



**For teaching from 2010
For awards from 2011**

**INFORMATION AND COMMUNICATION
TECHNOLOGY**

SPECIMEN ASSESSMENT MATERIALS

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GCSE

4331/01

INFORMATION AND COMMUNICATION TECHNOLOGY

INFORMATION AND COMMUNICATION TECHNOLOGY
(SHORT COURSE)

UNIT 1 Understanding ICT

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. Where the space is not sufficient for your answer, continue the answer at the back of the book, taking care to number the continuation correctly.

INFORMATION FOR CANDIDATES

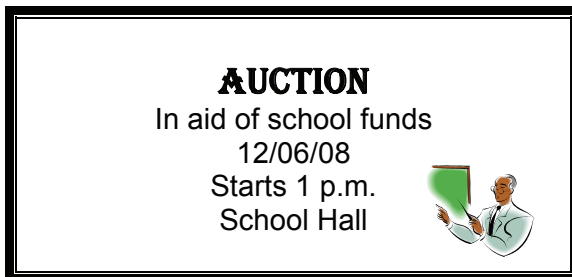
The number of marks is given in brackets at the end of each question or part-question.

The total number of marks for this paper is 80.

The quality of written communication will be assessed in question 8.

Answer all questions.

1. A school is designing a poster to advertise a fund raising auction. Part of this poster is shown below.



- (a) **CIRCLE** which of the following features was used to produce this poster. [3]

CLIPART BORDER ART RIGHT JUSTIFY CENTRE TEXT FULLY JUSTIFY

- (b) Give **one** feature of the software that could be used to detect spelling mistakes. [1]

.....

- (c) Other than DTP software, state **two** other *types* of software that could be used in organising the auction. Give an example of how each could be used. [6]

Type of software 1

Example of use

.....

.....

.....

Type of software 2

Example of use


.....

.....

.....

2. Complete the table below saying which is *data*, which is *information* and which is *knowledge*. [4]

The first one is done for you.

You were travelling at 31 mph and you have exceeded the 30 mile an hour speed limit	Knowledge
The Athlete who ran the race in 1 min and 15 seconds is the fastest	
	
1 min 20 seconds 1 min 15 seconds	
The athletes times are sorted into order 1 min 15 seconds 1 min 20 seconds	

3. A school PE department keeps a record of the fitness levels of its pupils on a computer database. Part of this database is shown below.

Pupil No	Name	Activity	Gender	Fitness test score	Date of Birth
474	Davies S	Rugby	M	6	12/12/94
387	Khan S	Running	F	11	04/09/95
210	Jones R	Aerobics	M	10	00/13/96
109	Robolski A	Rugby	M	12	15/09/94
078	Evans L	Running	F	13	17/04/96
321	Jones W	Running	M	9	04/07/96
045	Begum T	Aerobics	F	7	04/06/95
029	Smith R	Running	F	8	11/11/94
607	Adams Y	Rugby	F	5	19/03/95

- (a) 'Pupil No' is the keyfield. State the purpose of the keyfield. [1]

.....

- (b) The 'Gender' field contains a letter M or F. Describe **one** benefit of entering the data in this way? [2]

.....

- (c) The PE department want to find the details of all 'female runners'. Complete the table below to show how they can obtain this information from the database. [5]

Fieldname	Logical operator	Search criteria
	=	

AND

Fieldname	Logical operator	Search criteria

- (d) The PE department sorts the 'Fitness test score' into descending order. Whose name would appear at the top of the list? [1]

.....

(e) The phrase GIGO (Garbage In Garbage Out) is often used when referring to data.

(i) Give an example of GIGO from the fitness database shown on the previous page. [1]

(ii) Describe how this mistake could have happened and describe a method of preventing the mistake. [3]

(f) The computer database takes up less storage space in the PE office. Describe using examples, **two other** advantages to the PE department of keeping this data on a computer database. [4]

Advantage 1

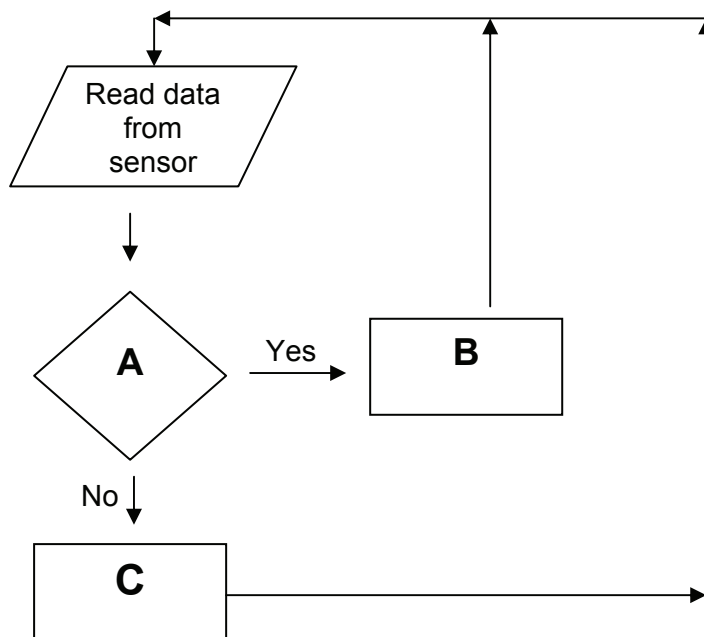
Example

Advantage 2

Example

4. A Modern house has a computer controlled environment.
- (a) A central heating system is used to keep the rooms at a temperature of 18 ° C.

A diagram of the system is shown below.



Complete the table giving suitable processes for the letters A, B, C indicated in the diagram.

[3]

A	
B	
C	

(b) The house has a burglar alarm system. Name **three** types of sensor which could be used in the burglar alarm to detect unauthorised entry into the house and for **each** describe a *different* way it could be used. [6]

Sensor 1.....

Use

.....

.....

Sensor 2.....

Use

.....

.....

Sensor 3.....

Use

.....

.....

5. A teacher has recorded details of test scores for a class. Part of the spreadsheet is shown below.

	A	B	C	D	E	F	G
1	Firstname	Surname	Test 1	Test 2	Test 3	Test 4	Total
2	Christopher	BANNISTER	93	100	93	76	362
3	Adam	PRINCE	87	87	73	77	324
4	Danielle	HIGHAM	93	73	80	69	315
5	Corinna	VALENTINE	67	73	87	84	311
6	Helen	SANDERSON	73	87	80	57	297
7	Michael	HARRISON	73	80	80	63	296
8	Ceri	MOULDER	80	53	67	75	275
9	Christopher	BELLIS	93	33	73	67	266
10	Edward	CHAN	67	15	73	74	229
11	Ian	O'ROURKE	73	20	53	79	225
12	Adam	STUBBS	80	0	80	48	208
13	Sian	PAULSON	60	33	60	51	204
14	Leanne	RATCLIFFE	53	15	67	66	201
15	Asif	KHAN	33	27	67	72	199
16	Average						

- (a) Which of the following formulas could be used to give the **Total** in Cell **G2**? [1]

- A = B2+C2+D2+E2+F2
- B = SUM(A2:B2)
- C = SUM(C2:F2)
- D = SUM(C2*F2)

.....

- (b) Give a suitable formula for working out the **Average** in Cell **C16**. [2]

=.....

- (c) State the data in cell **C3**. [1]

.....

