities for the development of the Key Skills of *Communication*, *Application of Number*, *Information and Communication Technology*, *Working with Others*, *Improving Own Learning* and *Performance and Problem Solving* at Levels 1 and/or 2. However, the extent to which this evidence fulfils the Key Skills criteria at these levels will be totally dependent on the style of teaching and learning adopted for each unit.

The following table indicates where opportunities may exist for at least some coverage of the various Key Skills criteria at Levels 1 and/or 2 for each unit.

Unit	C		AoN		ICT		WwO		IoLP		PS	
	1	2	1	2	1	2	1	2	1	2	1	2
B061	✓	✓	✓	✓	✓	✓						
B062	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B063	✓	✓	✓	✓	✓	✓						
B064	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B065	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Appendix A: 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 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. 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.

A 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)

YOUR CHECKLIST

Our aim is to provide you with all the information and support you need to deliver our specifications.

✔ Bookmark **www.ocr.org.uk/gcse2012**

✔ Be among the first to hear about support materials and resources as they become available. Register for email updates at **www.ocr.org.uk/updates**.

✔ Book your inset training place online at **www.ocreventbooker.org.uk**

✔ Learn more about active results at **www.ocr.org.uk/activeresults**

✔ Join our ICT social network community for teachers at **www.social.ocr.org.uk**

NEED MORE HELP?

Here's how to contact us for specialist advice:

Phone: **01223 553998**

Email: **general.qualifications@ocr.org.uk**

Online: **http://answers.ocr.org.uk**

Fax: **01223 552627**

Post: **Customer Contact Centre, OCR, Progress House, Westwood Business Park, Coventry CV4 8JQ**

WHAT TO DO NEXT

Become an approved OCR centre – if your centre is completely new to OCR and has not previously used us for any examinations, visit **www.ocr.org.uk/centreapproval** to become an approved OCR centre.

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