OCR
RECOGNISING ACHIEVEMENT

Principal Learning

IT

OCR Level 2 Principal Learning in IT H825

Extract from OCR Centre Handbook
Section 3 - Accredited units

The OCR centre handbook for Level 2 Principal Learning in IT is available to download, free of charge, from the OCR website (www.ocr.org.uk).

The centre handbook comprises 12 sections and each section can be down loaded separately. Sections may be updated at any time by OCR and centres should refer to the OCR website for the latest version.

The centre handbook sections are:

1 Introduction

2 Principal Learning in IT – an overview

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4 General information

5 External assessment

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Unit G086: The potential of technology

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

There has been a revolution in the way companies, society and individuals use IT over the past 10 years. This has led to new businesses, new working practices and radical changes to the way we all live and work in the 21st century. This unit focuses upon these changes now and the changes we are likely to see in the short and medium term. The unit will prepare learners for the future by giving them an insight into both the changes that are taking place and the rationale for these changes.

The unit explores current and future practices by exploring the types of hardware, software and systems learners should be using and why these systems are used to improve efficiency, productivity and communications. It is an essential unit for those considering a career in any business organisation to gain knowledge and understanding of the skills and processes involved in the growing use of new technology.

It is also important for potential workers to develop an understanding of the issues in relation to communicating with organisations and individuals, and learners will be required to gain a basic understanding of the legal frameworks surrounding the requirements for recording and reporting of information.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Understand the role and contribution of technology to the success of a range of organisations	The learner can: 1.1 Plan and prioritise a research project into the contribution of technology to the success of a range of organisations (IE2, SM5) (ICT) 1.2 Investigate how technology has affected the success of a range of different organisations (Eng, ICT) 1.3 Describe the effect that technology has had on the success of a range of organisations	• Learners will plan to research into a range of organisations. This plan will prioritise tasks • Research will include investigating the positive effects of technology on efficiency within an organisation and competitiveness within a business sector or industry. These may be traditional areas of business, or, alternatively, areas of business that are fundamentally based around developments in technology, such as those based on the internet • From their research, learners will be able to comment on the contribution of technology to the success of specific organisations • Research and investigation should include the requirement to read and interpret written information correctly and accurately. This should be paraphrased by the learner in their work rather than copied in order to produce the evidence required

Learning outcomes	Assessment criteria	Exemplification
2 Understand the effects that technology is having on organisations, individuals and society	2.1 Explore the effects technology has had on how organisations, individuals and society operate (IE3) (Eng, ICT) 2.2 Use examples of the effects of technology on each of the focus areas to describe these effects	• The focus of this Learning Outcome is the effects of technology across the three focus areas. This work will require some focus on specific examples; however, rather than listing each effect for a range of organisations and individuals, learners will comment on the general and wide-reaching effects of technology, with specific reference to each focus group as a whole • A range of scenarios that allows learners to discuss issues across all three focus areas will need to be considered. The effect of technology on home shopping may be analysed alongside the effects on organisation and structure of those businesses that use technology. This research may then be combined with analysis of the societal effects of this technology • Learners should show awareness of both the possible positive and negative effects of IT
3 Be able to demonstrate how the key components of technology systems may combine together to create an effective solution to business needs	3.1 Describe the key components of a technology system 3.2 Explain how key components may be used in a range of different business scenarios to create effective solutions to business needs (CT3) (ICT)	• Learners will understand the key components of a business system and be able to explain the function of each component in technology systems designed to meet the needs of different business scenarios

Learning outcomes	Assessment criteria	Exemplification
4 Individually and as part of a team, learners are to use their understanding of the benefits of technology to justify the adoption of a new, or improvement to an existing, technology system	Working as part of a team: 4.1 Identify organisations which would either benefit from a new technology system, or by the improvement of one which already exists (TW1) (Eng, ICT) 4.2 List the business objectives of the identified organisation (Eng) 4.3 Identify how the business objectives of the target organisation would be better met by using the new, or improved, technology system (TW2, TW5, TW6) (Eng, ICT) Individually: 4.4 Write a business report explaining why the target organisation should implement or improve a technology system (CT3) (Eng, ICT)	• Working as part of a group, learners will identify organisations that should implement or improve a technology system. The group will then identify the business objective of the organisation and how these may be better met by the adoption or extension of a technology system • Learners will then take this information and, individually, explain why the target organisation should implement or improve a technology system • Speaking and listening skills should also form part of this assessment criteria to ensure learners can communicate their ideas and understand feedback from organisations • The information should be produced in a written format to evidence their use of English. The business report should be in a style and format appropriate to the IT industry. It should be structured, for example, with a table of contents, general introduction, information, conclusions and references

Form of assessment

This unit will be set and assessed externally. The assessment will take the following format:

Length of paper: 1 hour 30 minutes.
Number of marks: 90.

There will be pre-release material to identify research activities. There will not be any pre-release tasks. Candidates will not be able to take notes with them into the examination.

Marking criteria

The total number of marks for this unit is 90.

Guidance on the allocation of marks will be detailed in the pre-release material for each series and within teacher support materials for the examination. The sample assessed material will also provide additional support.

Approaches to applied learning and assessment

This unit follows a logical progression in learning. Learners begin the unit by understanding the possible benefits of technology within business organisations, and the effects that technology has had on how business organisations, individuals and society operate. Learners will then develop a thorough understanding of what makes up a technology system. This understanding will then be applied so that learners can identify how a technology system may be employed or improved to suit the needs of a target organisation.

Learners should be encouraged to identify for themselves organisations which have used technology to good effect and plan how they will carry out research into these organisations. This plan should attempt to gather information from more than one type of data source. This information will then be presented as an explanation of the effect of technology on the success of organisations. Learners should then use similar skills to explore the effects of technology on how business organisations, individuals and society operate. This is not intended to be an unnecessarily detailed blow-by-blow account of technology on each of a list of organisations, people or societal functions, but rather an overall commentary of the effect of technology on the modern world, with examples from each of these areas as necessary.
They should explain why a target organisation should implement or improve technology. This should be presented in an appropriate format for the IT industry and may form part of collaborative working with local businesses if possible.
The external assessment of this unit will be based on a case study, designed to allow learners to apply their learning to a range of real world scenarios. Learners will therefore benefit from a range of real word experiences, which allow the skills and understanding of this unit to be explored. Learners need to be exposed as much as possible to the real world use of ICT.

Functional skills

This unit will provide learners with opportunities to use English and ICT in a number of ways.

English:

- Present information and ideas clearly and persuasively to others (4.1, 4.2, 4.3), working as part of a team to research a business
- Make significant contributions to discussions, taking a range of roles and helping to move discussion forward to reach decisions (4.1, 4.2, 4.3), working as a team to research a business
- Select and use different types of text to obtain relevant information (1.2, 2.1, 4.1, 4.3), research the potential of technology
- Read and summarise succinctly, information/ideas from different sources (1.2, 2.1, 4.1, 4.3), research the potential of technology
- Present information/ideas concisely, logically and persuasively (4.4), write a report on the findings of a business
- Present information on complex subjects concisely and clearly (4.4), write a report on the findings of a business
- Use a range of sentence structures, including complex sentences (4.4), write a report on the findings of a business.

Mathematics
No opportunities in this unit.

ICT:
- Select and use software applications to meet needs and solve problems (1.2, 4.4), research and write report
- Use ICT to effectively plan work and review the effectiveness of ICT tools to meet needs in order to inform future judgments (1.1) Gantt charts for planning
- Identify ICT problems and take appropriate action (3.2, 4.1, 4.3, 4.4), identify weaknesses in a system and suggest improvements
- Select and use appropriate sources of ICT-based and other forms of information that match requirements (1.2, 2.1), research how technology has affected businesses
- Recognise copyright and other constraints on the use of information (4.4), reference sources used in a bibliography
- Access, navigate and search internet sources of information purposefully and effectively (1.2, 2.1), research how technology has affected businesses
- Enter, organise, develop, refine and format information, applying editing techniques to meet needs (4.4), write report
- Use appropriate page layout (4.4), write report
- Produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate (4.4) write report.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criteria 1.1 & 2.1
Creative thinkers:	Assessment criteria 3.2 & 4.4
Reflective learners:	There are no opportunities in this unit
Team workers:	Assessment criteria 4.1 & 4.3
Self managers:	Assessment criterion 1.1
Effective participators:	There are no opportunities in this unit

Unit G087: Exploring organisations

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

Using current examples from industry, learners will develop their understanding of enterprise and business organisations, including exploring technology-enabled business processes.

The unit content encourages learners to undertake research into different types of organisations by approaching, researching and visiting different businesses. They will discover how organisations are structured, the key business processes and the importance of effective communication in developing relationships that are important both within and outside the organisation.

Through their research and participating in running a simulated mini-enterprise or undertaking relevant work experience, learners will understand the composition and contribution of business processes: management, operational and supporting. They will appreciate the crucial aspects of business processes and the importance of maintaining successful customer and supplier relationships.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Understand different organisational structures, cultures and roles	The learner can: 1.1 Investigate and describe different types of organisations in the business environment and their organisational structures (IE1, IE2) (Eng, ICT) 1.2 Describe the organisational structure of businesses (Eng, ICT) 1.3 Describe the function and responsibility of key personnel within the organisation 1.4 Describe the different types of organisational culture and discuss how culture plays a role within an organisation and affects organisational performance (Eng)	• Learners will need to research and describe a range of different organisations and how they are structured • This should include online as well as more traditional businesses • They could draw up organisational charts for each organisation, showing the hierarchy of key personnel, and compare the charts for different types of companies • During their investigation they will need to consider the organisational culture of different organisations and the roles of the personnel within them • They will need to consider how the organisational culture affects factors such as productivity, staff satisfaction, commitment and motivation • They may participate in role play to demonstrate how culture affects staff behaviour and performance

Learning outcomes	Assessment criteria	Exemplification
2 Understand the purpose of key business processes	2.1 Explore important business processes and use examples to describe the purpose of these processes (IE1, IE2, CT2) (Eng, ICT) 2.2 Compare and contrast similar business processes in different organisations (Eng, ICT) 2.3 Describe the types of information needed by an organisation and how it collects and disseminates information 2.4 Illustrate the information flow into and out of organisations and between departments as well as the different types of communication methods used (Eng, ICT)	• Learners should explore the business processes within a range of different organisations, including: – online businesses – paying particular attention to customer relationship management – people management – supplier management – service delivery • They need to consider the similarities and differences between similar processes in different companies, for example between an online and a traditional business • To understand business processes, learners will need to consider the information needs of each organisation and the flow of information into and out of the organisation and within it • This could be illustrated graphically on paper or electronically by creating an interactive multimedia presentation or a digital animation

Learning outcomes	Assessment criteria	Exemplification
3 Know how the use of technology supports business processes	3.1 Investigate and describe the types of technology used to support business processes and why they are used (IE2, IE3, IE4) (Eng, ICT) 3.2 Illustrate how businesses use technology to run their business processes (ICT) 3.3 Describe the advantages and disadvantages of technology used in business (Eng, ICT)	• Learners need to investigate and illustrate how the use of technology supports business processes in a range of organisations, including online businesses • They need to describe the technology used and the benefits it delivers • This should include communicating information, supporting the functions within the organisation and how the systems interact with each other • The investigation may include interviewing staff in local organisations to find out how and why they use technology • These interviews could be video recorded or written in a business report in a style and format appropriate to the IT industry

Learning outcomes	Assessment criteria	Exemplification
4 Be able to explore key factors in an organisation's success	4.1 Participate in running a simulated, small business enterprise or undertake relevant work experience (TW1-5, EP1-6) (Eng) 4.2 Identify the strengths and weaknesses of the enterprise or business, supporting conclusions with calculations of costs, revenues and potential profitability. Present findings using a multimedia presentation (TW6) (Eng, Maths, ICT) 4.3 Determine the factors contributing to a businesses success and recommend areas for improvement (EP4) (Eng, ICT)	• Through participating in running a simulated mini-enterprise or through work experience, learners will discover the key factors that determine whether a business is successful or not • Calculations and analysis of the operating costs and potential sales revenues will enable the profit (loss) and break-even point to be estimated. Methods of working and an appreciation of numerical calculation with and without calculators (in particular should include percentages, fractions, graphs, equations and algebra) • They may present their findings by creating a multimedia presentation and presenting to an audience

Form of assessment

This unit will be internally assessed, by the centre, and externally moderated.