- (d) Give **two specific** advantages of using a spreadsheet to work out the totals. [2]

Advantage 1

.....

.....

Advantage 2

.....

.....

6. Teachers in a school use many features of *email* (electronic mail).

(a) Give a definition of email. [2]

.....
.....

(b) The teachers use email *attachments* and they also send *carbon copy* emails. Define what is meant by these features and give a suitable example of how a teacher might use them in their work.

(i) Email attachment [3]

Definition

Example of use

(ii) Carbon copy emails [3]

Definition

Example of use

7. It is now possible to book air travel tickets and theatre tickets on-line from home.

(a) Other than name, address or telephone number give **three** other essential items of data that would be stored in most on-line booking systems. [3]

(i)

(ii)

(iii)

(b) Describe **two** advantages of using an on-line booking system. [4]

Advantage 1

.....
.....

Advantage 2

.....
.....

(c) Describe **two** disadvantages of using an on-line booking system. [4]

Disadvantage 1

.....
.....

Disadvantage 2

.....
.....



GCSE




4331/01

INFORMATION AND COMMUNICATION TECHNOLOGY

INFORMATION AND COMMUNICATION TECHNOLOGY
(SHORT COURSE)

UNIT 1 Understanding ICT

Mark Scheme

1(a)	Clip art, Centre text, Border art	3																												
1(b)	Spell Check	1																												
1(c)	One mark for each software type (no brand names) One mark for each statement of example of use plus one mark for expansion.	1 x 2																												
	<table border="0"> <tr> <td><u>Type of software</u></td> <td><u>Example of Use</u></td> <td><i>Accept any reasonable answer e.g.</i></td> </tr> <tr> <td>Database</td> <td>Store details of goods (1) and to whom sold (1)</td> <td></td> </tr> <tr> <td>Spreadsheet</td> <td>Store details of prices paid (1) to work out profit (1)</td> <td></td> </tr> <tr> <td>Web authoring</td> <td>Create web pages (1) to advertise event on school website (1)</td> <td></td> </tr> <tr> <td>Control</td> <td>Security alarms (1) to protect auction items(1)</td> <td></td> </tr> <tr> <td>Word processing</td> <td>Write invitation letters / leaflet (1) to publicise auction (1)</td> <td></td> </tr> <tr> <td>Presentation software</td> <td>Create display catalogue (1) of goods to be sold (1)</td> <td></td> </tr> <tr> <td>Email</td> <td>Send details of auction (1) to people in contacts list (1)</td> <td></td> </tr> <tr> <td>Graphics</td> <td>Manipulating images of items (1) for inclusion on web page (1)</td> <td></td> </tr> </table> <p>Do not give repeated list</p>	<u>Type of software</u>	<u>Example of Use</u>	<i>Accept any reasonable answer e.g.</i>	Database	Store details of goods (1) and to whom sold (1)		Spreadsheet	Store details of prices paid (1) to work out profit (1)		Web authoring	Create web pages (1) to advertise event on school website (1)		Control	Security alarms (1) to protect auction items(1)		Word processing	Write invitation letters / leaflet (1) to publicise auction (1)		Presentation software	Create display catalogue (1) of goods to be sold (1)		Email	Send details of auction (1) to people in contacts list (1)		Graphics	Manipulating images of items (1) for inclusion on web page (1)		2 x 2	10
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2	1 mark for each correct answer	4																												
	<table border="1"> <tr> <td>You were travelling at 31 mph and you have exceeded the 30 mile an hour speed limit</td> <td>Knowledge</td> </tr> <tr> <td>The Athlete who ran the race in 1 min and 15 seconds is the fastest</td> <td>Knowledge</td> </tr> <tr> <td></td> <td>Data</td> </tr> <tr> <td>1 min 20 seconds 1 min 15 seconds</td> <td>Data</td> </tr> <tr> <td>The athletes times are sorted into order 1 min 15 seconds 1 min 20 seconds</td> <td>Information</td> </tr> </table>	You were travelling at 31 mph and you have exceeded the 30 mile an hour speed limit	Knowledge	The Athlete who ran the race in 1 min and 15 seconds is the fastest	Knowledge		Data	1 min 20 seconds 1 min 15 seconds	Data	The athletes times are sorted into order 1 min 15 seconds 1 min 20 seconds	Information		4																	
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3(a)	Gives unique identifier / unique identity	1																												
3(b)	One mark for statement, second mark for expansion e.g. Consistency of data/ Fewer errors (1) typing in one letter rather than the whole word (1) NOT 'Less errors' It is easier to do searches (1) on standardised data (1). Faster to enter data (1) Saves memory/storage space (1) NOT 'space' by itself. NOT 'Saves space.' Security issue if qualified	2																												
3(c)	One mark for each correct element. Activity Running Gender = F <i>Spelling in search criteria must be correct. Accept like / equals</i>	5																												
3(d)	Evans L / L Evans / Evans	1																												

