

Resources to support the pilot of functional skills

Teaching and learning functional ICT

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Contents

General introduction	5
Teaching and learning functional ICT	
Overview	19
1. Introduction	21
1.1 What is functional ICT?	21
1.2 The functional ICT vision	21
1.3 Teaching functional ICT	22
1.4 How to read the standards	23
1.5 Progression through the levels	26
1.6 Resources	26
2. Using ICT to tackle practical tasks	27
2.1 Introduction	28
2.2 Case studies	29
Case study 1: Quiz night	29
Case study 2: Risk assessment	31
Case study 3: Nursery trips	33
Case study 4: Looking ahead	35
Case study 5: Data collection and analysis	38
3. Activities for developing functional ICT skills	41
3.1 Use ICT systems	42
Activities U1 – U5	43
3.2 Find and select information	61
Activities F1 – F3	63
3.3 Develop, present and communicate information	70
Activities D1 – D12	72
4. Useful resources	107
Acronyms	109

Teaching and learning functional ICT

General introduction

Preface

This resource has been prepared by the functional skills support programme for use in the 1000 centres that will be piloting functional skills from September 2007. These include schools, colleges, training providers, work-based learning, adult and community learning, and secure contexts. Functional skills will be piloted at all levels from Entry level to Level 2, and to learners aged from 14 upwards, including links with GCSE in the relevant subjects.

This resource is in four parts:

1. Managing delivery
2. Teaching and learning functional English
3. Teaching and learning functional mathematics
4. Teaching and learning functional Information and Communication Technology (ICT).

The aim is to offer support that will enable the reader to move forward with the implementation of the pilot for functional skills. It is expected that most specialist teaching staff (English, mathematics, ICT) and leaders/managers in the pilot centres will have had the opportunity to attend the CPD sessions organised by the functional skills support programme in June and July 2007, with follow-up sessions in October 2007 and February 2008.

Clearly, different practitioners, coming from different backgrounds, have very different areas of familiarity, interest and concern in relation to functional skills. An important aim of this material is to encourage common levels of understanding, so that teachers and leaders/managers coming from school, college, training provider, prison education and so on can develop a shared understanding, vocabulary and approach to functional skills that, while fit for each setting, have a common core.

It is important to understand two key points.

- This pilot is genuinely developmental, ie it is not expected that the pilot centres will 'get it right first time'. Rather, supported by the functional skills support programme, by the awarding bodies, and by these and subsequent materials and resources, they will develop good practice and share experience during the three years of the pilot. This will inform the national roll-out of functional skills in 2010.
- These materials are about management, and about teaching and learning. It is not their role to give guidance on preparing learners for summative assessment, in whatever form or forms this will be piloted.

The functional skills support programme

Support for centres in the pilot will be available from the functional skills support programme, which is managed by the Quality Improvement Agency (QIA) and by the Secondary National Strategy (SNS), and from the awarding bodies.

QIA has contracted the Learning and Skills Network (LSN) to develop a range of support materials. See www.LSNeducation.org.uk/functionalskills

SNS will deliver support for workforce development. Initially, this support will be focused on those centres taking part in the functional skills pilots from September 2007. See www.standards.dfes.gov.uk

Other sources of information and support

DfES 14-19 website at www.dfes.gov.uk/14-19 – go to ‘Qualifications’ and then ‘Getting the basics right: Functional skills’.

The QCA website at www.qca.org.uk/qca_6062.aspx has information about the functional skills standards and the pilot.

The Key Skills Support Programme has a continuing brief to provide centres with information about functional skills developments. See www.keyskillssupport.net

Many of the awarding bodies’ websites have sections dedicated to functional skills.

Introduction

What are functional skills?

The DfES defined functional skills as:

‘the core elements of English, mathematics and ICT that provide an individual with the essential knowledge, skills, and understanding that will enable them to operate confidently effectively and independently in life and at work.’

14-19 Education and Skills: Implementation Plan (DfES, 2005a)

The origins of functional skills lie in the Tomlinson report on 14-19 reform (DfES, 2004) and in the government’s response in the White Paper *14-19 Education and Skills* (DfES, 2005b). Tomlinson argued that it was possible for young people to achieve grade C and above in GCSE English and mathematics without having a satisfactory standard of literacy or numeracy. In the White Paper, the government promised a ‘sharper focus on the basics’ and to ensure that learners have a sound grounding in ‘functional skills’.

Functional skills qualifications are therefore being developed in English, mathematics and ICT. The intention is that, in due course, functional skills qualifications will provide a single ladder of achievement from Entry to Level 3 that is available to all learners aged 14+ in all sectors.