OCR will provide model assignments along with guidance and criteria related to using them, centres must adhere to this guidance. The model assignments will consist of tasks that are applied and holistic in approach. Care should be taken to ensure that a single task, or group of inter-related tasks, is capable of generating evidence against the appropriate assessment criteria and across all marking criteria.

To assist centres in the teaching and assessment of this unit, OCR has designed an appropriate 'Model Assignment'. This assignment may be used by centres without modification. However, in order to provide appropriate contextualisation, improve access or increase local relevance, centres may 'tailor' the model assignments within set parameters. Details of the scope of adaptation are provided in the 'Notes for Tutors' section that accompanies the model assignment.

Centres should advise learners as to the suitability of the organisations to be investigated and may provide assistance in setting up contacts and arranging visits, etc. However, the research and the report/project should be the learner's own work.

Centres may provide learners with realistic 'case study' material where it is otherwise difficult to obtain information from appropriate organisations; however, this should not be overly prescriptive with regards to the learning outcomes and should require learners to select the information required.

This form of assessment has been adopted as a large portion of the learning outcomes relate to practical abilities. The context of the work should enable learners to experience real events and work alongside people in a 'sector' context, for example, work experience.

The work will include:

a Descriptions of different types of organisations and the hierarchy within, along with illustrations of the organisation structures of different types of businesses **[6]**

b Descriptions of the function and responsibility of key personnel and a discussion of organisational culture and its role and effects, and a witness statement or video recording of role play activities undertaken **[6]**

c Examples used to describe the purpose of key business processes and a comparison of similar business processes in different organisations **[6]**

d Descriptions of the information needs of organisations, information flow and communication methods. These could be presented graphically or electronically using an interactive multimedia presentation or digital animation **[6]**

e Descriptions of the types of technology used to support business processes including an illustration of how technology is used in businesses and descriptions or video recordings of its advantages and disadvantages **[12]**

f Evidence of participation in running a simulated mini-enterprise or undertaking relevant work experience, determining factors contributing to its success and identifying areas for improvement **[12]**

g Evidence of the correct use of written English and other communications **[6]**

h Evidence of transferable skills in basic mathematics appropriate to the unit and relevant to the IT industry **[6]**.

OCR will ensure that the model assignment is related to a real purpose and has clear goals. The centre must ensure these goals are fully communicated to learners.

In this unit it is recommended that learners spend 40 glh on the acquisition of knowledge, skills and understanding. The remaining 20 glh will take the form of controlled assessment where learners produce the appropriate assessment evidence.

Further guidance on 'controlled assessment' is provided in the centre handbook for OCR Level 2 Principal Learning in IT.

Marking criteria

The total number of marks for this unit is 60.

AC	Band 1	Band 2	Band 3
1.1 **1.2**	**a1:** A basic description of at least two different types of organisation and the hierarchy within their organisational structure A limited illustration of the organisational structure of a business **[0 1 2]**	**a2:** A description of at least three different types of organisation and the hierarchy within the organisational structure of the businesses A clear illustration of the organisational structure of a business **[3 4]**	**a3:** A thorough description of at least four different types of organisation and the hierarchy within the organisational structure of the businesses A detailed illustration of the organisational structure of a business **[5 6]**
1.3 **1.4**	**b1:** A list of the functions and responsibilities of key personnel in a business A limited discussion of organisational culture and how it plays a role in an organisation **[0 1 2]**	**b2:** A description of the functions and responsibilities of key personnel in a business A discussion of organisational culture and how it plays a role in an organisation, including the effect on productivity and staff satisfaction **[3 4]**	**b3:** A detailed description of the functions and responsibilities of key personnel in a business A detailed discussion of organisational culture and how it plays a role in an organisation including the effect on productivity, staff satisfaction, commitment and motivation **[5 6]**

AC	Band 1	Band 2	Band 3
2.1 **2.2**	**c1:** A limited description of the purpose of key business processes, including customer relationship management, people management, supplier management and service delivery, using few, if any, examples A basic comparison of a few similar business processes in two different organisations **[0 1 2]**	**c2:** A description, with examples, of the purpose of key business processes, including customer relationship management, people management, supplier management and service delivery A comparison of a range of similar business processes in two different organisations **[3 4]**	**c3:** A detailed description, with a range of examples, of the purpose of key business processes, including customer relationship management, people management, supplier management and service delivery A detailed comparison of a wide range of similar business processes in different organisations **[5 6]**
2.3 **2.4**	**d1:** A list of the types of information needed by an organisation and a brief description of how it collects information A basic illustration of the information flow and communication methods, into and out of an organisation, and between departments **[0 1 2]**	**d2:** A description of the types of information needed by an organisation and how it collects and disseminates information A clear illustration of the information flow and communication methods, into and out of an organisation, and between departments **[3 4]**	**d3:** A detailed description of the types of information needed by an organisation and how it collects and disseminates information A detailed illustration of the information flow and communication methods, into and out of an organisation, and between departments **[5 6]**
3.1	**e(i)1:** A limited description of a few different types of technology used by businesses **[0 1 2]**	**e(i)2:** A description of a range of different types of technology used by businesses **[3 4]**	**e(i)3:** A detailed description of a wide range of different types of technology used by businesses **[5 6]**

AC	Band 1	Band 2	Band 3
3.2 **3.3**	**e(ii)1:** A brief illustration of how a business uses technology to support its business processes A list of advantages of using technology in a business **[0 1 2]**	**e(ii)2:** A clear illustration of how a business uses technology to support its business processes A limited description of advantages and disadvantage of using technology in businesses **[3 4]**	**e(ii)3:** A detailed illustration of how businesses use technology to support their business processes A detailed description of advantages and disadvantages of using technology in businesses, including notes or a video recording of interviewing staff in local organisations **[5 6]**
4.1 **4.2**	**f(i)1:** Evidence of participation in the running of a simulated mini-enterprise or undertaking relevant work experience, along with a description of some factors contributing to the success of that business **[0 1 2]**	**f(i)2:** Evidence of participation in the running of a simulated mini-enterprise or undertaking relevant work experience, and, using the knowledge gained during this experience, a description of the factors contributing to the success of that business **[3 4]**	**f(i)3:** Evidence of participation in the running of a simulated mini-enterprise or undertaking relevant work experience, and, using the knowledge gained, a detailed description of the factors contributing to the success of that business **[5 6]**
4.3	**f(ii)1:** A list of some areas for improvement **[0 1 2]**	**f(ii)2:** A description of areas for improvement **[3 4]**	**f(ii)3:** A detailed description of areas for improvement with suggestions for how these improvements could be achieved **[5 6]**

AC	Band 1	Band 2	Band 3
2.2 **3.1** **3.2** **3.3**	**g1:** The use of written English is limited and may not be correct with some spelling, punctuation and/or grammatical errors Their reading or interpretation of other documents and information shows some misunderstanding or inaccuracies They display a limited vocabulary when speaking and listening **[0 1 2]**	**g2:** The use of written English is generally sound with few spelling, punctuation or grammatical errors Their reading and interpretation of other documents is generally correct They display a reasonable vocabulary when speaking and listening **[3 4]**	**g3:** The use of written English is good with only minor spelling, punctuation or grammatical errors and use a wide vocabulary Their reading and interpretation of other documents is correct and accurate They display a good vocabulary when speaking and listening **[5 6]**
4.2	**h1:** A limited number and range of mathematical calculations are used to identify the impact of key factors in the success of the business Calculations contain some errors and methods are not shown **[0 1 2]**	**h2:** A fair number and range of mathematical calculations are used to identify the impact of key factors in the success of the business Calculations are generally correct, with only minor errors Methods and processes used are shown with workings and intermediate results **[3 4]**	**h3:** A good number and range of mathematical calculations are used to identify the impact of key factors in the success of the business Calculations are correct Methods and processes used are shown with workings and intermediate results in a range of scenarios using both numerical and graphical information **[5 6]**

Approaches to applied learning and assessment

Practical experience and observation of current, day-to-day, business operations will benefit learners' understanding. Hands-on experience in a business environment, direct with a business or through participating in a mini-enterprise project, will develop learners' understanding of enterprise and organisations. Analysis of current examples from industry and examination of case studies is encouraged, learners can use work experience or participate in the running of a simulated business in order to gain knowledge. Through the experience they gain, learners will understand why departments are created in larger companies, the functions of various departments and why there is a need for a hierarchy in job functions.

Communicating information effectively to people within and outside an organisation is vital. Learners will carry out research to identify the types, and significance, of information needed by different organisations. Research should include how organisations collect information, what information is exchanged within and outside the organisation, with whom it is shared and how it is communicated. Learners will identify and understand which communication methods are efficient and effective for different organisations. Learners could interview staff in local organisations to find out how they work in practice.

Learners will investigate the use of technology by businesses and appreciate the problems with using technology and the need for backup systems. They will understand how organisations react to developments in technology and how these changes affect businesses, including the development of online businesses. Learners will investigate the impact of technology on working practices and the day-to-day running of the businesses. Learners will understand how the introduction of technology has affected the development of process control and production control.

Learners will use the knowledge gained through their research, investigations and practical experience to report on factors contributing to an organisation's success. The report will identify any weaknesses and suggest areas for improvement.

Functional skills

This unit will provide learners with opportunities to use English, ICT and apply mathematics in a number of ways.

English:

- Present information and ideas clearly and persuasively to others (1.4, 4.1), role play and participating in a business
- Adapt contributions in discussions to suit audience, purpose and situation (1.4, 3.1, 4.1), role play and participating in a business
- Make significant contributions to discussions, taking a range of roles and helping to move discussion forward to reach decisions (1.4, 4.1), role play and participating in a business
- Select and use different types of text to obtain relevant information (1.1, 2.1, 3.1), research
- Read and summarise, succinctly, information/ideas from different sources (1.1, 2.1, 3.1), research
- Present information/ideas concisely, logically and persuasively (1.2, 1.4, 2.1, 2.2, 2.4, 3.3, 4.2, 4.4), write up of project
- Present information on complex subjects concisely and clearly (1.2, 1.4, 2.1, 2.2, 2.4, 3.3, 4.2, 4.4), write up of project
- Use a range of sentence structures, including complex sentences (2.2, 3.1, 3.2, 3.3), write up of project.

Mathematics:

- Understand and use positive and negative numbers of any size in practical contexts (4.2), calculations and analysis of operating costs, sales and revenue
- Carry out calculations with numbers of any size in practical contexts (4.2), calculations and analysis of operating costs, sales and revenue
- Add and subtract fractions, add, subtract, multiply and divide decimals to a given number of decimal places (4.2), calculations and analysis of operating costs, sales and revenue.

ICT:

- Select and use software applications to meet needs and solve problems (1.2, 2.4), create organisation structure/information flow
- Select and use appropriate sources of ICT-based and other forms of information that match requirements (1.1, 2.1, 3.1), research
- Recognise copyright and other constraints on the use of information (1.1, 2.1, 3.1), research and write up of information
- Access, navigate and search internet sources of information purposefully and effectively (1.1, 2.1, 3.1), research
- Produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate (1.2, 2.2, 2.4, 3.2, 3.3, 4.2, 4.3), write up of information
- Enter, develop and organise numerical information that is fit for purpose (4.2), calculations and analysis of operating costs, sales and revenue
- Format numerical information appropriately (4.2), calculations and analysis of operating costs, sales and revenue
- Bring together and organise components of images and text (1.2, 2.4), create organisation structure/information flow.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criteria 1.1, 2.1 & 3.1
Creative thinkers:	Assessment criterion 2.1
Reflective learners:	There are no opportunities in this unit
Team workers:	Assessment criteria 4.1 & 4.2
Self managers:	There are no opportunities in this unit
Effective participators:	Assessment criteria 4.1 & 4.3

Unit G088: Effective communications

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

The changing nature and dynamics of today's business environment requires the individuals who work in it to be able to perform not only their own designated job role, but also to integrate and contribute effectively within a wide variety of teams and sub-groups. Similarly, the rapid rate of change and development of local, national and global communication methods places additional demands on employees at all levels. Each must be aware and competent in the use of a much wider range of technologies and media than in the past.