3(e)(i)	00/13/96 or explanation of it. NOT just 'Date of Birth'.	1																	
(ii)	<p>One mark for how it could have happened e.g. Typed in 00/13 not 01/03 or transposition error or transcription error NOT just 'typing error'/ 'typed in wrong date' <i>Allow American format</i></p> <p>One mark for stating prevention plus a further mark for expansion e.g. Range check <i>or description</i> Drop list for month Set date properties on field <i>Any reasonable answer but must not be vague</i></p>	1																	
3(f)	<p>One mark each for identifying two process advantages and one mark if they relate it to / illustrate with an appropriate example from the database. NOT general advantages of using a computer e.g. increased security through password protection (needs qualification as in database) NOR saves office space.</p> <table border="0" data-bbox="225 824 1233 1093"> <tr> <td>Advantage</td> <td>Example</td> </tr> <tr> <td>Faster / easier to update</td> <td>fitness scores / members details</td> </tr> <tr> <td>Variety of output reports</td> <td>graph of fitness</td> </tr> <tr> <td>Faster to / easier to search for clients</td> <td>date of birth</td> </tr> <tr> <td>Faster to / easier to sort on</td> <td>to find the fittest</td> </tr> <tr> <td>Mail merge</td> <td>letters to member about a new course</td> </tr> <tr> <td>Validation techniques</td> <td>reduce data entry errors</td> </tr> <tr> <td>Database security</td> <td>can set a password on the database</td> </tr> </table> <p>NOT 'easier to sort' / 'easier to search' unless well qualified NOT 'more secure' or if security could apply to computer system Any reasonable answer.</p>	Advantage	Example	Faster / easier to update	fitness scores / members details	Variety of output reports	graph of fitness	Faster to / easier to search for clients	date of birth	Faster to / easier to sort on	to find the fittest	Mail merge	letters to member about a new course	Validation techniques	reduce data entry errors	Database security	can set a password on the database	2 x 2	17
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Faster / easier to update	fitness scores / members details																		
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4(a)	<table border="1" data-bbox="225 1240 828 1346"> <tr> <td>A</td> <td>e.g. Is temperature below 18°C</td> </tr> <tr> <td>B</td> <td>e.g. turn on boiler</td> </tr> <tr> <td>C</td> <td>e.g. turn off boiler</td> </tr> </table>	A	e.g. Is temperature below 18°C	B	e.g. turn on boiler	C	e.g. turn off boiler	3											
A	e.g. Is temperature below 18°C																		
B	e.g. turn on boiler																		
C	e.g. turn off boiler																		
4(b)	<p>1 mark for each sensor and 1 mark for each description Any three of e.g.</p> <table border="0" data-bbox="225 1451 1297 1749"> <tr> <td>Light beam (PIR)</td> <td>In hall/room, contacts computer when beam is broken</td> </tr> <tr> <td>Pressure pad</td> <td>On floor in front of door/below a window which sends signal when stepped on</td> </tr> <tr> <td>Heat</td> <td>Detects a rise in room temperature due to a body being present</td> </tr> <tr> <td>Movement detector</td> <td>On wall, sends a signal when movement is detected</td> </tr> <tr> <td>Filament</td> <td>In window/door, glass sends signal when broken</td> </tr> <tr> <td>Make/break contact</td> <td>On door/window frame, sends signal when door/window opened</td> </tr> </table>	Light beam (PIR)	In hall/room, contacts computer when beam is broken	Pressure pad	On floor in front of door/below a window which sends signal when stepped on	Heat	Detects a rise in room temperature due to a body being present	Movement detector	On wall, sends a signal when movement is detected	Filament	In window/door, glass sends signal when broken	Make/break contact	On door/window frame, sends signal when door/window opened	3 x 2	9				
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5(a)	C or =SUM(C2:F2)	1	
5(b)	=AVE(C2:C15) one mark for AVE() one mark for C2:C15	2	
5(c)	87	1	
5(d)	Any two of: Accurate calculations Save formula and data Automatic recalculation Can quickly sort the data Replicate if qualified NOT quicker. NOT general advantages of a computer Any reasonable answer	2	6
6(a)	Messages sent between computers (1) across networks / via Internet (1) Electronic messaging systems (1) NOT 'messages sent by a computer'	2	
6(b)(i)	One mark for definition plus up to two marks for relevant example of use with expansion. File /document/picture/sound/video sent with an email/included in an email Plan of lesson / Scheme of work (1) to Headteacher / hod for review (1) Spreadsheet of exam entries (1) to exams office (1) Report to parents (1) on pupil achievement/attendance (1) Homework tasks (1) to absent students (1) Any reasonable answer	3	
6(b)(ii)	One mark for definition plus up to two marks for relevant example of use with expansion. Same email sent to more than one person at same time. Send scheme of work (1) to all other teachers/hod for comments (1) Send homework (1) to all members of class (1) Send minutes/agenda of meeting (1) to colleagues (1) Send reference copy of letter (1) to headteacher/secretary/school office (1) <i>Any reasonable answer</i>	3	8
7(a)(i) – (iii)	<i>Any three reasonable answers e.g.</i> Dates of show/travel, venue/destination, cost/amount paid, method of payment, email address	3	
7(b)	One mark for each advantage plus further mark for expansion. Advantages for customer e.g. Cheaper to book direct (1) Check availability and prices (1) from a range of places (1) Read reports of people who have been (1) Less chance of error (1) Advantages for Travel Company/Theatre e.g. Don't need to pay (1) commission to agents (1) Don't need to pay (1) staff to input data (1) Savings can be passed on to customer (1)	2 x 2	
7(c)	One mark for each disadvantage plus further mark for expansion. Disadvantages e.g. Booking/Travel Agencies may close (1) causing unemployment (1) Package tours may die out (1) people create their own holiday package (1) Not everyone has the facilities at home (1)	2 x 2	11

8	<p>The quality of written communication is assessed in this response.</p> <p>Candidates may include some of the following: e-mail, teleconferencing, scanning presentations, databases, spreadsheet, registration, intranet, extranet, networks, internet, vpn, edi file transfer, swipe cards in canteen, electronic newsletter / bulletin boards, digital copiers, fibre optic / broadband, text messaging</p> <p>Advantages e.g. paper costs are lower, searching, sorting is quicker, reduction in the cost of hardware, saves space in the office range of work has increased, helping the environment, secure because of backup</p> <p>Disadvantages e.g. cost of installing, data might be less secure, staff training, change in working practices, viruses, power cut (qualified), hacking (qualified)</p> <p>The description of any of the points could be extended with more detail to gain an extra mark and use of good examples can also gain extra marks. Candidates must give at least one advantage and one disadvantage to gain maximum marks.</p> <p>10 -15 Candidates give a clear, coherent answer describing four ways ICT has helped development and included four or more advantages or disadvantages. They use appropriate terminology and accurate spelling, punctuation and grammar.</p> <p>5 - 9 Candidates describe some ways ICT has helped this development and include some advantages or disadvantages, but responses lack clarity. There are a few errors in spelling, punctuation and grammar.</p> <p>1 - 4 Candidates simply list a range of points or give a brief explanation of one or two with few if any advantages or disadvantages. The response lacks clarity and there are significant errors in spelling, punctuation and grammar.</p> <p>0 Response not worthy of credit.</p>	15	15
Total			80



GCSE

4332/01

INFORMATION AND COMMUNICATION TECHNOLOGY

Unit 2 CONTROLLED ASSIGNMENT

INSTRUCTIONS TO CANDIDATES

Read the given scenario.

You will have 22½ hours to complete these tasks.

It is important that you work independently from other candidates and make sure that what you hand in is your own unaided work.

Read the tasks carefully to make sure that you understand what is needed.

Carry out all tasks and make sure that you check your work carefully to ensure that the work you produce is accurate and correct.

Save your work regularly.

INFORMATION FOR CANDIDATES

Teachers and students will be required to sign a declaration that all work presented is the work of the candidate alone. Failure to authenticate the work may result in grades being delayed or refused.

The quality of written communication will be assessed in your evaluation.

Healthy Eating

The local authority are targeting young adults in an effort to promote healthy eating. They will be visiting local schools and youth organisations to give a series of presentations and lectures entitled '**Healthy Eating**'. Your school will be setting up a new '**Snack Shop**' selling healthy items for pupils to buy before and after school and during break times.

In order to prepare for this series of lectures you have been asked to:

- (i) produce a screen-based presentation to inform teenagers aged 13-16 about healthy eating which will be used in the lectures.
- (ii) import a datafile with contact details and addresses and add suitable extra fields for schools and youth organisations which can be used to produce lists.
- (iii) produce a letter to send to the contact person at each school or youth organisation.
- (iv) produce a model showing how computer software could be used to help in running the new Snack Shop in your school.

In connection with the above, you are required to use ICT hardware and software applications for the following:

Task 1 Produce a screen based presentation using **either** web pages **or** a slide based show giving teenagers aged 13 – 16 years information about healthy eating.

Task 2 Import the given datafile and add suitable fields so it can be used by the local authority to search for, sort and print relevant data about local schools and youth organisations.

You will need to add a key field and other fields for the names of the organisations and the day, either Thursday or Saturday, they are available for the presentation. Think about what data you need to use and where you can find it.

Add the new fields to your datafile, using appropriate field names, data types and validation and enter the information.

Sort the data and use a simple and complex search to produce lists for a sensible purpose.

Credit will be given for use of an appropriate variety of features of the software.

Task 3 Produce a mail merge letter to the contact person at each school or youth organisation informing them about the healthy eating campaign.

Task 4 Produce a computer model demonstrating how a software application could be used to work out the profit or loss for the new Snack Shop.

Think about what data you need to use and where you can find it.

Carry out research to find costs. Make sure they are accurate and up-to-date.