A problem solving approach

A key characteristic of functional skills is that they are based on a problem solving approach. Learners who are ‘functionally skilled’ are able to use and apply the English/mathematics/ICT they know to tackle problems that arise in their life and work.

Clearly, teachers cannot know what English/mathematics/ICT their learners will use as they move through their lives. This means that we cannot identify a curriculum core that every learner will use. Instead, and much more powerfully, learners should be taught to use and apply the English/mathematics/ICT that they know, and to ask for help with the areas with which they are less confident.

It is essential to think of learners becoming functional in their English/mathematics/ICT, rather than thinking that there is a vital body of knowledge, known as functional English/mathematics/ICT.

The implications for teaching and learning are significant and will need to be introduced gradually and thoughtfully, but they do not threaten aspects of existing good practice. Helping learners to become more ‘functional’ is supported by existing practices including:

- learning through application
- learner-centred approaches

Teaching and learning functional ICT: General introduction

- active learning and a problem-centred approach
- partnership learning
- assessment for learning.

Why are functional skills needed?

‘Employers and educators have identified these skills as vital for enabling young people and adults to have the practical skills to succeed in further learning, employment and life in modern society.’

‘Functional’ skills – Your questions answered (DfES, 2006a)

The introduction of functional skills, both into the 14-19 curriculum and for adult learners, is being driven by a number of social, educational and economic concerns. For example:

- Only 45% of school leavers achieve five A*-C GCSEs including English and mathematics.

The ‘need to give every child a good command of English and maths’ is seen ‘as the way to overcome economic and social disadvantage and make equality of opportunity a reality’ for every child.

Higher Standards, Better Schools for All (DfES, 2005c)

- Without functional skills, pupils would find it ‘almost impossible to succeed’ because of the difficulty they would have in accessing the secondary curriculum.

2020 Vision (the ‘Gilbert Review’) (DfES, 2006b)

- Basic skill levels of those leaving school and seeking employment are inadequate.

Working on the Three Rs (CBI, 2006)

- Functional skills are central to achieving the outcomes of ‘Every Child Matters’ (DfES, 2003), particularly:
 - enjoy and achieve
 - make a positive contribution
 - achieve economic well-being.

Functional skills for employability – the skills agenda

For the UK to remain economically competitive, the knowledge and skills base of the population must increase. Low post-16 participation rates mean that learners are not staying in learning to achieve the Level 2 (GCSE A*-C) benchmark that will lead them into employability.

Teaching and learning functional ICT: General introduction

A series of government publications and policies, particularly in the last five years, has emphasised the importance of these skills for employability and set what has become known as 'the skills agenda'. The 'Leitch Report' (2006) said:

'In the 21st century, our natural resource is our people – and their potential is both untapped and vast. Skills will unlock that potential. The prize for our country will be enormous – higher productivity, the creation of wealth and social justice.'

Leitch identified the following skills as 'applicable in most jobs':

- literacy
- numeracy
- team working
- communication

and set targets to close the 'skills gap' by 2020, including:

- 95% of adults to achieve functional literacy and numeracy (three times the current projected rate of improvement – 7.4 million adult attainments)
- more than 90% of adults to be qualified at least to Level 2 – 5.7 million adult attainments
- 4 million adult Level 3 attainments
- half a million apprenticeships a year
- 40% of adults to be qualified to Level 4 and above.

Leitch was very clear that, while the focus of his report was on the skills of adults aged between 19 and 65, these targets will not be achieved unless they are underpinned by 14-19 education and training:

'... the Review also recognises how vital effective education for young people is to the new ambition. School standards have improved over the past decade, with more young people than ever achieving five good GCSEs. And yet, more than one in six young people leave school unable to read, write and add up properly. The proportion of young people staying in education past 16 is below the OECD average. The Review emphasises how critical reforms to GCSEs are to improve functional literacy and numeracy. The new 14-19 Diplomas must succeed.'

The development of functional skills in schools and colleges will make a major contribution to meeting these targets.

World Class Skills: Implementing the Leitch Review of Skills in England was published in July 2007. It presents the Government's response to the Leitch Review.

The same message comes from the Confederation of British Industry (CBI):

'Weak functional skills are associated with higher unemployment, lower earnings, poorer chances of career progression and social exclusion... The time has come to ensure that school-leavers in future have the functional

Teaching and learning functional ICT: General introduction

skills they need for work and daily life. In short, British business sees concerted action on functional skills as a key priority.'