This unit will allow learners to develop their ability to communicate and operate effectively in a business-like environment and will encourage them to keep pace with future technological developments.

Central to the unit is the development of effective skills in English through business contexts. Learners will have opportunities to take part in role play, present findings both orally and in writing supported by IT, create a range of business documents and reports and take part in video/computer conferencing. They will also consider the consequences associated with the incorrect use of language and different behaviours such as inappropriate body language.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Understand different communication media, the implications of their use and their appropriateness in a wide range of business contexts	The learner can: 1.1 Give examples of the communication media used in business organisations with examples of when and how they are used (Eng, ICT) 1.2 Work with others to explore and experiment in the use of a variety of communication media (ICT) 1.3 Assess the appropriateness of and implications associated with communications media in a range of contexts (IE4)	• Learners will investigate and experiment with different media for communication, assessing implications in a wide range of business contexts • This could include, for example: – formal meetings – emails – blogs – telephone calls – SMS messages and presentations • Research and investigation could include the requirement to read and interpret written information correctly and accurately
2 Be able to demonstrate effective transferable communication skills, including confident, correct and contextually appropriate English	2.1 Describe what makes communication effective 2.2 Demonstrate their ability to communicate effectively	• Learners will identify and demonstrate the features of effective communication between individuals and groups • They will demonstrate confident, correct and contextually appropriate English in a range of communications appropriate to the business environment, which may include meetings, short reports, emails, telephone calls and presentations

Learning outcomes	Assessment criteria	Exemplification
3 Understand how teams work and how different behaviours, attitudes and actions affect their performance	3.1 Explain in a written business report, using effective English, what makes a good team (Eng, ICT) 3.2 Describe in the report the issues and barriers that can prevent effective communication and the performance of teams (Eng, ICT) 3.3 Contribute to a group project (TW1–6, SM1, SM2) (Eng)	• When identifying and demonstrating the features of effective communication, learners will focus on understanding how teams work • They will explore and reflect on the consequences of different behaviours, attitudes and actions in terms of effective communication and performance by working as a member of a team on a group project • The report should be produced in a written form to evidence their use of English (including grammar, spelling and punctuation) • The report should be in a style and format appropriate to the IT industry
4 Be able to assess their personal performance as an individual and as a member of a team, and identify aspects that could be improved	4.1 Evaluate his or her own contribution to the success of a project and that of other team members (RL1, RL4) (Eng) 4.2 Make constructive suggestions as to how his or her own contribution and that of other members of the team could be improved if the project was to be repeated at a later date (IE6, RL5, RL6, EP4) (Eng)	• Learners will evaluate their personal performance as an individual and as a member of a team, including offering and responding constructively to feedback • Speaking and listening skills could also form part of this assessment criteria to ensure learners can communicate their ideas and understand feedback from other team members

Form of assessment

This unit will be internally assessed, by the centre, and externally moderated.

OCR will provide model assignments along with guidance and criteria related to using them, centres must adhere to this guidance. The model assignments will consist of tasks that are applied and holistic in approach. Care should be taken to ensure that a single task, or group of inter-related tasks, is capable of generating evidence against the appropriate assessment criteria and across all marking criteria.

To assist centres in the teaching and assessment of this unit, OCR has designed an appropriate 'Model Assignment'. This assignment may be used by centres without modification. However, in order to provide appropriate contextualisation, improve access or increase local relevance, centres may 'tailor' the model assignments within set parameters. Details of the scope of adaptation are provided in the 'Notes for Tutors' section that accompanies the model assignment.

Centres should advise learners as to the suitability of the organisations to be investigated and may provide assistance in setting up contacts and arranging visits, etc. However, the research and the report/project should be the learner's own work.

Centres may provide learners with realistic 'case study' material where it is otherwise difficult to obtain information from appropriate organisations; however, this should not be overly prescriptive with regards to the learning outcomes and should require learners to select the information required.

This form of assessment has been adopted as a large portion of the learning outcomes relate to practical abilities. The context of the work should enable learners to experience real events and work alongside people in a 'sector' context; for example, work experience.

The work will include:

a the results of research into different communication methods/media employed in business organisations considering how and when each method/media is employed **[6]**

b evidence that the learner has accessed and explored the use of a range of communication media in different situations and assessed their appropriateness and effectiveness in each case **[6]**

c evidence that the learner contributed to a team project and has demonstrated effective team working **[6]**

d evidence that the learner has demonstrated effective communication skills **[6]**

e a description of what makes a good team and the factors that influence the team communications and performance **[6]**

f a description of what makes communication effective between individuals and groups **[6]**

g an evaluation by the learner of his or her contribution to a team project (responding to feedback from others) and an assessment of the contribution of team members, including ways in which the learner's performance and that of the team might be improved should the project be repeated **[12]**

h evidence throughout the unit that demonstrates the learner's ability to employ confident, correct and contextually appropriate English, including correct use of grammar, spelling and punctuation **[12]**.

OCR will ensure that the model assignment is related to a real purpose and has clear goals. The centre must ensure these goals are fully communicated to the learner.

In this unit it is recommended that learners spend 45 glh on the acquisition of knowledge, skills and understanding. The remaining 15 glh will take the form of controlled assessment where learners produce the appropriate assessment evidence.

Further guidance on 'controlled assessment' is provided in the centre handbook for OCR Level 2 Principal Learning in IT.

Marking criteria

The total number of marks for this unit is 60.

AC	Band 1	Band 2	Band 3
1.1	**a1:** A limited range of communication media/methods are identified with a few examples of when and how they are used **[0 1 2]**	**a2:** A range of communication media/methods are identified, with a number of examples of when and how they are used The description at times lacks depth **[3 4]**	**a3:** A wide range of communication media/ methods are identified, along with a comprehensive range of examples of when and how they are used The work displays both breadth and depth **[5 6]**
1.2 **1.3**	**b1:** A limited range of communication media has been explored within a group The discussion of their appropriateness and effectiveness is generally superficial **[0 1 2]**	**b2:** A range of media has been explored within an organised group Their appropriateness and effectiveness in a limited range of different situations is discussed The work sometimes lacks depth **[3 4]**	**b3:** A comprehensive range of media has been explored within an organised group The appropriateness and effectiveness of each has been considered in a variety of situations and contexts The work demonstrates depth and breadth of understanding **[5 6]**

AC	Band 1	Band 2	Band 3
3.3	**c1:** There is evidence that the learner has made some contribution to a team project **[0 1 2]**	**c2:** There is evidence that the learner has clearly contributed to a team project **[3 4]**	**c3:** There is comprehensive evidence to support the learner's significant contribution to the team project **[5 6]**
2.2	**d1:** The learner displays limited effectiveness of communication skills **[0 1 2]**	**d2:** The learner's communication skills are usually effective **[3 4]**	**d3:** The learner consistently displays effective communication skills **[5 6]**
3.1 **3.2**	**e1:** A brief report describing what makes a good team and some issues influencing the effectiveness of teams have been identified **[0 1 2]**	**e2:** A detailed report describing what makes a good team and a range of issues and barriers influencing the effectiveness of teams **[3 4]**	**e3:** A comprehensive report describing what makes a good team and a range of issues and barriers influencing the team communications and performance **[5 6]**
2.1	**f1:** A brief description of what makes communications effective **[0 1 2]**	**f2:** A good description of what makes communications effective **[3 4]**	**f3:** A detailed description of what makes communications effective including both individuals and groups **[5 6]**
4.1	**g(i)1:** There are limited comments assessing or evaluating the learner's and other team members' contributions to the project **[0 1 2]**	**g(i)2:** There is a clear assessment or evaluation of the learner's and other team members' contributions to the project **[3 4]**	**g(i)3:** There is a detailed assessment or evaluation of the learner's and other team members' contributions to the project **[5 6]**

AC	Band 1	Band 2	Band 3
4.2	**g(ii)1:** Limited suggestions are made as to how the learner's and other team members' contributions to the project might be improved if it were repeated **[0 1 2]**	**g(ii)2:** Sound suggestions are made as to how the learner's and other team members' contributions to the project might be improved if it were repeated The evidence demonstrates some understanding of the issues involved **[3 4]**	**g(ii)3:** Constructive suggestions are made as to how the learner's and other team members' contributions to the project might be improved if it were repeated The evidence demonstrates a comprehensive understanding of the issues involved **[5 6]**
3.1 **3.2** **3.3** **4.1** **4.2**	**h1:** The learner may lack confidence using English that is not always contextually appropriate The use of written English may not be correct or contextually appropriate; with some grammatical, spelling and punctuation errors that may detract from the quality of the work **[0 1 2 3 4]**	**h2:** The learner shows some confidence when using contextually appropriate English The use of correct and contextually appropriate written English is generally sound; with minor grammatical, spelling and punctuation errors These do not detract significantly from the quality of the work **[5 6 7 8]**	**h3:** The learner is confident using contextually appropriate English The use of correct and contextually appropriate written English is good; with no or very few grammatical, spelling and punctuation errors The quality of the work is not affected **[9 10 11 12]**

Approaches to applied learning and assessment

The unit content encourages the use of a wide range of teaching approaches to aid learners with a variety of learning styles to demonstrate their abilities – supporting the aim of developing those generic skills that support a young person's employability. Therefore, learners need to be provided with the opportunity to carry out individual research, participate confidently and creatively within a team and assess and reflect on their own contribution and that of others.

Learners should investigate the current range of communication methods and technologies found in a variety of business organisations. To do this, they must be supported in the use of as many media (eg websites, blogs, mobile telephone, email, etc) as is practicable. They will assess their appropriateness and effectiveness through exploring good and bad aspects and issues associated with their use.

The team-working aspects will develop their individual team skills, including leadership, negotiation and conflict management. Through self and peer assessment, individuals will develop the means by which to evaluate their personal effectiveness and skills, thus identifying their future development needs.

Team scenarios might include: the need to suggest improvements to an organisation's communications; the need to recruit a new member of staff for a specific job role in a business organisation; making a recommendation to the school/college to make a change; carrying out a joint investigation and reporting on a current business issue; creating and managing a team to run an event (eg a school/college production or club).

Learners' knowledge and use of English could be improved by such activities as writing a CV and covering letter for a part-time job or a proposal to identify problems likely to arise from poor use of language, role playing handling customer complaints or practising writing a business report, for example summarising the results of independent research, through conducting a mock interview with a local employer.

Functional skills

This unit will provide learners with opportunities to use English and ICT in a number of ways.

English:

- Listen to complex information and give a relevant, cogent response in appropriate language (3.3, 4.1, 4.2), contribute in team work
- Present information and ideas clearly and persuasively to others (3.3, 4.1, 4.2), contribute in team work
- Adapt contributions in discussions to suit audience, purpose and situation (3.3, 4.1, 4.2), contribute in team work
- Make significant contributions to discussions, taking a range of roles and helping to move discussion forward to reach decisions (3.3, 4.1, 4.2), contribute in team work
- Present information and ideas clearly and persuasively to others (3.3), contribute in team work
- Adapt contributions in discussions to suit audience, purpose and situation (3.3), contribute in team work
- Make significant contributions to discussions, taking a range of roles and helping to move discussion forward to reach decisions (3.3), contribute in team work
- Select and use different types of text to obtain relevant information (1.1), research
- Read and summarise, succinctly, information/ideas from different sources (1.1), research
- Present information/ideas concisely, logically and persuasively (3.1, 3.2, 4.1, 4.2), report on team work
- Present information on complex subjects concisely and clearly (3.1, 3.2, 4.1, 4.2), report on team work
- Use a range of sentence structures, including complex sentences (3.1, 3.2, 4.1, 4.2), report on team work.