Create your model using suitable data plus appropriate formulas and cell referencing.

Investigate the effect of different prices or profit margins in setting the selling prices by changing both data and a formula in your model.

Use an appropriate chart to show the result of one of your investigations.

Credit will be given for use of an appropriate variety of functions or features of the software.

Task 5 An email to a friend attaching a copy of the presentation asking for their opinions.

Task 6 Produce an evaluation of your own and others' work. You should include comments on:

- how you planned your work
- tools and techniques and research methods used
- review of feedback given and received
- changes made after receiving feedback
- the documents and presentations produced
- suggestions for improvement.

You should take some time to think about and plan what you have to do.

Keep a list of the sources you use and remember to check copyright.

Whilst completing these tasks you should make sure that you follow safe and secure practice, especially when saving or backing up your work.

Your teacher will give you a datafile for use in Task 2.

GUIDANCE FOR CANDIDATES

Your work for this assignment will be marked by the school and moderated externally against the following assessment scheme.

Unit 2 Solving Problems with ICT Outline Scheme of Assessment	
File handling	5
Research and data collection	6
Email	6
Communication information	16
Modelling	16
Data handling	16
Evaluation	15
Total	80

Datafile for use in Task 3

This file will be issued to centres electronically to be made available to candidates for use in the controlled assignment.

Mrs, Sophie, Bransbury, 12 Gilbert Place, Swansea, SA788HS, (01792) 138683
Miss, Cathy, Gravell, 19 Albion Street, Swansea, SA431MV, (01792) 858887
Mr, Will, Bray, 175 Corporation Street, Newport, NP256VN, (01633) 169255
Mr, Denis, Caine, 207 Pirory Road, Newport, NP454AZ, (01633) 890337
Mr, Glyn, Vale, 38 Mandville Road, Newport, NP699LD, (01633) 315586
Mr, Ryan, Haines, 16 Homeforge Street, Swansea, SA491CT, (01792) 842631
Mr, Adam, Williams, 47 Mountain Ash Road, Swansea, SA414MA, (01792) 510047
Mr, Chris, Edge, 75 First Avenue, Newport, NP104AN, (01633) 252087
Ms, Charlotte, Finch, 122 Chester Road, Newport, NP360NS, (01633) 480775
Mr, Benjamin, Lillycrop, 19 Clare Court, Swansea, SA331TX, (01792) 503138
Miss, Beth, Williams, 81 St Andrews Avenue, Swansea, SA231AU, (01792) 844151
Ms, Julia, Thomas, 56 Southgate Street, Swansea, SA263BC, (01792) 528806
Ms, Kadie, Szulczynski, 91 Amroth Way, Swansea, SA625UF, (01792) 836808
Miss, Lauren, Van, 38 Morgan Street, Newport, NP541JP, (01633) 207206
Ms, Lydia, Mitson, 62 Pool Crescent, Newport, NP189NM, (01633) 400474
Miss, Natasha, Hughes, 135 New Street, Swansea, SA437ZA, (01792) 869249
Mr, Rhys, Overton, 9 Tollgate Road, Swansea, SA621LA, (01792) 667005
Mr, Ryan, Ronlings, 3 Hickman Road, Newport, NP130EH, (01633) 666281
Miss, Sian, Webber, 80 Miskin Way, Newport, NP165FZ, (01633) 660017
Mr, Christopher, Williams, 31 Barnels Court, Newport, NP480KY, (01633) 134781
Mr, Daniel, Meyer, 8 Rock Villa Close, Swansea, SA702YM, (01792) 435741
Mrs, Doris, Nicholson, 21 Abbey Road, Newport, NP377IX, (01633) 170068
Mrs, Enid, Prickett, 28 Charles Street, Swansea, SA113LZ, (01792) 662813
Mrs, Zara, Williams, 76 Jeffery Terrace, Newport, NP237RL, (01633) 587512
Mr, Fergus, Reynolds, 17 Butchers Lane, Newport, NP220FA, (01633) 461222

Unit 2: Solving Problems with ICT

Controlled Assessment - Mark Scheme

<p>Quality of Written Communication</p> <p>The quality of written communication is assessed as an integral part of the candidate evaluation and not as a standalone element using the following specific criteria:</p> <ul style="list-style-type: none"> • legibility of text, accuracy of spelling, punctuation and grammar, clarity of meaning. • selection of a form and style of writing appropriate to purpose and to complexity of subject matter. • organisation of information clearly and coherently, use of specialist vocabulary where appropriate. 		
Mark Grid		Indicative Content
File handling - 5 marks		
5	The candidate: follows efficient and safe working practices with folders, subfolders and files. They consistently use sensible names and version management They adopt a backup strategy and make appropriate use of media to backup and store files safely including email groups and folders.	<p>The controlled assignment may specify details but candidates could include evidence of the following:</p> <ul style="list-style-type: none"> • use of folders, subfolders and files with evidence of at least two different folder operations • sensible naming of files and folders • backup work to an external device • version management • organise emails, groups and folders.
3-4	has used files and folders efficiently and there is some evidence of the use of sensible naming conventions, version management, backing up and use of media to secure data.	
1-2	has used files but may not use folders at all and does not name files and folders sensibly. There is little evidence of efficient or safe working practices, backing up or use of media.	
0	Not worthy of credit.	
Research and data collection - 6 marks		
5-6	The candidate: used a wide range of appropriate sources showing discrimination in selecting and downloading information which is accurate and fit for purpose for use in documents, files and worksheets. They have used techniques efficiently to refine searches and make it easy to return to useful sites.	<p>The controlled assignment may specify details but candidates could include evidence of the following:</p> <ul style="list-style-type: none"> • use of online information sources • use a url for a purpose • use search engines for different purposes • manage and use references to make it easier to find information again • download, organise and store different types of information • data collection from printed sources • data collection from other people.
3-4	used a range of appropriate sources to select and download relevant information which may be accurate or fit for purpose with some evidence of refining searches and organising information.	
1-2	used sources to collect information, some of which is relevant.	
0	Not worthy of credit.	

Email - 6 marks		
5-6	The candidate: can select and use software to open, create, send and respond to emails. Emails are accurate and fit for audience and purpose. They can open and add attachments and use a contacts list to send to a group	The controlled assignment may specify details but candidates could include evidence of the following where appropriate: <ul style="list-style-type: none"> • open email • save emails efficiently • create and send email • reply to email • send to a group • attach a file to an email • open attachment • use a contacts list – add amend and delete entry • forward an email • adapt style to suit purpose • contribute to blog or forum
3-4	can use software to open, create, send and respond to emails. Emails have few inaccuracies and are fit for audience or purpose. They can open and add attachments.	
1-2	can open, create and send emails.	
0	Not worthy of credit.	
Communicating Information - 16 marks		
12-16	The candidate: has developed a document and a presentation using appropriate content and features of the chosen software effectively. Accurate and plausible data has been entered and processed. Basic skills have been enhanced by the inclusion of a range of advanced skills to develop and format data effectively. They have used feedback from others to enhance their document and presentation so that they are fit for purpose and audience.	The controlled assignment may specify details but candidates could include evidence of the following: <ul style="list-style-type: none"> • first draft of a document • final version of same document • a presentation sequencing a set of events using different sources of data • use of appropriate page layout and formatting of data e.g. <ul style="list-style-type: none"> ○ fonts and sizes ○ simple formatting techniques e.g. bold, text alignment, colour fonts ○ word art or borders, autoshapes, simple tables or original templates ○ simple bullets or numbering ○ Insert, crop or resize and position an image fit for purpose • combine text with information in different forms <i>from a library</i> e.g. images, sound, Gif video • develop and format data e.g. <ul style="list-style-type: none"> ○ enhance tables with borders, cell merging, text direction or rotation, rotation or enhanced manipulation of images, customised bullets using <i>internal</i> facilities, numbering with subnumbering. ○ Use of formulas in a document e.g. invoices, etc. ○ Use a second different source for data e.g. digital image, sound, original graph, mailmerging, etc • headers and footers or page numbering or macros (<i>play and record macros</i>).
7-11	has developed a document and a presentation using appropriate content and a range of features of the chosen software. Accurate and plausible data has been entered and basic skills have been used with some advanced skills to develop, process and format data effectively. They have improved first drafts of their document and presentation but these may not be fully fit for purpose	
1-6	may have developed a document and a simple presentation but they are not fit for purpose and data may be inaccurate or implausible. Some basic skills have been used to process data but there is limited evidence.	
0	Not worthy of credit.	