Working on the Three Rs (CBI, 2006)

This is not simply a matter of young people not being 'good at maths' or 'not being able to spell and punctuate'. While some may have these weaknesses, the real problem is that even those who can demonstrate the knowledge and understanding required by GCSE do not know how to use and apply their knowledge in practical work-based contexts; this is a problem of skills rather than of knowledge. As explained above, functional skills are not only about knowledge – they are about the use and application of English, mathematics and ICT in real contexts.

Functional skills in higher education

English, mathematics and ICT skills, and the ability to apply them in contexts, are critical to successful progression in education and training post-19. In recent years, many higher education institutions (HEIs) have highlighted the lack of these skills among school leavers. They have shown how weaknesses in these skills have a negative impact on retention and achievement in degree level courses. As a result, many HEIs have to provide remedial courses in these subjects, even to undergraduates who have good grades at GCSE. As with young people entering employment, this is not simply a matter of undergraduates being weak in English, maths and/or ICT. The problem is that even those who have achieved good grades at GCSE do not know how to use and apply their knowledge in practical contexts, whether these are in the humanities, the sciences, engineering, business, or the plethora of vocational degrees that are now available. Functional skills are designed to develop these applied skills.

Functional skills in everyday life

Official and unofficial reports dating back to the 19th century have identified poor standards of literacy and numeracy as a problem affecting not only the employability of individuals and the impact on the economy, but also the quality of people's lives in the broadest sense. Recent research from the National Research and Development Centre (NRDC), for example, has confirmed that people with poor levels of literacy and numeracy have poorer physical and mental health, live in lower standard accommodation, have higher rates of family breakdown, are more politically apathetic, are more likely to have been in trouble with the police, and have lower self-esteem. In recent years, the ability to cope with ICT, even at a very basic level, has become necessary for people to operate effectively in everyday life.

Functional skills are therefore:

- central to the success of the reforms in 14-19 education and training and to the 'skills agenda'
- crucial for the personal development of all learners aged 14 and above
- needed for degree level study

Teaching and learning functional ICT: General introduction

- a platform for the development of employability skills
- fundamental to tackling the skills gap in England.

How are functional skills being developed?

The standards

QCA has developed draft standards for functional English, mathematics and ICT at Entry levels 1, 2 and 3, Level 1 and Level 2 (QCA June 2007). Figure 1 shows how these levels relate to the National Qualifications Framework.

Figure 1

Functional skills levels	National Qualifications Framework levels	Examples of qualifications at each level
Entry 1	Entry	<ul style="list-style-type: none"> ▪ Adult Literacy and Numeracy certificates
Entry 2		
Entry 3		
Level 1	1	<ul style="list-style-type: none"> ▪ GCSEs grades D-G ▪ Level 1 Key Skills ▪ Level 1 Certificates in Adult Literacy and Numeracy ▪ Level 1 NVQ
Level 2	2	<ul style="list-style-type: none"> ▪ GCSEs grades A*-C ▪ Level 2 Key Skills ▪ Level 2 Certificates in Adult Literacy and Numeracy ▪ Level 2 NVQ ▪ BTEC First
Level 3 (NB standards not yet drafted)	3	<ul style="list-style-type: none"> ▪ AS and A levels ▪ Level 3 Key Skills ▪ Level 3 NVQ ▪ BTEC National

It is important to recognise that the 'levelness' of a functional skill is determined by a combination of factors:

- the complexity of the situation or problem the learner is tackling
- the familiarity to the learner of the situation or problem
- the technical demand of the skill required
- the independence of the learner in identifying and selecting the skills they will need, and in tackling the situation or problem.

Teaching and learning functional ICT: General introduction

A learner who is 'functional' in mathematics, English and/or ICT is able to consider a problem or task, identify the functional mathematics, English and/or ICT skills that will help them to tackle it, select from the range of skills in which they are competent (or know what help they need and who to ask), and apply them appropriately. This interplay of the four factors means, for example, that tackling a complex problem in a situation with which a learner is unfamiliar but that requires relatively undemanding English/mathematics/ICT skills may involve a higher level of 'functionality' than a relatively straightforward task in a familiar context that requires more advanced 'subject' skills. It is the combination of the four factors that confirms the functional skill level.

Following extensive consultation in 2005/06, small-scale trials of the draft standards were carried out in 2006/07. The resulting revised standards are being piloted by the awarding bodies from autumn 2007.

The focus of the draft standards is on:

- the application of transferable, practical skills underpinned by knowledge and understanding
- enhancing current GCSE provision
- offering a single ladder of achievement and progression with each level incorporating and building on the level/s below.

The draft standards:

- set out the expected knowledge, understanding and skills as well as their scope and level of demand
- are not detailed curricula or schemes of work
- do not set out models of assessment.