Mathematics

No opportunities in this unit.

ICT:

- Select and use software applications to meet needs and solve problems (3.1, 3.2), report writing
- Select and use appropriate sources of ICT-based and other forms of information that match requirements (1.1, 1.2), research
- Recognise copyright and other constraints on the use of information (1.1, 1.2, 3.1, 3.2), research
- Access, navigate and search internet sources of information purposefully and effectively (1.1, 1.2, 3.1, 3.2), research
- Bring together and organise components of images and text (3.1), business report
- Produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate (3.1), business report.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criteria 1.3, 4.2
Creative thinkers:	There are no opportunities in this unit
Reflective learners:	Assessment criteria 4.1 & 4.2
Team workers:	Assessment criterion 3.3
Self managers:	Assessment criterion 3.3
Effective participators:	Assessment criterion 4.2

Unit G089: Skills for innovation

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

IT professionals need to be able to create and present IT-based solutions for business problems. They also need to be aware of the legal and ethical frameworks that constrain their actions and those of the organisations in which they operate. This unit will develop the knowledge, skills and understanding needed to do this. Learners will analyse existing business processes, identifying opportunities for improvement. This analysis will include the use of statistical and mathematical techniques to manipulate numerical data. They will then generate a number of different possible solutions and evaluate them in order to identify the most appropriate option. Learners will then create recommendations for action, which are presented to an audience in a compelling and convincing way. The solutions will need to be defended and possible objections overcome. The solutions will need to be both technologically and financially feasible.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Undertake an investigation of a number of selected organisations to support learning outcomes in 1, 3 and 4	The learner can: 1.1 Produce an action plan that enables the learner to collect the information required to cover learning outcomes 1, 3 and 4 (RL2, EP2, EP3) (ICT) 1.2 Carry out the planned activities, monitoring and reflecting on progress, making any changes to the plan that are required to successfully obtain the required information (RL3) (ICT) 1.3 Evaluate their own performance (and the performance of others, where relevant) (IE6)	• The investigation should be used to carry out research in selected organisations to obtain information to be used for learning outcomes 1, 3 and 4 • The action plan should include: – a list of required information and other actions – ie format information (1.0.3) ethical issues (1.0.4) – a description of when, where and how the planned activities will be implemented – space for monitoring the activities
2 Use creative, investigative and numerical reasoning skills to present proposals to address business challenges and opportunities	2.1 Identify appropriate opportunities for improvement in a range of example business scenarios (CT1, CT2) 2.2 Describe a number of options to address each challenge/opportunity, assessing their relative merits (CT1, CT5) 2.3 Describe recommendations for action that demonstrate innovation, creativity and adaptability (CT3)	• Learners should identify and describe existing business processes, for example: – how the business receives and processes customer orders – how a charity keeps a record of donations received – how a sports centre keeps customers informed about new developments • Learners should then identify opportunities for improvement, for example: – how a college could introduce a computerised registration system – how a charity could set up a website to enable people to make donations *Continued next page*

Learning outcomes	Assessment criteria	Exemplification
	2.4 Present the proposals in a convincing way, seeking agreement for these recommendations through an evaluation of the findings and responses to the proposals to inform future progress; demonstrate skills in persuasion and negotiation (RL4, RL5, RL6, SM4) (Eng, ICT)	*Cont.* • Learners should consider both the technological appropriateness of solutions as well as the impact on the business and its customers/suppliers • Speaking and listening skills could also form part of this assessment criteria to ensure learners can communicate their ideas and understand user requirements
3 Demonstrate mathematical competence, using a wide range of numerical and graphical techniques to analyse and present business-relevant information	3.1 Select and apply a range of relevant numerical and graphical techniques to analyse and present business-related information to solve business problems (Maths, ICT)	• Learners should provide evidence of a range of mathematical and statistical techniques to be covered, including: – simple calculations involving percentages and averages – the use of estimation (using simple graphical techniques) and approximation – the use of tables, charts and graphs to summarise and present numerical information • Learners should be able, for example, to identify and summarise the possible costs of introducing a new technological solution as well as the potential benefits (for example, on increased revenues or reduced future operating costs)

Learning outcomes	Assessment criteria	Exemplification
4 Understand key legal and ethical considerations in the IT environment, including data protection, health and safety, and copyright	4.1 Produce a business report describing the principles of key ethical considerations and IT-related legislation (Eng, ICT) 4.2 Explain how selected organisations are affected by ethical and legal issues (IE3, CT3)	• Learners are not expected to have a detailed knowledge of IT-related legislation, but rather a broad understanding of the main principles relating to data protection, health and safety, and copyright • They should understand how selected business organisations and their employees are affected by the requirement to comply with this legislation • They should understand the difference between legal and ethical constraints and be able to recognise the main ethical issues relevant to selected business organisations (eg environmental issues, advertising and public relations, etc). For example, a charity thinking of making it possible for the public to make donations on a website using a credit card needs to consider carefully the need for data security, including the prevention of data theft and the organisation's legal use of the donor's personal data • The business report should be in a style and format appropriate to the IT industry, such as a guidance document for a small/medium enterprise (SME) • It should be structured, for example, with a table of contents, general introduction, information, conclusions and references • The report is produced in a written format to evidence their use of English

Form of assessment

This unit will be internally assessed, by the centre, and externally moderated.

OCR will provide model assignments along with guidance and criteria related to using them, centres must adhere to this guidance. The model assignments will consist of tasks that are applied and holistic in approach. Care should be taken to ensure that a single task, or group of inter-related tasks, is capable of generating evidence against the appropriate assessment criteria and across all marking criteria.

To assist centres in the teaching and assessment of this unit, OCR has designed an appropriate 'Model Assignment'. This assignment may be used by centres without modification. However, in order to provide appropriate contextualisation, improve access or increase local relevance, centres may 'tailor' the model assignments within set parameters. Details of the scope of adaptation are provided in the 'Notes for Tutors' section that accompanies the model assignment.

Learners will be required to investigate a number of different business organisations and use this research to produce evidence against each of the learning outcomes. Centres should advise learners as to the suitability of the organisations to be investigated and may provide assistance in setting up contacts and arranging visits, etc. However, the research and the writing-up should be the learner's own work. Centres may provide learners with 'case study' material where it is otherwise difficult to obtain information from appropriate organisations, however, this should not be overly prescriptive with regards to the learning outcomes and should require learners to select the information required.

This form of assessment has been adopted as a large portion of the learning outcomes relate to practical abilities. The context of the work should enable learners to experience real events and work alongside people in a 'sector' context; for example, work experience.

The work will include:

a An action plan to investigate a number of organisations **[12]**
b A description of a number of opportunities in business scenarios and a presentation of a persuasive case for action **[16]**
c Numerical and graphical analysis of business-related information **[12]**
d A consideration of key ethical and legal issues within organisations **[14]**
e Evidence of the correct use of written English (to include spelling, punctuation and grammar) and other communications (both verbal and text based) **[6]**.

OCR will ensure that the model assignment is related to a real purpose and has clear goals, the centre must ensure these goals are fully communicated to the learner.

In this unit it is recommended that learners spend 45 glh on the acquisition of knowledge, skills and understanding. The remaining 15 glh will take the form of controlled assessment where learners produce the appropriate assessment evidence.

Further guidance on 'controlled assessment' is provided in the centre handbook. for OCR Level 2 Principal Learning in IT.

Marking criteria

The total number of marks for this unit is 60.

AC	Band 1	Band 2	Band 3
1.1 **1.2** **1.3**	**a1:** The action plan lists a small number of information requirements/actions, with little indication of how and when they will be implemented Activities are implemented with significant guidance from others There is little or no monitoring of progress The self evaluation is limited and shows little evidence of reflective-learning **[0 1 2 3 4]**	**a2:** The action plan describes a number of information requirements/actions, together with statements of how and when they will be implemented Activities are implemented with limited guidance from others There is some evidence of monitoring progress The self evaluation is detailed, showing some evidence of reflective-learning **[5 6 7 8]**	**a3:** The action plan describes a number of information requirements/actions, together with descriptions of how and when they will be implemented Activities are implemented with little or no guidance from others There is substantial evidence of monitoring progress The self evaluation is detailed, showing considerable evidence of reflective-learning, including setting targets for future performance **[9 10 11 12]**

AC	Band 1	Band 2	Band 3
2.1 **2.2** **2.3** **2.4**	**b1:** A description of a limited number of opportunities for improvement in at least one business scenario A brief description of a small number of options to address each challenge/opportunity The assessment of their relative merits lacks relevance to the selected organisation(s) A description of recommendations for action that demonstrate a limited degree of innovation, creativity and adaptability The proposals are presented, at least in part, in a convincing way. The attempts to seek agreement for these recommendations lack plausibility A limited range of skills in persuasion and negotiation is demonstrated **[0 1 2 3 4 5 6]**	**b2:** A detailed description of a limited number of opportunities for improvement in at least two business scenarios A description of a number of options to address each challenge/opportunity The assessment of their relative merits is brief but is appropriate to the selected organisation(s) A description of recommendations for action that demonstrate a reasonable degree of innovation, creativity and adaptability The proposals are presented in a convincing way The attempts to seek agreement for these recommendations are largely successful A good range of skills in persuasion and negotiation is demonstrated **[7 8 9 10 11]**	**b3:** A detailed description of a number of opportunities for improvement in at least two business scenarios A detailed description of a number of options to address each challenge/opportunity. The assessment of their relative merits is detailed and appropriate to the selected organisation(s) A description of recommendations for action that demonstrate a high degree of innovation, creativity and adaptability The proposals are presented in a convincing way The attempts to seek agreement for these recommendations are successful A very good range of skills in persuasion and negotiation is demonstrated **[12 13 14 15 16]**
3.1	**c1:** A limited range of straightforward numerical and graphical techniques is selected and used with only partial accuracy The analysis and presentation of business-related information lacks detail and is only partially applied to the selected organisation **[0 1 2 3 4]**	**c2:** A range of straightforward numerical and graphical techniques is selected and used with reasonable accuracy The analysis and presentation of business-related information is appropriately applied to the selected organisation **[5 6 7 8]**	**c3:** A wide range of numerical and graphical techniques is selected and used with accuracy and precision The analysis and presentation of business-related information is detailed and appropriately applied to the selected organisation **[9 10 11 12]**

AC	Band 1	Band 2	Band 3
4.1 **4.2**	**d1:** The basic principles of key ethical considerations and IT-related legislation are briefly described The explanation of how selected organisations are affected by ethical and legal issues is brief and is only partially applied to the selected organisations **[0 1 2 3 4 5]**	**d2:** The main principles of key ethical considerations and IT-related legislation are described in detail The explanation of how selected organisations are affected by ethical and legal issues is detailed It is appropriately applied to the selected organisations, demonstrating a good understanding of the impact on selected individuals or processes **[6 7 8 9 10]**	**d3:** The main principles of key ethical considerations and IT-related legislation are fully described The explanation of how selected organisations are affected by ethical and legal issues is detailed It is appropriately applied to the selected organisations, demonstrating a good understanding of the impact on the organisation as a whole **[11 12 13 14]**
2.4 **4.1**	**e1:** The use of written English is limited and may not be correct with some spelling, punctuation and/or grammatical errors Their reading or interpretation of other documents and information shows some misunderstanding or inaccuracies **[0 1 2]**	**e2:** The use of written English is generally sound with few spelling, punctuation or grammatical errors Their reading and interpretation of other documents is generally correct **[3 4]**	**e3:** The use of written English is good with only minor spelling, punctuation or grammatical errors and uses a wide vocabulary Their reading and interpretation of other documents is correct and accurate **[5 6]**

Approaches to applied learning and assessment

The context of this unit is the business organisations in which IT is situated. Learners will need to understand the business contexts in which organisations operate. They will also need to learn and use simple tools and methods of analysis that will enable them to gain an insight into how they are used in business organisations.