Modelling - 16 marks		
12-16	The candidate: has developed a complex spreadsheet model which suits the given audience. Accurate and plausible data has been entered and processed. Basic skills have been enhanced by the inclusion of a range of advanced skills. Testing has been carried out to show that the model is fit for purpose with 'what if' investigations changing both data and formulas. The model demonstrates efficient use of the features of the software.	The controlled assignment may specify details but candidates could include evidence of the following: Development of the model. Data entry. A range of basic skills e.g. <ul style="list-style-type: none"> • formatting, e.g. currency, or % decimal places • use formula with single operator • simple function e.g. SUM, AVERAGE, MAX, MIN RAND, etc • relative referencing • creation of a chart with appropriate title, legend, axis labels and formatting. • 'what if' investigation changing data • 'what if' investigation changing formula.
7-11	has developed a spreadsheet model for the given audience. A range of basic and some advanced skills have been used to enter and process accurate and plausible data. Some calculations may not be efficient. Some testing has been carried out but the model may not be fully fit for purpose. A 'what if' investigation has been used.	A range of more advanced skills e.g. <ul style="list-style-type: none"> • enhanced layout and format of the spreadsheet • enhanced grids/borders, merged cell, text wrap, headers or footers, forms. • more advanced functions e.g. IF, LOOKUP and COUNT, etc. • absolute referencing • goal seek • pivot tables • macros.
1-6	has developed a spreadsheet model but data may be inaccurate or implausible. Some basic skills have been used to process data and there is limited evidence that the model has been tested using investigations to show it is fit for purpose.	Testing.
0	Not worthy of credit.	

Data handling – 16 marks		
12-16	The candidate: has imported data and used it in developing a datafile which suits the given audience. Accurate and plausible data has been entered and processed. Basic skills have been enhanced by the inclusion of a range of advanced skills. Testing has been carried out to show that the datafile is fit for purpose and can be used to search, sort, and print lists. The datafile demonstrates efficient use of the features of the software. Complex searches, sorts and validation are carried out for stated useful purposes.	The controlled assignment may specify details but candidates could include evidence of the following: Importing data from csv file. A range of basic skills e.g. <ul style="list-style-type: none"> • adding key field • adding fields with suitable fieldnames • adding suitable data types • adding suitable data • editing and deleting a record • obtaining information fit for purpose using sort • obtaining information fit for purpose using simple search.
7-11	has developed a a datafile using imported data which suits the given purpose. A range of basic and some advanced skills have been used to enter and process accurate and plausible data. Some testing has been carried out but searches, sorts or validation may not be efficient, have a purpose or work correctly.	A range of more advanced skills e.g. <ul style="list-style-type: none"> • create an on screen data entry form • add a validation technique • testing that validation works • use logical operators and at least one wild card
1-6	has developed a datafile but fields may not have been added. Data may be inaccurate or implausible. Some basic skills have been used to process data and the datafile may have been tested with a simple search or sort. There is limited evidence that it is fit for purpose.	<ul style="list-style-type: none"> • sort on multiple fields • obtain information fit for purpose using double searches (search within a search) • use of clearly explained logical operators
0	Not worthy of credit.	<ul style="list-style-type: none"> • Use of a wildcard in queries for a defined purpose • use reports • command buttons on forms or macros or reports • VB enhancements.

Evaluation - 15 marks	
11-15	<p>The candidate: has written a clear, coherent evaluation making effective comments on the outcomes of all the tasks including feedback they have given and received. They have analysed the tasks and the methods they have used and suggested effective improvements, both formative and summative, to their work. They use appropriate terminology and accurate spelling, punctuation and grammar.</p>
6-10	<p>has made comments, evaluating the outcome of some of the tasks including on feedback either given or received. There is some analysis of the tasks and methods they have used but comments and suggestions for improvements lack clarity. They have used some terms were appropriate and there are a few errors in spelling, punctuation and grammar.</p>
1-5	<p>has used everyday language and comments lack clarity, are poorly organised with significant errors in spelling, punctuation and grammar.</p>
0	<p>Comments not worthy of credit.</p>

Evaluation may be iterative and/or summative. The controlled assignment may specify what should be evaluated but candidates could include the following:

- evaluation of working practice
- analysis of stages within tasks
- analysis of research methods and data collected
- comments on modifications made
- evaluation of any documents and presentations produced
- analysis of data and information used in modelling and data handling
- evaluation of other tools and techniques used
- review of feedback given and received
- suggestions for improvement.



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INFORMATION AND COMMUNICATION TECHNOLOGY

UNIT 3 ICT in Organisations

1 hour 30 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. Where the space is not sufficient for your answer, continue the answer at the back of the book, taking care to number the continuation correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

The total number of marks for this paper is 80.

The quality of written communication will be assessed in question 9.

Answer all questions.

1. Many graphic designers use ICT to develop their designs and use many different types of images. Examine **Image A** and **Image B** below.

Image A is a bitmap graphic and Image B is a vector graphic.

Image A

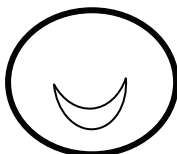
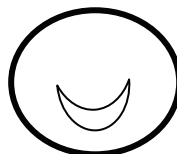


Image B



- (a) Give one input device that could be used to draw the image [1]

.....

- (b) Describe what is meant by a *bitmap graphic*. [2]

.....
.....
.....
.....

- (c) Describe what is meant by a *vector graphic*. [2]

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.....

- (d) Give two benefits of using vector graphics over bitmap graphics. [2]

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.....
.....

2. *Rotoscoping* and *stop motion* are different forms of animation techniques.

(a) Describe what is meant by *rotoscoping*. [2]

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.....
.....
.....

(b) Describe what is meant by *stop motion*. [2]

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.....
.....
.....

3. Images published on web pages should be *optimised*.

(a) Describe what is meant by optimisation of images for the web? [2]

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.....
.....
.....

(b) Give one advantage of optimising images for publishing on a web page. [1]

.....
.....

4. Most businesses have computer networks.

(a) What name is given when computers on one site are connected together?

..... A..... N..... [1]

(b) What name is given when computers on different sites are connected together?

..... A..... N..... [1]

(c) Give **three** reasons why networks are useful compared with a number of standalone computers. [3]

(i)

.....