Throughout this unit learners should be introduced to concepts in an applied context. There should be opportunities for learners to visit and experience a range of relevant business organisations. As a result of these visits, there should be opportunities for learners to both observe previously learnt concepts in operation as well as opportunities to debrief and learn from what was observed. This could happen through a range of activities such as work placements, guided visits and individual research projects; learners, own employment locations could provide suitable contexts. The business report may be produced as a reference or guidance document for a small/medium enterprise (SME). Centres need to be aware to not overburden learners with several visits/projects/work experience placements, but rather focus on two businesses using one of these methods to gain information.

Throughout the unit learners should be given opportunities to develop transferable skills such as team working, problem solving, critical analysis, creative thinking and reflective learning. Learners should be given opportunities during the formative learning to develop the planning, research, interpretative and communication skills that they will apply when generating evidence for the learning outcomes.

Functional skills
This unit will provide learners with opportunities to use English, ICT and apply mathematics in a number of ways.

English:
- Listen to complex information and give a relevant, cogent response in appropriate language (2.4), present proposals for improvement
- Present information and ideas clearly and persuasively to others (2.4), present proposals for improvement
- Adapt contributions in discussions to suit audience, purpose and situation (2.4), present and discuss proposals for improvement
- Present information/ideas concisely, logically and persuasively (4.1), write a report on the findings of IT-related legislation
- Present information on complex subjects concisely and clearly (4.1), write a report on the findings of IT-related legislation
- Use a range of sentence structures, including complex sentences (4.1), write a report on the findings of IT-related legislation
- Punctuate accurately using commas, apostrophes and inverted commas (4.1), write a report on the findings of IT-related legislation
- Ensure written work has accurate grammar, punctuation and spelling and that meaning is clear (4.1), write a report on the findings of IT-related legislation.

Mathematics:
- Understand and use positive and negative numbers of any size in practical contexts (3.1), applying numerical techniques to a real business
- Carry out calculations with numbers of any size in practical contexts (3.1), applying numerical techniques to a real business
- Understand and use equivalences between fractions, decimals and percentages (3.1), applying numerical techniques to a real business
- Add and subtract fractions, add, subtract, multiply and divide decimals to a given number of decimal places (3.1), applying numerical techniques to a real business
- Collect and represent discrete and continuous data, using ICT where appropriate (3.1), applying numerical techniques to a real business
- Use and interpret for discrete and continuous data, using ICT where appropriate, statistical measures, tables and diagrams (3.1), applying numerical techniques to a real business.

ICT:
- Select and use software applications to meet needs and solve problems (1.1, 1.2, 2.4), producing business documents
- Use ICT to effectively plan work and review the effectiveness of ICT tools to meet needs in order to inform future judgments (1.1, 1.2) Gantt charts for planning and monitoring
- Recognise copyright and other constraints on the use of information (4.1), reference sources used in a bibliography
- Enter, organise, develop, refine and format information, applying editing techniques to meet needs (4.1), write report
- Use appropriate page layout (4.1) write report
- Enter and format text to maximise clarity and enhance presentation (4.1), write report
- Enter, develop and organise numerical information that is fit for purpose (3.1), presenting numerical information for a real business
- Format numerical information appropriately (3.1) presenting numerical information for a real business
- Create and develop charts and graphs to suit the numerical information, using suitable labels (3.1), presenting numerical information for a real business
- Produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate (4.1), write report.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criteria 1.3 & 4.2
Creative thinkers:	Assessment criteria 2.1, 2.2, 2.3 & 4.2
Reflective learners:	Assessment criteria 1.1, 1.2 & 2.4
Team workers:	There are no opportunities in this unit
Self managers:	Assessment criterion 2.4
Effective participators:	Assessment criterion 1.1

Unit G090: Technology systems

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

Those considering a career in the IT sector will require the ability to develop technology systems for a range of business environments. This includes installing hardware and software for networked PC systems as well as installing and upgrading software applications, and developing or customising software.

Potential IT staff need skills to assemble small-scale technology systems for use in a range of business contexts. For this they need knowledge and understanding of the hardware and software components that make up these systems. Skills in designing, developing, reviewing and improving software systems, whether developed or customised, are key requirements.

It is also important for those wishing to enter the IT sector to develop their understanding of the principles of system availability, to develop their knowledge of maintenance and security procedures and to gain problem-solving skills relevant to small-scale technology environments.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Understand the hardware, software and processes required to create a business-relevant technology system	The learner can: 1.1 Produce a document to identify the role of key hardware and software components of networked PC systems (Eng, ICT) 1.2 Explain the procedures used to ensure that systems are accessible, reliable and secure as part of the report (Eng, ICT)	• The learner should understand the function of each key component of networked PC systems, its function within the system as a whole and how it interacts with other components • The learner could produce a business report, in a style and format appropriate to the IT industry. It should be structured with a table of contents, general introduction, information, conclusions and references • They could produce written and graphical explanations in the form of posters, web pages or fact sheets • The learner should understand the principles of system availability and the processes and procedures that help a system to be accessible, reliable and secure • This will include implementing appropriate file structures (eg hierarchical), security processes (password protection, access rights) and backup processes (individual backup, auto-recovery settings, system backup) • The learner will produce written procedures (eg user guides, policy documents)

Learning outcomes	Assessment criteria	Exemplification
2 Assemble a technology system and resolve problems	2.1 Assemble a networked PC system (SM2, SM3) (ICT) 2.2 Resolve problems arising in a small-scale technology environment, recording information in a problem log (IE1, CT5, CT6) (ICT)	• The learner will be able to assemble the hardware, install or upgrade software (system and application) and carry out any necessary configuration of a business-relevant technology system • The learner will produce photographic or video and screen-printed evidence of the assembly with brief written descriptions • This will include detecting and removing viruses as well as resolving straightforward user errors such as incorrect locations for storing files, accidental deletion and unnecessary duplication • Reading skills may be evidenced through the use of fault log sheets from the user • The learner may produce screen-printed or other graphical evidence of resolving errors and will include these in a problem log (this log could be maintained as a single table database)

Learning outcomes	Assessment criteria	Exemplification
3 Be able to use and customise existing software applications	3.1 Create straightforward software systems including programs, scripts and macros (SM2, SM3) 3.2 Create single table databases, populate with data and carry out searching and sorting (ICT)	• Macros can be created using standard software applications (spreadsheet, database, word processor) • Straightforward programs should be written using a scripting language (such as VBScript) or a programming language (such as Visual BASIC) • The learner could create a macro to search, or sort, a database, and might write a script to perform these functions • They could create a macro for a spreadsheet or they could develop a straightforward program to perform a particular function (such as wage calculation, tax calculation and invoice creation) • Ideas for software systems may be derived from the needs of a local business • The learner will create a single table database (such as a database of learners or a database of problems and their resolutions), will populate the database and then show evidence of sorting (eg by age, surname or date) and searching (eg all students on a particular course or all problems of one type) • This evidence may come from using a database application or from software created by the learner

Learning outcomes	Assessment criteria	Exemplification
4 Know how to design, develop, test and review straightforward systems	4.1 Design, develop and test a straightforward system to meet an identified business need (CT6, RL1) (ICT) 4.2 Seek feedback and review the system, identifying opportunities for improvement (CT6, RL1, EP4) (Eng, ICT)	• The learner will determine the requirements (input, output and processing) for a simple system to meet the identified need • They will develop the system (writing a program, a script, a macro or creating a database with associated sorting and searching software) • The learner will carry out testing on the system to ensure that it meets the requirements • Feedback will be sought from the user, for example by creating a feedback form • The learner will gain feedback and will use it to undertake a review of the system • They will identify improvements that can be made, although they may not carry out these improvements • Speaking and listening skills could also form part of this assessment criteria to ensure learners can communicate their ideas and understand user feedback

Form of assessment

This unit will be internally assessed, by the centre, and externally moderated.

OCR will provide model assignments along with guidance and criteria related to using them, centres must adhere to this guidance. The model assignments will consist of tasks that are applied and holistic in approach. Care should be taken to ensure that a single task, or group of inter-related tasks, is capable of generating evidence against the appropriate assessment criteria and across all marking criteria.

To assist centres in the teaching and assessment of this unit, OCR has designed an appropriate 'Model Assignment'. This assignment may be used by centres without modification. However, in order to provide appropriate contextualisation, improve access or increase local relevance, centres may 'tailor' the model assignments within set parameters. Details of the scope of adaptation are provided in the 'Notes for Tutors' section that accompanies the model assignment.

Centres should advise learners as to the suitability of the organisations to be investigated and may provide assistance in setting up contacts and arranging visits, etc. However, the research and the report/project should be the learner's own work.

Centres may provide learners with realistic 'case study' material where it is otherwise difficult to obtain information from appropriate organisations, however, this should not be overly prescriptive with regards to the learning outcomes and should require learners to select the information required.

This form of assessment has been adopted as a large portion of the learning outcomes relate to practical abilities. The context of the work should enable learners to experience real events and work alongside people in a 'sector' context, for example, work experience.

This will include:

a evidence of the assembly of a networked PC system **[12]**
b an explanation of the role of the key components of the system and the procedures that might be used to ensure that the system has maximum availability **[12]**
c a problem log including problem description and resolution of at least three errors, along with graphical evidence of the errors and their correction **[6]**
d a single table database created and populated by the learner, along with evidence that it has been searched and sorted **[6]**
e records of the design, development, testing and review of a straightforward software system (macro, script or program) to meet a given business need, identified for the learner **[12]**
f evidence of feedback gained by the learner and suggestions for improvement of the system **[6]**
g evidence of the correct use of written English and other communications **[6]**.

Learners must be provided with realistic contexts in which business needs are identified and for which they can independently assemble a networked PC system and develop a straightforward software system.

OCR will ensure that the model assignment is related to a real purpose and has clear goals, the centre must ensure these goals are fully communicated to learners.

In this unit it is recommended that learners spend 40 glh on the acquisition of knowledge, skills and understanding. The remaining 20 glh will take the form of controlled assessment where learners produce the appropriate assessment evidence.

Further guidance on 'controlled assessment' is provided in the centre handbook for OCR Level 2 Principal Learning in IT.

Marking criteria

The total number of marks for this unit is 60.

AC	Band 1	Band 2	Band 3
2.1	**a1:** Evidence that the learner has assembled the hardware and installed system or applications software. Some help may be required There is limited configuration of the system **[0 1 2 3 4]**	**a2:** Evidence that the learner has assembled hardware and installed system and applications software independently Most of the necessary configuration has been carried out **[5 6 7 8]**	**a3:** Evidence that the learner has confidently and efficiently assembled the hardware and installed or upgraded both system and applications software All of the necessary configuration has been carried out **[9 10 11 12]**

AC	Band 1	Band 2	Band 3
1.1 **1.2**	**b1:** The key components will be identified and their functions described The procedures to ensure system availability are explained in a limited way **[0 1 2 3 4]**	**b2:** The function and purpose of the key components are described Procedures to ensure system availability are clearly explained **[5 6 7 8]**	**b3:** The function, purpose and effects of the key components are fully explained Procedures to ensure system availability are clearly and fully explained **[9 10 11 12]**
2.2	**c1:** The log includes a limited description of at least one problem with its resolution There is some evidence of the errors being corrected **[0 1 2]**	**c2:** The log includes a description of at least two different types of problem with their resolution There is clear evidence of errors being corrected **[3 4]**	**c3:** The log includes a clear and detailed description of at least three different types of problem with their resolution There is extensive evidence of errors being corrected **[5 6]**
3.2	**d1:** The database is created and populated There is evidence of a simple search and sorting on one field **[0 1 2]**	**d2:** The database is created and populated There is evidence of a complex search and sorting on multiple fields **[3 4]**	**d3:** The database is created and populated There is evidence of a range of advanced searches and sorting on multiple fields **[5 6]**
3.1 **4.1**	**e1:** Records show a basic design A simple system is developed There is evidence of limited testing **[0 1 2 3 4]**	**e2:** Records show a detailed design A simple system is developed directly from the design There is evidence of detailed testing **[5 6 7 8]**	**e3:** Records show a full and detailed design A simple system is developed directly from the design There is full, clearly documented testing **[9 10 11 12]**

AC	Band 1	Band 2	Band 3
4.2	**f1:** Feedback is gained and used to a limited extent in a review of the system **[0 1 2]**	**f2:** Feedback is gained and used in a detailed review of the system, with some suggestions for improvement **[3 4]**	**f3:** Feedback is gained and used in a detailed review of the system, with clear and relevant suggestions for improvement **[5 6]**
1.1 **1.2** **4.2**	**g1:** The use of English is limited and may not be correct with some errors **[0 1 2]**	**g2:** The use of English is generally sound with few errors **[3 4]**	**g3:** The use of English is good with only minor errors **[5 6]**

Approaches to applied learning and assessment

Learners must be given the opportunity to assemble the hardware, install and upgrade software (system and application) and carry out configuration. For example, they might connect computers in a peer-to-peer network using a standard operating system. This activity could be carried out in a small group, giving the opportunity for learners to demonstrate team-working skills. They will need access to equipment that they can disassemble and re-assemble, and access to copies of system and application software that they can install or upgrade. They should have the opportunity to set passwords and access rights. In order to evidence transferable skills in English, learners could produce a report explaining the role of key hardware and software components of networked PC systems. This should be in a style and format appropriate to the IT industry. The report may form part of collaborative working with a local business if possible and be provided in the form of a guidance document. Or learners could provide clear evidence through a series of photographs or video clips of assembling the system. These should be annotated by the learner to describe the process.