(ii)

.....

.....

(iii)

.....

.....

(d) In the space below, draw and label a diagram of a star network. Show the position of the fileserver, workstations and printer on your diagram. [4]

5. Two types of software are application software and operating system software.

(a) Name **two** different types of application software. [2]

(i)

(ii)

(b) Linux is an operating system, name **two** other operating systems. [2]

(i)

(ii)

(c) One of the functions of an operating system is to provide a user interface. Give **three** other functions of an operating system. [3]

(i)

(ii)

(iii)

(d) Give **three** different features of Graphical User Interfaces (GUI) which make them easy to use. [3]

(i)

(ii)

(iii)

(e) Command line is another type of Human Computer Interface.

(i) Describe how a command line interface works. [2]

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(ii) Describe one disadvantage of a command line interface. [2]

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6. There are many factories where *robots* are used instead of humans.

(a) Describe what is meant by the term robot. [2]

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.....

(b) One advantage of using robots is that they can be re-trained to do other jobs. Explain **two** different ways of re-training robots. [4]

(i)
.....

(ii)
.....

(c) Describe **three** other advantages of using robots instead of humans. [6]

Advantage 1

.....
.....

Advantage 2

.....
.....

Advantage 3

.....
.....

(d) Name **three** different types of jobs done by robots in a car factory. [3]

.....
.....
.....

7. The Data Protection Act (DPA) of 1998 contains eight basic principles.

(a) Write down the principle that is designed to protect data that is held about you by an organisation. [1]

.....
.....
.....

(b) Write down the principle that is designed to prevent data held about you containing errors. [1]

.....
.....
.....

(c) Write down **two** other principles of the DPA. [2]

(i)

.....

(ii)

.....

(d) Give **two** exemptions from the DPA. [2]

Exemption 1

.....

Exemption 2

.....

(e) State **two** actions an individual can take if they find data held about them is incorrect. [2]

(i)

.....

(ii)

.....



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INFORMATION AND COMMUNICATION TECHNOLOGY

UNIT 3 ICT in Organisations

Mark Scheme

1(a)	Mouse, Graphics tablet	1	
1(b)	Made up of thousands of dots/ pixels (1) where the state of each individual pixel is stored (1)	2	
1(c)	Geometrical objects are drawn (1) the instructions for drawing the shape are stored rather than the image itself (1)	2	
1(d)	Any two of: Vector graphics can be enlarged without changing the quality of the image Allows you to zoom in and out on object Allows you to transform/rotate image Smaller file sizes	2	
			7
2(a)	Filming live action (1) by tracing each frame with a small change to create a life like motion (1)	2	
2(b)	Using still images and making them appear to move (1) by moving an object a small amount each time between taking photographs (1)	2	
			4
3(a)	Optimisation is the reduction of the size of the image (1) Reducing the quality of the image/reducing dimensions/ reduce number of colours /reduce resolution (1)	2	
3(b)	Faster uploads/downloads Saves memory	1	
			3
4(a)	Local Area Network	1	
4(b)	Wide Area Network	1	
4(c)	Any three of: share hardware easier to communicate share software central backup easier to monitor pupils share data / collaborative working centrally controlled security	3	
4(d)	One mark for each of: star topology (no marks if topology incorrect) fileserver w/stations printer	4	
			9

5(a)	Any two of: spreadsheet, word processing, dtp, database payroll, billing, etc (no marks for brand names)	2	
5(b)	Any two of: dos, unix, MacOs/Apple/Leopard, windows/XP/Vista, Sun, RiSC	2	
5(c)	Any three of: enables software to run / runs software manages system resources / controls memory controls hardware handles interrupts boots up / shuts down the computer manages memory display data on the screen managing multi-tasking managing multi-access 3 x 1 manages security manages user accounts Do not accept 'runs the computer/system'	3	
5(d)	windows icons menus / pointers (WIMP = 1 mark only) Accept colour / help system / task bar / toolbar / shortcuts / less chance of error / less typing / can be used with mouse / learn one package and you learn them all, or reference to GUI's being memory hungry, drag and drop / customising desktop	3	
5(e)(i)	Users type a set of instructions (1) using a set of words and symbols. (1)	2	
5(e)(ii)	Only suitable for skilled users (1) as commands have to be known. (1)	2	14

6(a)	A machine that can be programmed (1) to perform a sequence of actions (1)	2	
6(b)	The robot can be re-programmed (1) with a new set of instructions (1) The robot can be manually guided through the actions (1) and will remember/be able to repeat the instructions. (1)	2 2	
6(c)	Any three from: Ensures consistency of quality in a job (1) a human can be tired or distracted (1) whilst a robot performs the job equally well each time (1) Robots don't need breaks / holidays (1) and can repeat programmed actions all day / 24/7 (1) Robots do not need to be paid (1) after initial set up and maintenance costs (1) Robots can carry out boring / dangerous jobs (1) which humans don't want to / cannot do (1) Robots create new jobs (1) such as maintenance /programming (1)	3 x 2	
6(d)	Any three from e.g. Assemble parts Paint spraying Handle machine tools Weld / rivet Lifting / carrying Follow tracks on floor around warehouse Turn objects to specified setting	3	15
7(a)	data holders should protect the data against loss, theft or corruption / data must be kept securely	1	
7(b)	data must be accurate (and where relevant kept up to date)	1	
7(c)	Data to be adequate, relevant not excessive Not to be transferred outside EEU to countries without adequate provision Fairly and lawfully processed Processed within the rights of subjects Deleted when no longer needed <i>Accept slightly different wording if it is clear, but take care with duplication.</i> <i>Do NOT accept one word answers</i>	2	
7(d)	National security, detection of crime, for home use, data for wage, pension or tax Accept also Govt., police, medical (professions), medical records, hospitals, customs and excise, school pupil's work, domestic use, newsagents, family history, surveys, charities, <i>Any reasonable answer.</i>	2	
7(e)	See the personal data Insist on the data being correct	2	8

8	<p>One mark per relevant benefit, expansion or example e.g. limits the amount of travelling people need to undertake allows people to work from home can lead to easier international collaboration share expertise see people talking distance learning Also credit candidates who might mention protocols and the physical side of connecting devices, etc. Only credit speed of transfer once; only credit Internet once. Must mention videoconferencing and homeworking to get more than four marks.</p>	6	6
9	<p>The quality of written communication is assessed in this response. Candidates may include some of the following with examples of misuse: hacking, fraud, blackmail, planting viruses <i>consequences</i> e.g. loss of money, health issues, embarrassment, loss of data, unusable computer <i>prevention</i> e.g. restrict access i.e. disconnect from internet id's passwords, encryption, physical security The description of any of the points could be extended with more detail or use of good examples and gain extra marks.</p> <p>10 -14 Candidates give a clear, coherent answer identifying three crimes or offences, including good examples and detailed prevention measures. They use appropriate terminology and accurate spelling, punctuation and grammar. 5 - 9 Candidates identify some crimes or offences, include some examples and some prevention measures, but responses lack clarity. There are a few errors in spelling, punctuation and grammar. 1 - 4 Candidates simply list a range of points or give a brief explanation of one or two with few if any examples. The response lacks clarity and there are significant errors in spelling, punctuation and grammar. 0 Response not worthy of credit.</p>	14	14
Total			80



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INFORMATION AND COMMUNICATION TECHNOLOGY

UNIT 4 CONTROLLED ASSIGNMENT

INSTRUCTIONS TO CANDIDATES

Read the given scenario.

You will have 22½ hours to complete these tasks.

It is important that you work independently from other candidates and make sure that what you hand in is your own unaided work.

Read the tasks carefully to make sure that you understand what is needed.

Carry out all tasks and make sure that you check your work carefully to ensure that the work you produce is accurate and correct.

Save your work regularly.

INFORMATION FOR CANDIDATES

Teachers and students will be required to sign a declaration that all work presented is the work of the candidate alone. Failure to authenticate the work may result in grades being delayed or refused.

The quality of written communication will be assessed in your evaluation.

Multimedia catalogue

In the past an organisation has provided a printed catalogue for its customers. The organisation has decided to convert its catalogue to a multimedia computer based website or presentation. The organisation wants to develop a house style and ethos which will be used in all future publications.

In connection with the above, you are required to use ICT hardware and software to produce this new multimedia catalogue.

The multimedia publication should be of at least **six** pages or slides and include:

- An analysis of at least two existing websites or presentations.
- Within these pages there must be an effective navigation system.
- There should be a proportion of text and images suitable for the intended audience.
- Two of the images must be created.
- The multimedia publication should include original animation or an animated movie.
- The multimedia publication should include original sound, music or narration.
- Show your work to a friend and ask for their opinion.
- You should evaluate your work and the work of others.

Whilst completing these tasks you should make sure that you follow safe and secure practice, especially when saving or backing up your work.

GUIDANCE FOR CANDIDATES

Your work for this assignment will be marked by the centre and moderated externally against the following assessment scheme.

Unit 4 Developing Multimedia ICT Solutions Outline Scheme of Assessment	Marks
Efficient working practice	5
Analysis and Research	12
Design	5
Development – Template and Navigation	12
Development – Graphical images	10
Development – Animation or animated movie	10
Development –Sound	3
Development – Additional techniques	9
Evaluation and QWC	14
Total	80

**Unit 4: Developing Multimedia ICT Solutions
Controlled Assessment - Mark Scheme**

<p>Quality of Written Communication</p> <p>The quality of written communication is assessed as an integral part of the candidate evaluation and not as a standalone element using the following specific criteria:</p> <ul style="list-style-type: none"> • legibility of text, accuracy of spelling, punctuation and grammar, clarity of meaning. • selection of a form and style of writing appropriate to purpose and to complexity of subject matter. • organisation of information clearly and coherently, use of specialist vocabulary where appropriate. 	
Mark grid	Indicative content
Efficient working practice - 5 marks	
5	<p>The candidate: follows efficient and safe working practices with folders, subfolders and files. They consistently use sensible names and version management. They adopt a backup strategy and make appropriate use of media to backup and store files safely. They have provided a comprehensive log of sources they have used.</p>
3-4	<p>has used files and folders efficiently and there is some evidence of the use of sensible naming conventions, version management, backing up and use of media to secure data. A log of sources used has been provided.</p>
1-2	<p>has used files but may not use folders at all and does not name files and folders sensibly. There is little evidence of efficient or safe working practices, backing up or use of media. The sources log is either absent or limited.</p>
0	<p>Not worthy of credit.</p>

The controlled assignment may specify details but candidates could include evidence of the following:

- use of folders, subfolders and files
- sensible naming of files and folders
- backup of work to an external device
- version management
- sources log.

Analysis and Research - 12 marks		
9-12	The candidate: has analysed at least two existing contrasting websites or presentations making relevant comments on the purpose, house style and target audience of each. They have described in detail a wide range of multimedia features used on these websites or presentations, comparing and contrasting design, layout and the features used in each.	<p>The controlled assignment may specify details but candidates could include evidence of the following for each website or presentation:</p> <p>Description of:</p> <ul style="list-style-type: none"> • the purpose • the house style • target audience. <p>Comparison and contrasting the design and layouts used in each. e.g.</p> <ul style="list-style-type: none"> • navigation • template design • hyperlinks or hotspots • anchors or bookmarks • rollover buttons • pop up comments • mood colours • number of pages • interactive features, etc. <p>Collection of evidence of examples of multimedia features used on these websites and/or existing presentations, e.g.</p> <ul style="list-style-type: none"> • banners and/or animations • web icons • digital images • animations • movies • sound. <p>Description detailing the type and size of these features.</p>
5-8	has analysed at least two existing contrasting websites or presentations making relevant comments on the purpose, house style and target audience of each. They have described a range of multimedia features used on these websites or presentations, comparing or contrasting some of the design, layout and features used.	
1-4	has attempted analysis of two existing contrasting websites or presentations making some comment on the purpose, house style or target audience. They have described some multimedia features used on these websites.	
0	Not worthy of credit.	
Design - 5 marks		
5	The candidate: has developed a comprehensive solution for the multimedia task, explained how it is fit for audience and purpose and justified their design decisions. They have provided detailed designs for their solution including master page style and mood colours.	<p>The controlled assignment may specify details but candidates could include evidence of the following:</p> <ul style="list-style-type: none"> • identification of a solution to the multimedia task • explanation of how or why their solution is fit for purpose and audience • design of master page style • design of mood colours.
3-4	has developed a detailed solution for the multimedia task with some explanation of how it is fit for audience and purpose or justification of their design decisions. They have provided designs for a master page style and mood colours.	
1-2	has developed a solution for the multimedia task and provided designs for a master page or mood colours.	
0	Not worthy of credit.	

Development - Template and Navigation - 12 marks		
9-12	The candidate: has developed efficient navigation paths for the web pages or presentation. They have edited an existing template/slide style design and made good use of house style colours. They have selected and used a navigation bar or tools available in their chosen software and developed a standard navigation tool including colour scheme, hyperlinks and icons. They have entered suitable text.	The controlled assignment may specify details but candidates could include evidence of the following where appropriate: <ul style="list-style-type: none"> • creation of navigation paths for 6 web pages or slides • editing an existing template/slide style design • use of house style colours • selection and use of a navigation bar or tool • use of navigation tools from a library of facilities provided by the software • editing the standard navigation tool to include: <ul style="list-style-type: none"> • colour scheme • hyperlinks • icons • text fit for purpose.
5-8	has developed navigation paths for the web pages or presentation. They have edited an existing template/slide style design making some use of house style colours. They have used a navigation bar or tools available in their chosen software and edited a standard navigation tool. Suitable text has been entered.	
1-4	has developed some web pages or presentation slides. There is some evidence of use of house style colours but navigation may be incomplete or missing. Text has been entered but is not fit for audience or purpose.	
0	Not worthy of credit.	
Development - Graphical images - 10 marks		
8-10	The candidate: has created two images one of which is a logo or web icon. One of the images has three layers and both are optimised and saved in an appropriate format. The images demonstrate efficient use of a wide range of features of the software and are fit for purpose and audience.	The controlled assignment may specify details but candidates could include evidence of the following: <ul style="list-style-type: none"> • one image: a logo or web icon created by the candidate • a second image created by the candidate • one of these images must be created with at least three layers. • both images optimised and saved in appropriate format • a range of software tools e.g. <ul style="list-style-type: none"> • standard shapes and or lines • fill tools • brush tools • text tools • selection tools • distortion tools • sizing or cropping tools • repeated patterning or cloning • transparency tools.
4-7	has created two images one of which is a logo or web icon. One of the images has layers and both are saved in an appropriate format. The images demonstrate use of a range of features of the software and are fit for purpose and audience.	
1-3	has created two images using features of the software but they may not be fit for purpose or audience.	
0	Not worthy of credit.	