Problems should be introduced to these systems to give the learners the opportunity to identify as well as correct a problem (setting the default file storage location for an application accurately, introducing a virus to an isolated system, deleting a file for the learner to undelete. This activity will give the opportunity for learners to demonstrate that they are creative thinkers who can generate ideas and explore possibilities. They should follow an appropriate logic and use help functions to address the problems.

The learner will create a single table database (such as a database of learners), will populate the database and then show evidence of sorting (eg by age or surname, or both) and searching (eg all students on a particular course). This evidence may come from using the database application or from software created by the learner. Learners could create a database of problems and their resolutions. They could add the problems they solve to the database after populating it with a set of given problems.

Learners must design, develop, test and review a straightforward software system to meet an identified need. For assessment purposes, the learner must be given a realistic business context with a realistic identified need (eg a company needs a system to calculate wages for employees given the number of hours worked, overtime hours, rates of pay, etc). The identified need may come from a local business who can take on the role of user. Otherwise this role should be carried out by the assessor. The assessor should take on the role of the user who has requested the system. The learner will gain information from the user to determine the requirements (input, output and processing) for the system to meet the identified need. They will develop the system (writing a program, a script, a macro or creating a database with associated sorting and searching). The learner will carry out testing on the system to ensure that it meets the requirements. This activity will give learners the opportunity to improve and demonstrate their skills in creative thinking. They will generate ideas and explore possibilities in their design. Their interaction with the simulated user will allow them to ask questions, extending their thinking. The process of moving from design to development will allow learners to try out alternatives or new solutions and follow their ideas through.

Feedback should be sought. Learners should use knowledge gained in other units to help them create forms to get the feedback they need. Learners should be given access to sample feedback documentation (from software manufacturers). The learner will gain feedback and will use it to undertake a review of the system. They will identify improvements that can be made, although they may not carry out these improvements. They will suggest improvements in light of the feedback, adapting their ideas as circumstances (program requirements) change. This activity also provides opportunities for reflective learning. Learners will become able to invite feedback on their solutions, deal appropriately with praise, setbacks and criticism.

The unit has two areas of activity where learners can practise the skills of self-management. In assembling a networked PC system, learners will set and work towards goals, show initiative, commitment and perseverance, especially where there are problems with any part of the assembly. In designing, developing, testing and reviewing a software system, learners will again work towards goals. For both projects, learners will be required to organise their time and resources, prioritising their actions.

Functional skills

This unit will provide learners with opportunities to use English and ICT in a number of ways.

English:

- Listen to complex information and give a relevant, cogent response in appropriate language (4.2), seek feedback for system requirements and improvements
- Present information and ideas clearly and persuasively to others (4.2), seek feedback for system requirements and improvements
- Adapt contributions in discussions to suit audience, purpose and situation (4.2), seek feedback for system requirements and improvements
- Select and use different types of text to obtain relevant information (1.1), research
- Read and summarise, succinctly, information/ideas from different sources (1.1), research
- Present information/ideas concisely, logically and persuasively (1.1, 1.2), write a report
- Present information on complex subjects concisely and clearly (1.1, 1.2), write a report
- Use a range of sentence structures, including complex sentences (1.1, 1.2), write a report
- Punctuate accurately using commas, apostrophes and inverted commas (1.1 & 1.2), write a report
- Ensure written work has accurate grammar, punctuation and spelling and that meaning is clear (1.1, 1.2), write a report.

Mathematics

No opportunities in this unit.

ICT:

- Use correct procedures to start and shut down an ICT system (2.1), assemble a network system
- Select and use software applications to meet needs and solve problems (2.1), assemble a network system
- Select and use interface features and system facilities effectively to meet needs (2.1), assemble a network system
- Select and adjust settings as appropriate to individual needs (2.1, 2.2), assemble a network system
- Manage files and folder structures to enable efficient information retrieval (2.1), assemble a network system
- Insert, remove, label and store media safely (2.1), assemble a network system
- Minimise physical stress (2.1), assemble a network system
- Keep information secure (2.1), assemble a network system
- Identify ICT problems and take appropriate action (2.1, 2.2), assemble a network system
- Select and use appropriate sources of ICT-based and other forms of information which match requirements (1.1, 1.2), write a report
- Recognise copyright and other constraints on the use of information (1.1, 1.2), write a report
- Enter, organise, develop, refine and format information, applying editing techniques to meet needs (1.1, 1.2), write a report
- Use appropriate page layout (1.1, 1.2), write a report

- Enter and format text to maximise clarity and enhance presentation (1.1, 1.2), write a report
- Enter, organise, select and edit records using field names and headings, data types and unique record identifier when appropriate (3.2), database creation
- Sort records on one or more fields in ascending or descending order (3.2), database creation
- Produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate (1.1, 1.2), write a report
- Evaluate the effectiveness of ICT tools to meet needs (2.2, 4.1, 4.2), evaluate use of network for a user.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criterion 2.2
Creative thinkers:	Assessment criteria 2.2, 4.1, 4.2
Reflective learners:	Assessment criteria 4.1, 4.2
Team workers:	There are no opportunities in this unit
Self managers:	Assessment criteria 2.1, 3.1
Effective participators:	Assessment criterion 4.2

Unit G091: Multimedia

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

The use of multimedia products to communicate, advertise, and entertain has now become widespread. This unit will enable learners to acquire and develop vital skills, such as the ability to identify where multimedia elements may be used to enhance an existing multimedia presentation or to develop a wholly new product having analysed the business needs of the client and the needs of the associated target audience.

It is also important that, before a multimedia product is passed to the end user for publication, full testing is carried out to ensure that the product works as intended and meets its stated aims. The ability to evaluate feedback from the target audience for a multimedia product and to use this to identify opportunities for improvement are also extremely important skills to develop in order to follow a career in multimedia.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Understand which types of digital media can be used to meet different business-related objectives	The learner can: 1.1 Investigate how different types of digital media can be used to deliver different business-related content (IE1, IE2, IE4) (Eng, ICT) 1.2 Produce a business report detailing the different types of digital media available and explain how each may be used to suit different business-related objectives (Eng, ICT)	• Learners will need to investigate the use of the full range of digital media types in order to understand better how each type of digital is best used • This investigation will include the use of digital media in areas which are obviously linked to business, such as advertising or information delivery in a range of different locations and contexts (such as in a library, post office or motorway service station) • However, other areas may also be researched into in order to improve understanding • Research into the use of digital media in films and games will also allow the learner to develop this understanding • Learners will record the information sources they use • Research and investigation should include the requirement to read and interpret written information correctly and accurately • The information could be produced in a written format to evidence their use of English

Learning outcomes	Assessment criteria	Exemplification
2 Know how to enhance web pages for a given purpose by adding multimedia components	2.1 Show where the use of multimedia components could improve the standard of web pages (CT1) (ICT) 2.2 Enhance web pages by adding a range of multimedia components (ICT)	• Learners will need to acquire the technical knowledge and skills necessary to add elements such as images, graphics, video, sound and timeline-based animation to web pages to enhance them for a given purpose • The web pages evaluated may be professionally produced or purpose designed by the centre • It is likely that the web pages which learners enhance will be created by the centre
3 Design, develop and test a multimedia product which meets the needs of a specific audience and purpose	3.1 Assess the business and audience needs for a given multimedia product (CT2) (English) 3.2 Use the assessment of business and audience needs to design a multimedia product to meet the needs of the specified audience and purpose (CT5) (ICT) 3.3 Use multimedia software to create a multimedia product that combines a range of multimedia components to meet the needs of a specified audience and purpose (SM1, SM3, SM4, SM5) (ICT) 3.4 Test the multimedia product during production to ensure that it meets the needs of the specified audience and purpose (RL1, RL2, RL3) (ICT) 3.5 Test the multimedia product at completion to ensure that it meets the needs of the specified audience and purpose (ICT)	• This will involve the design, development and testing of a multimedia product to meet the needs of a particular client • Learners will create a multimedia product that combines a range of multimedia components • The target audience for the multimedia product could be one with whom learners are already familiar, such as peers or members of the local community, or have ready contact • The ability to interact with the target audience is important for the evaluation, as well as the planning process

Learning outcomes	Assessment criteria	Exemplification
4 Assess the effectiveness of the multimedia product	4.1 Collect feedback from the target audience on how effectively the completed multimedia product has met the stated purpose (RL4) (ICT) 4.2 Use the collected feedback to identify opportunities for improvement to the completed multimedia product (RL5, SM6) (ICT)	• In order to identify how the completed multimedia product may be improved, learners must collect and evaluate feedback from the target audience for the product • This feedback may cover a range of issues, such as quality and relevance of content, accuracy of production or the use of effects to enhance the overall quality or message of the product • Speaking and listening skills could form part of this assessment criteria to help learners communicate their ideas and understand user feedback

Form of assessment

This unit will be internally assessed, by the centre, and externally moderated.

OCR will provide model assignments along with guidance and criteria related to using them, centres must adhere to this guidance. The model assignments will consist of tasks that are applied and holistic in approach. Care should be taken to ensure that a single task, or group of inter-related tasks, is capable of generating evidence against the appropriate assessment criteria and across all marking criteria.

To assist centres in the teaching and assessment of this unit, OCR has designed an appropriate 'Model Assignment'. This assignment may be used by centres without modification. However, in order to provide appropriate contextualisation, improve access or increase local relevance, centres may 'tailor' the model assignments within set parameters. Details of the scope of adaptation are provided in the 'Notes for Tutors' section that accompanies the model assignment.

Centres should advise learners as to the suitability of the organisations to be investigated and may provide assistance in setting up contacts and arranging visits, etc. However, the research and the report/project should be the learner's own work.

Centres may provide learners with realistic 'case study' material where it is otherwise difficult to obtain information from appropriate organisations, however, this should not be overly prescriptive with regards to the learning outcomes and should require learners to select the information required.

This form of assessment has been adopted as a large portion of the learning outcomes relate to practical abilities. The context of the work should enable learners to experience real events and work alongside people in a 'sector' context; for example, work experience.

The work will include:

a a list of the different types of digital media available and an explanation, based on research, of how each form of media may be used to suit a different business-related objective **[6]**

b an evaluation of a series of web pages, identifying areas where multimedia elements may be added to enhance the standard of the website **[6]**

c evidence that web pages have been improved by the addition of a range of multimedia components **[6]**

d an assessment of the business and audience needs for a given multimedia product **[6]**

e a design for a multimedia product to meet the needs of a specified audience and purpose **[6]**

f a multimedia product to communicate with a defined audience for a clear purpose **[12]**

g documentation of testing of the multimedia product **[6]**

h a review of the multimedia product, using target audience feedback to identify opportunities for improvement to the completed multimedia product **[6]**

I evidence of the correct use of written English and other communications **[6]**.

OCR will ensure that the model assignment is related to a real purpose and has clear goals. The centre must ensure these goals are fully communicated to learners.

In this unit it is recommended that learners spend 40 glh on the acquisition of knowledge, skills and understanding. The remaining 20 glh will take the form of controlled assessment where learners produce the appropriate assessment evidence.

Further guidance on 'controlled assessment' is provided in the centre handbook for OCR Level 2 Principal Learning in IT.

Marking criteria

The total number of marks for this unit is 60.

AC	Band 1	Band 2	Band 3
1.1 **1.2**	**a1:** A limited list of types of digital media Evidence of limited research resulting in basic explanations of how the types of digital media listed are suited to different business-related objectives An identification of information sources **[0 1 2]**	**a2:** A list of most types of digital media Evidence of carrying out research and using the information to provide an explanation of how the types of digital media listed will be suited to different business-related objectives Information sources are listed in an appropriate form **[3 4]**	**a3:** A list of all forms of digital media Evidence of carrying out detailed research and using the information to produce a full explanation of how the types of digital media listed may be used to suit different business-related objectives Information sources are listed in a detailed bibliography **[5 6]**

AC	Band 1	Band 2	Band 3
2.1	**b1:** Some suggestions for the improvement of at least one web page by the addition of multimedia elements **[0 1 2]**	**b2:** An assessment of a series of web pages, including clear indications of how the web pages may be improved by the addition of a range of multimedia elements Not all types of multimedia element are considered Some suggestions may not be suitable for the purpose of, or target audience for, the web pages **[3 4]**	**b3:** A thorough assessment of a series of web pages, including clear indications of how the web pages may be improved by the addition of the full range of multimedia elements All types of multimedia element are considered All suggestions suit the purpose of, and target audience for, the web pages **[5 6]**
2.2	**c1:** Evidence of the changing of at least one web page by the addition of at least one type of multimedia element **[0 1 2]**	**c2:** Web pages have been updated by the addition of at least three different types of multimedia element Most changes made are suitable for the purpose and target audience of the web pages **[3 4]**	**c3:** Web pages have been updated by the addition of a wide range of multimedia elements The updated web pages are clearly an improvement on the original version and all necessary changes have been made in line with the purpose and audience of the web pages **[5 6]**
3.1	**d1:** A basic assessment of either the audience needs or the business needs of a given multimedia product **[0 1 2]**	**d2:** An assessment of both the business and audience needs of a given multimedia product **[3 4]**	**d3:** A detailed assessment of both the business and audience needs of a given multimedia product **[5 6]**

AC	Band 1	Band 2	Band 3
3.2	**e1:** Evidence of a simple design for a multimedia product **[0 1 2]**	**e2:** Evidence of a design for a multimedia product that meets the needs of the product and the requirements of the target audience Some aspects of the design may not be clear, or not all necessary elements are included **[3 4]**	**e3:** Evidence of a detailed design for a multimedia product that meets the needs of the product and the requirements of the target audience The design is clear and covers all necessary design considerations **[5 6]**
3.3	**f1:** A basic multimedia product is created in response to a straightforward brief **[0 1 2 3 4 5]**	**f2:** A multimedia product is created in response to a straightforward brief, fulfilling some requirements for the target audience **[6 7 8]**	**f3:** An effective multimedia product is created in response to a brief, fully meeting the needs of the target audience **[9 10 11 12]**
3.4 **3.5**	**g1:** Evidence of testing the completed multimedia product to check that it works as intended **[0 1 2]**	**g2:** A test plan is developed and used to test that the completed multimedia product meets the needs of the brief and works as intended **[3 4]**	**g3:** A detailed test plan is developed over time and used to test that the completed multimedia product meets the needs of the brief and audience and works as intended **[5 6]**

AC	Band 1	Band 2	Band 3
4.1 **4.2**	**h1:** Some feedback is collected from the target audience and used to produce a limited review of the multimedia product **[0 1 2]**	**h2:** A review of the effectiveness of the multimedia product is produced that takes some account of the needs of the target audience and client Target audience feedback is used to suggest some improvements to the product **[3 4]**	**h3:** A detailed and thorough review of the effectiveness of the multimedia product is produced that clearly takes account of the needs of the target audience and client There is clear evidence that target audience feedback has been used to suggest improvements to the whole of the product **[5 6]**
1.2 **3.1** **4.1**	**i1:** The use of English is limited and may not be correct with some errors Their interpretation of documents and information shows some misunderstanding or inaccuracies **[0 1 2]**	**i2:** The use of English is generally sound with few errors Their interpretation of documents is generally correct **[3 4]**	**i3:** The use of English is competent with only minor errors and use a wide vocabulary Their interpretation of documents is correct and accurate **[5 6]**

Approaches to applied learning and assessment

This unit is intended to be completed via a project-centred approach. Learners could carry out a review of the use of digital media in relation to a wide range of business settings and objectives. This review need not be limited to the formal presentation of data, but may also extend into entertainment and other areas such as advertising, film and gaming. The review will then be used as the foundation from which the other assessment criteria may be achieved. The review should be presented as a business report detailing the different types of digital media available and explain how each may be used to suit different business-relevant objectives. The report may form part of collaborative working with local businesses if possible and be provided in the form of a guidance document for new multimedia solutions.

Learners should use the understanding gained to suggest improvements to a series of web pages and then make changes to web pages. The web pages to which learners make changes may not be the same as those that have been criticised. The intention is that by criticising web pages, learners will develop a greater understanding of the content of high-quality web pages. Learners will then go on to design, create and test a multimedia product for a given brief. There must be the opportunity for learners to gather and assess the comments of members of the target audience for the product so that the evaluation of the completed product is targeted and meaningful.

The briefs should clearly set out the needs of both the client and the target audience. Learners should respond to this brief as though it were a genuine commission. Briefs may include a multimedia product to promote a fund-raising event or a business organisation. Learners will first need to assess the audience needs and the business objectives.

Learners should be taught the principles of planning, designing, developing, testing and implementing multimedia solutions and to appreciate the importance of clear understanding of both business requirements and business needs.

Functional skills

This unit will provide learners with opportunities to use English and ICT in a number of ways.

English:

- Listen to complex information and give a relevant, cogent response in appropriate language (3.1, 4.1), assess needs and gain feedback on product
- Present information and ideas clearly and persuasively to others (3.1, 4.1), assess needs and gain feedback on product
- Adapt contributions in discussions to suit audience, purpose and situation (3.1, 4.1), assess needs and gain feedback on product
- Select and use different types of text to obtain relevant information (1.1), research
- Read and summarise, succinctly, information/ideas from different sources (1.1), research
- Present information/ideas concisely, logically and persuasively (1.2), write a report on types of media
- Present information on complex subjects concisely and clearly (1.2), write a report on types of media
- Use a range of sentence structures, including complex sentences (1.2), write a report on types of media
- Punctuate accurately using commas, apostrophes and inverted commas (1.2), write a report on types of media
- Ensure written work has accurate grammar, punctuation and spelling and that meaning is clear (1.2), write a report on types of media.

Mathematics
No opportunities in this unit.

ICT:
- Select and use software applications to meet needs and solve problems (2.1, 2.2, 3.3), create multimedia product
- Identify ICT problems and take appropriate action (2.1, 2.2, 3.1, 3.3), create multimedia product
- Select and use appropriate sources of ICT-based and other forms of information which match requirements (1.1), research
- Recognise copyright and other constraints on the use of information (1.1, 1.2), research and write up of report
- Enter, organise, develop, refine and format information, applying editing techniques to meet needs (1.2, 2.1, 2.2, 3.3), write a report/create multimedia products
- Use appropriate page layout (1.2, 2.1, 2.2, 3.3), write a report/create multimedia products
- Enter and format text to maximise clarity and enhance presentation (1.2, 2.1, 2.2, 3.3), write a report/create multimedia products
- Produce information that is fit for purpose and audience using accepted layouts and conventions as appropriate (1.2, 2.1, 2.2, 3.3), write a report/create multimedia products
- Evaluate the effectiveness of ICT tools to meet needs (2.1, 2.2, 3.3, 3.4, 3.5, 4.1, 4.2), create and evaluate multimedia products
- Review and modify work as it progresses to ensure the result is fit for purpose and audience, and to inform future judgments (3.2, 3.3, 3.4, 3.5, 4.1, 4.2), design, create and evaluate a multimedia product.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criterion 1.1
Creative thinkers:	Assessment criteria 2.1, 3.1 & 3.2
Reflective learners:	Assessment criteria 3.4, 4.1 & 4.2
Team workers:	There are no opportunities in this unit
Self managers:	Assessment criteria 3.3 & 4.2
Effective participators:	There are no opportunities in this unit

Unit G092: Managing projects

Unit level	**Unit size**
Level 2	60 Guided Learning Hours

Unit overview

Projects are undertaken by most people on a daily basis. This unit describes what a project is and how it can be effectively planned. Projects can be very short such as installing a new piece of software, or last for several years. The principles are the same in every case. Learners completing this unit will learn about what defines a project and how to create simple task-based project plans. The skills may be applied to a planned outside visit or field trip, holiday, product development, software installation or computer upgrade, for example. Both IT, and non-IT-related projects may be considered. The use of software applications is included, which represent a very powerful tool for the project manager to create, track and analyse their project. This also allows for the 'what if' scenario to be predicted, by examining external factors that can influence the process and outcome.

Assessment will take the form of a portfolio of evidence that demonstrates practical ability in the creation and review of a project plan although learners are not required to manage the plan through to completion as part of this unit.

Learning outcomes	Assessment criteria	Exemplification
The learner will: 1 Understand 'what is a project' and the fundamentals of a project plan	The learner can: 1.1 Investigate a range of project plans with different content and levels of success (Eng, ICT) 1.2 Describe what a project is and identify the key features that define it (IE1) (Eng) 1.3 Describe the main aims of a project plan and illustrate how these could be affected by a change in circumstances (EP1) (Eng, Maths)	• Learners will use case studies of actual business projects to identify the processes involved. The projects may be found within local or national businesses and include both successful and unsuccessful outcomes. The main elements of the project and any particular factors and features should be identified, for both large and small projects • Definition of a project with reference to start/end points, objectives and interdependent tasks. Includes both IT and non-IT types of projects • Aims of the project plan should include reference to the end product, timescales, resources and cost. Consider a range of circumstances that could affect the project, eg revised product specification, end dates or budget constraints • Research and investigation could include the requirement to read and interpret written information correctly and accurately

Learning outcomes	Assessment criteria	Exemplification
2 Carry out research for and development of a new project plan, including identifying key factors that influence the success or failure of the project	2.1 Identify a new project, completing research on what will be needed in order to complete the project successfully (CT1, CT2) (Eng, Maths, ICT) 2.2 Recognise the strengths and weaknesses of project team members by consideration of potential issues and problems from different perspectives (IE3, CT4) (Eng, Maths) 2.3 Describe internal and external factors that could influence the project plan (IE4, IE5, CT4) (Eng, Maths)	• Learners will need to identify a simple project that may be used to generate a project plan. This could be, for example, a planned outside visit or field trip, holiday, product development, software installation or computer upgrade for example • Opportunities may be explored to produce project plans for other departments within the school, such as exhibitions, performing arts or website developments. Alternatively, the possibility of working with outside organisations may be developed alongside work experience programmes • To include research for and consideration of resources, timescales, costs and team working. Internal factors include the resources and should identify a range of people who may have different perspectives and will need to work together. External factors relate to revised constraints, timescales, specifications, etc

Learning outcomes	Assessment criteria	Exemplification
3 Know how to create a new project plan by using current project management software tools	3.1 Produce a project plan using software tools, with defined tasks, durations, dependencies and resources required (SM4, EP2, EP3) (Eng, Maths, ICT) 3.2 Explain reasons for choices of task durations, dependencies and resource allocations (IE6, CT4) (Eng, Maths)	• Learners should identify a range of industry standard software tools and use one to produce the project plan. It must illustrate task breakdown, dependencies, resources and the critical path • A Gantt chart or similar graphical illustration of the project should be produced. Justifications for task durations could be provided as quotations for component deliveries, eg software or electronic parts. Resource allocations may be explained by a requirement for relevant skills and number of person hours of work needed, but resource over-allocations should be avoided
4 Be able to adapt and review a project plan for changing external factors in a range of scenarios	4.1 Identify the implications of changing external factors to the project end date, critical path and/or costs (RL5) (Eng, Maths) 4.2 Produce a business report that includes a review of the project plan and any assumptions made (RL6) (Eng)	• Identify a range of external factors such as revised delivery dates, specifications, budget constraints, etc. Use these as a 'what if' scenario and create alternative project plans for these factors. Check the implications for resource requirements and resource loading • Review the project plan, making reference to the success (or failure) of the project and the implications of changing external factors • Speaking and listening skills could also form part of this assessment criteria to ensure learners can communicate their ideas and understand feedback from team members

		and clients

Form of assessment

This unit will be internally assessed, by the centre, and externally moderated.