Development - Animation or animated movie - 10 marks		
8-10	The candidate: has created a storyboard for an animation or animated movie and developed this animation with at least three techniques or elements. The animation is fit for purpose and audience and includes an explanation of the timing and /or frame rate used and an animated moving banner combining text and graphics.	The controlled assignment may specify details but candidates could include evidence of the following: <ul style="list-style-type: none"> • a storyboard for an animation or animated movie • an animation or animated movie created by the candidate with one of the following: <ul style="list-style-type: none"> • an animation from clipart using evidence of at least 3 different techniques, e.g. cloning, onion skinning, tweening, etc. • a stop frame animation with at least 3 frames showing movement • a flash animation with at least 3 frames showing movement and <ul style="list-style-type: none"> • an explanation of timing and/or frame rate used • an animated moving banner combining text and graphics.
4-7	has created a storyboard for an animation or animated movie and developed this animation using techniques or elements available in the software. The animation is fit for purpose or audience and includes an animated moving banner combining text and graphics which may not work correctly. Some attempt has been made to explain the timing and /or frame rate used.	
1-3	may have created a storyboard and there is some evidence of animation created by the candidate.	
0	Not worthy of credit.	
Development - Sound - 3 marks		
3	The candidate: has created and manipulated sound, music or narration which is fit for purpose and audience.	The controlled assignment may specify details but candidates could include evidence of the following: <ul style="list-style-type: none"> • use of sound, music or narration • editing of sound, music or narration to produce an original sound file.
2	has created and manipulated sound, music or narration.	
1	has used sound, music or narration.	
0	Not worthy of credit.	

Development - Additional techniques - 9 marks		
7-9	The candidate: has enhanced their work with the use of a wide range of additional tools or techniques which may be: web/presentation effects; animation effects; movie effects; sound effects; interactive elements; or enhancement with original code. Each use is fit for purpose and audience.	The controlled assignment may specify details but candidates could include evidence of the following:
3-6	has enhanced their work with the use of a range of additional tools or techniques which may be: web/presentation effects; animation effects; movie effects; sound effects; interactive elements; or enhancement with original code. Each use is fit for purpose or audience	<ul style="list-style-type: none"> • Web/presentation effects: <ul style="list-style-type: none"> ○ rollover buttons or polygon hotspots ○ special effects added to objects e.g. shadow, raised/outer glow. ○ use of drop down boxes or expanding collapsing menus of at least two choices ○ hyperlinks in the form of text or graphics to external files. • Animation effects: <ul style="list-style-type: none"> ○ more complex animation of at least six frames or techniques or a mixture of both ○ use of background or overlay frames ○ looping or repeating techniques • Movie effects: <ul style="list-style-type: none"> ○ title or credits ○ video or transition effects • Sound effects: <ul style="list-style-type: none"> ○ envelopes, echo, etc ○ looping or repeating ○ overlay tracks ○ podcasting • Interactive element(s) from a library • Enhancement with original code e.g. html, visual basic.
1-3	has used some additional tools or techniques which may be: web/presentation effects; animation effects; movie effects; sound effects; or interactive elements.	
0	Not worthy of credit.	
<i>NB Other techniques/tools may be acceptable upon application to WJEC.</i>		

Evaluation - 14 marks		
11-14	The candidate: has written a clear, coherent evaluation making effective comments on the outcomes of all the tasks including feedback they have given and received. They have suggested effective improvements, both formative and summative , to their work. They use appropriate terminology and accurate spelling, punctuation and grammar.	<p>Evaluation may be iterative and/or summative. The controlled assignment may specify what should be evaluated but candidates could include the following:</p> <ul style="list-style-type: none"> • evaluation of working practice • description of the suitability and effectiveness of the features analysed • evaluation of tools and techniques used • review of feedback given and received • comments on modifications made • suggestions for improvement • evaluation of effectiveness of final solution • consideration of output to the web • consideration of download times and file size • justification of choice of image, sound and animation optimisation.
6-10	has made comments, evaluating the outcome of some of the tasks including on feedback either given or received. Some suggestions for improvements are made but comments lack clarity. They have used some terms where appropriate and there are a few errors in spelling, punctuation and grammar.	
1-5	has used everyday language and comments lack clarity, are poorly organised with significant errors in spelling, punctuation and grammar.	
0	Comments not worthy of credit.	

GCSE ICT ASSESSMENT GRID

	Assessment Objectives			Total Mark	QWC (✓)	Funct. Elem.
	Actual Marks					
	AO1	AO2	AO3			
Unit 1						
1	9		1	10		
2	4			4		
3	14		3	17		
4	7		2	9		
5	4		2	6		
6	8			8		
7	7		4	11		
8	7		8	15	✓	
TOTAL (Marks)	60		20	80		
Unit 2						
File handling		5		5		✓
Research and data collection		6		6		✓
Email		6		6		✓
Communicating information		16		16		✓
Modelling		16		16		✓
Data handling		16		16		✓
Evaluation and QWC		4	11	15	✓	✓
TOTAL (Marks)		69	11	80		
Unit 3						
1	7			7		
2	4			4		
3	3			3		
4	9			9		
5	9		5	14		
6	12		3	15		
7	5		3	8		
8	4		2	6		
9	7		7	14	✓	
TOTAL (Marks)	60		20	80		
Unit 4						
Efficient working practice		5		5		✓
Analysis and Research		9	6	15		✓
Design		5		5		✓
Development – Template and Navigation		12		12		✓
Development – Graphical images		9		9		✓
Development – Animation or animated		9		9		✓
Development – Sound		3		3		✓
Development – Additional techniques		8		8		
Evaluation and QWC		4	10	14	✓	✓
TOTAL (Marks)		64	16	80		

Coverage of Functional Elements	Unit 2 Controlled Assignment							Unit 4 Controlled Assignment								
	File Handling	Research and data collection	Email	Communicating Information	Modelling	Data handling	Evaluation and QWC	Efficient working practice	Analysis and Research	Design	Development – Template and Navigation	Development – Graphical images	Development – Animation or animated	Development – Sound	Development – Additional techniques	Evaluation and QWC
Assessment																
Skills Standards																
Using ICT																
Plan solutions to complex tasks by analysing the necessary stages				✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
select, interact with and use ICT systems safely and securely for a complex task in non-routine and unfamiliar contexts	✓		✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	
manage information storage to enable efficient retrieval	✓					✓		✓								
Finding and selecting information																
use appropriate search techniques to locate and select relevant information		✓				✓			✓							
select information from a variety of sources to meet requirements of a complex task		✓		✓	✓		✓		✓		✓	✓				
Developing, presenting and communicating information																
enter, develop and refine information using appropriate software to meet requirements of a complex task			✓	✓	✓	✓					✓	✓	✓	✓	✓	
use appropriate software to meet the requirements of a complex data-handling task					✓	✓										
use communications software to meet requirements of a complex task			✓													
combine and present information in ways that are fit for purpose and audience				✓							✓	✓	✓	✓	✓	
evaluate the selection, use and effectiveness of ICT tools and facilities used to present information				✓	✓	✓	✓		✓		✓	✓	✓			✓