OCR will provide model assignments along with guidance and criteria related to using them, centres must adhere to this guidance. The model assignments will consist of tasks that are applied and holistic in approach. Care should be taken to ensure that a single task, or group of inter-related tasks, is capable of generating evidence against the appropriate assessment criteria and across all marking criteria.

To assist centres in the teaching and assessment of this unit, OCR has designed an appropriate 'Model Assignment'. This assignment may be used by centres without modification. However, in order to provide appropriate contextualisation, improve access or increase local relevance, centres may 'tailor' the model assignments within set parameters. Details of the scope of adaptation are provided in the 'Notes for Tutors' section that accompanies the model assignment.

Centres should advise learners as to the suitability of the organisations to be investigated and may provide assistance in setting up contacts and arranging visits, etc. However, the research and the report/project should be the learner's own work.

Centres may provide learners with realistic 'case study' material where it is otherwise difficult to obtain information from appropriate organisations, however, this should not be overly prescriptive with regards to the learning outcomes and should require learners to select the information required.

This form of assessment has been adopted as a large portion of the learning outcomes relate to practical abilities. The context of the work should enable learners to experience real events and work alongside people in a 'sector' context; for example, work experience.

Learners will produce a portfolio of evidence that will include:

a a description of the characteristics of a project and the fundamentals of a project plan **[6]**
b evidence of research on a new project and the key factors that will influence the success or failure of the project **[18]**
c a project plan using software tools. This should illustrate tasks, durations, dependencies and the critical path through the project. An appropriate graphical format will be included with the text-based information **[18]**
d a description of the implications of changing external factors on the project plan and a review of the completed plan(s) **[12]**
e evidence of the correct use of written English and other communications **[6]**.

OCR will ensure that the model assignment is related to a real purpose and has clear goals, the centre must ensure these goals are fully communicated to the learner.

In this unit it is recommended that learners spend 45 glh on the acquisition of knowledge, skills and understanding. The remaining 15 glh will take the form of controlled assessment where learners produce the appropriate assessment evidence.

Further guidance on 'controlled assessment' is provided in the relevant centre handbook for OCR Level 2 Principal Learning in IT.

Marking criteria

The total number of marks for this unit is 60.

AC	Band 1	Band 2	Band 3
1.1 **1.2** **1.3**	**a1:** Key features of successful and unsuccessful projects. Definition of a project. List of the main aims of a project plan **[0 1 2]**	**a2:** Description of why projects have been successful or unsuccessful. Description of the main aims and fundamentals of a project plan. Examples of actual projects and case studies in a business or commercial context **[3 4]**	**a3:** Analysis of a range of successful and unsuccessful project plans. Detailed description of the aims and fundamentals of a project plan to include task breakdown, timescales, dependencies and the critical path. Detailed examples of actual projects and case studies in a business or commercial context **[5 6]**
2.1	**b(i)1:** Researched a new project plan, listed what is needed for its completion **[0 1 2 3]**	**b(i)2:** Description of a new project plan and what is needed for its completion **[4 5 6]**	**b(i)3:** Detailed description of a new project plan to include deliverables, dates, resources **[7 8 9]**

AC	Band 1	Band 2	Band 3
2.2 **2.3**	**b(ii)1:** List of key factors (internal and/or external) in the success or failure of the business project. Brief summary of project team members **[0 1 2 3]**	**b(ii)2:** Description of key factors (internal and/or external) in the success or failure of the business project. List of team members with reference to strengths and weaknesses **[4 5 6]**	**b(ii)3:** Detailed description of internal and external key factors and potential problems/ solutions from different perspectives. Consideration of team members' strengths, weaknesses and different perspectives and how well they may work together. Description of what they will do in a range of different circumstances should they occur **[7 8 9]**
3.1 **3.2**	**c(i)1:** Created a basic project plan showing the sequence of tasks using software tools. Brief explanation of choices made for tasks and durations **[0 1 2 3]**	**c(i)2:** Detailed project plan with task breakdown, dependencies and resources allocated to each task. Explanations of choices made for task durations, dependencies and resource allocations **[4 5 6]**	**c(i)3:** Detailed project plan with task breakdown, dependencies, range of resource allocations, resource levelling to remove over allocations. Detailed explanations of choices made for task durations, dependencies and resource allocations **[7 8 9]**
3.1	**c(ii)1:** Produced a Gantt chart (or other graphical illustration) with the critical path **[0 1 2 3]**	**c(ii)2:** Produced a Gantt chart (or other graphical illustration) with the critical path and identified key tasks that influence the end date **[4 5 6]**	**c(ii)3:** Produced a Gantt chart (or other graphical illustration) with the critical path together with a detailed description of the factors that could influence the key tasks on the critical path, such as resources and suppliers **[7 8 9]**

AC	Band 1	Band 2	Band 3
4.1 **4.2**	**d(i)1:** List of implications of external factors that could influence the project plan **d(ii)1:** Basic review of the project plan in terms of its suitability for managing the project **[0 1 2 3]**	**d(i)2:** Description of external factors that could influence the project plan and how modifications may be made **d(ii)2:** Modify the project plan to demonstrate the implication of a change in the external factors. Produced a second (alternative) plan for this scenario. Review the plan in terms of suitability for managing the project, using evidence from the alternate plan to show a basic understanding of how the plan can be adapted, identify any assumptions made **[4 5 6 7 8]**	**d(i)3:** Detailed description of a wide range of external factors that could influence the project plan **d(ii)3:** Produce a range of project plans for alternate scenarios due to changes in external factors. Produce a detailed review the plan in terms of suitability for managing the project, using evidence from the alternate plans showing a detailed understanding of how the plan can be adapted and the implications of these adaptations, clearly identifying any assumptions made **[9 10 11 12]**
1.2 **1.3** **2.2** **2.3** **3.1** **3.2** **4.1** **4.2**	**e1:** The use of English is limited and may not be correct with some errors. Their interpretation of documents and information shows some misunderstanding or inaccuracies **[0 1 2]**	**e2:** The use of English is generally sound with few errors. Their interpretation of documents is generally correct **[3 4]**	**e3:** The use of English is good with only minor errors. Their interpretation of documents is correct and accurate **[5 6]**

Approaches to applied learning and assessment

This unit is intended to be delivered through a project-based approach. Initially, a series of case studies from real-world business and commercial applications should look at whether projects have been successful or failed as a result of significant deviation from the original plan. A review of the main problems encountered is recommended where possible. The projects would ideally cover a range of local and national projects, both large and small, relating to IT and non-IT projects. Learners should develop an understanding of what constitutes a project and what outcomes will determine whether the project is a success or failure. Initially, a series of case studies from real-world business and commercial applications should enable learners to look at whether projects have been successful or failed as a result of significant deviation from the original plan. A review of the main problems encountered is recommended where possible. This learning will provide a basis for the learners' planning of their own projects.

Students should be given exercises to enable them to identify the critical parts of a project whereby any changes make a dramatic impact to the overall success, role playing exercises could be used to help students.

Learners should learn how to use industry standard software tools effectively. This includes how to generate the original project plan as well as modifying it for changing external factors. Different types of graphical representations such as Gantt and/or PERT charts should be included. Whichever chart is used, it should be formatted to show the critical path.

Learners will research a project of their own and prepare a project plan through to completion. A practical project should be chosen by the learner that can be completed within the delivery of the course. They may assist each other as team members, but each learner must produce their own project plan. Both IT-related projects (such as computer upgrades) and non-IT projects (such as a holiday or gig) may be used. In all cases, it must be possible to plan several stages of the project by effective use of task breakdown, establishing dependencies and illustrating the critical path. A change to the external factors for the project can be agreed so that it allows the learner to re-schedule tasks and/or resources in order to adapt the plan and illustrate the implications.

A review of the project plan and its value as a learning exercise will be completed by the learner. This should include any alternative approach that would be used on future projects. A summary should be prepared in a suitable format for conveying the information to specified target audiences, which will describe the overall project performance. This could be presented to the class by the learner.

Functional skills

This unit will provide learners with opportunities to use English, ICT and apply mathematics in a number of ways.

English:

- Listen to complex information and give a relevant, cogent response in appropriate language (4.1, 4.2), adapting and reviewing a project plan
- Present information and ideas clearly and persuasively to others (4.1, 4.2), adapting and reviewing a project plan
- Select and use different types of text to obtain relevant information (1.1, 2.1), research projects
- Read and summarise, succinctly, information/ideas from different sources (1.1, 2.1), research projects
- Present information/ideas concisely, logically and persuasively (1.2, 1.3, 2.2, 2.3, 3.1, 3.2, 4.1, 4.2), write up of projects
- Present information on complex subjects concisely and clearly (1.2, 1.3, 2.2, 2.3, 3.1, 3.2, 4.1, 4.2), write up of projects
- Use a range of sentence structures, including complex sentences (1.2, 1.3, 2.2, 2.3, 3.1, 3.2, 4.1, 4.2), write up of projects
- Punctuate accurately using commas, apostrophes and inverted commas (1.2, 1.3, 2.2, 2.3, 3.1, 3.2, 4.1, 4.2), write up of projects
- Ensure written work has accurate grammar, punctuation and spelling and that meaning is clear (1.2, 1.3, 2.2, 2.3, 3.1, 3.2, 4.1, 4.2), write up of projects.

Mathematics:

- Understand and use positive and negative numbers of any size in practical contexts (1.3, 2.1, 2.2, 2.3, 3.1, 4.1), costs of project plans
- Carry out calculations with numbers of any size in practical contexts (1.3, 2.1, 2.2, 2.3, 3.1, 4.1), costs of project plans.

ICT:

- Select and use software applications to meet needs and solve problems (3.1), producing project plan
- Use ICT to effectively plan work and review the effectiveness of ICT tools to meet needs in order to inform future judgments (3.1), producing project plan
- Select and use appropriate sources of ICT-based and other forms of information that match requirements (1.1, 2.1), research projects
- Recognise copyright and other constraints on the use of information (1.1, 2.1), research projects.

Personal, learning and thinking skills

There are several opportunities in this unit for learners to develop and apply their personal, learning and thinking skills. The assessment criteria listed below indicate which of the skills can be developed and applied.

Independent enquirers:	Assessment criteria 1.2, 2.2, 2.3 & 3.2
Creative thinkers:	Assessment criteria 2.1, 2.2, 2.3 & 3.2
Reflective learners:	Assessment criteria 4.1 & 4.2
Team workers:	There are no opportunities in this unit
Self managers:	Assessment criterion 3.1
Effective participators:	Assessment criteria 1.3 & 3.1