Details of how to 'read' the standards in each functional skill subject are included in the appropriate part of this publication.

Standards are, of course, only the first stage in developing qualifications. When they are finalised, QCA works with the awarding bodies to develop the assessment methods and the qualifications.

Assessment

The assessment regime for functional skills will influence:

- models of delivery
- approaches to teaching and learning
- learner motivation and engagement
- continuing professional development (CPD).

The assessment methods for functional skills qualifications must be fit for purpose across a wide range of learners in a wide range of contexts. It may be that no one method will be appropriate to all settings.

Teaching and learning functional ICT: General introduction

During the pilot, 12 awarding bodies will pilot a range of models of assessment. QCA has produced three documents, one for each functional skills subject, entitled 'Assessment arrangements and principles for pilot'. These documents define the parameters within which the awarding bodies will develop assessment models and materials for functional skills qualifications during the pilot. These models and materials will be accredited by QCA. Many of the principles are common to all three functional skills, including:

- the assessment can be entirely task-based, or a combination of tasks with test-style items
- the assessment should not be entirely test-based
- assessment items may be externally set by an awarding body or requirements may be externally set and provide for internally contextualised task-based assessments
- assessment is of the candidate's own ability to solve a problem or reach an outcome by independent application of skills.

For details of assessment, you should contact your awarding body.

The pilot

What has been learned from the trials of the standards and the approaches to assessment will inform the certificated pilots that run for three years from September 2007 (ie, candidates in these pilots can be awarded a functional skills certificate). These will involve approximately 1000 centres, most of whom will be schools but also including colleges, training providers, work-based provision, adult and community settings and secure settings.

From 2008, functional skills will be piloted within the first phase of Diplomas. Some 800 of the pilot centres are also piloting the Diploma (having passed through the 'Gateway'). They will therefore pilot all three functional skills. The other centres have been identified by QCA and the awarding bodies and may pilot one, two or all three functional skills.

Timelines

Start date	
September 2007	Three-year pilot (approximately 1000 centres) of functional English, mathematics and ICT in a range of contexts, including stand-alone.
September 2008	All three functional skills trialled within the first tranche of Diplomas (construction and the built environment, creative and media, engineering, society health and development, IT).
September 2010	Functional English, mathematics and ICT available nationally.

Where do functional skills fit in the 14-19 reform programme?

Functional skills are at the core of the 14-19 reform programme.

The key features of the reform programme are:

- a strengthened core – functional skills
- the Foundation Learning Tier
- revised GCSEs (from 2010)
- revised AS and A levels (from 2008)
- new Diplomas (from 2008)
- age 16 no longer a fixed point
- a new 'extended project' qualification at Level 3
- personalisation of learning.

'... passing these functional skills qualifications will be a requirement for achieving a C or better in GCSE English, maths or ICT. Young people will therefore have to master the functional skills in order to achieve a... Diploma or an apprenticeship.'

White Paper 14-19 Education and Skills (DfES, 2005)

In effect, therefore, achievement of functional skills will be a requirement for all 14-19 learners.

Key Stage 3

Level 1 functional skills will be embedded in the programmes of study for English, mathematics and ICT at Key Stage 3.

Clearly, success at 14-19, and hence the success of the reforms as a whole, depends on establishing firm foundations at Key Stage 3. Hence, the emphasis on functional skills starts with reform of the Key Stage 3 curriculum and programmes of study.

QCA is currently reviewing what pupils learn at Key Stage 3 by revising the national curriculum programmes of study in order to provide:

- greater flexibility
- improved coherence
- increased personalisation.

One of the aims of the revised curriculum is to develop successful learners who possess 'the essential learning skills of literacy, numeracy and information and communication technology'.

'Individuals at any age who possess these skills will be able to participate and progress in education, training and employment as well as develop and secure the broader range of aptitudes, attitudes and behaviours that

Teaching and learning functional ICT: General introduction

will enable them to make a positive contribution to the communities in which they live and work.'

www.qca.org.uk/secondarycurriculumreview/

Key Stage 4

Level 2 functional skills will be embedded in the programmes of study for English, mathematics and ICT at Key Stage 4.

The functional skills standards are being incorporated into the revised GCSE criteria for English, mathematics and ICT.

While delivery of the underpinning knowledge and understanding is likely to remain the responsibility of specialist GCSE teachers, functional skills will only become transferable when they are embedded across the curriculum. All staff will need to raise their awareness of the relevance of these skills and support learners in applying them in their subject areas.

Every Child Matters (DfES, 2004) includes outcomes that require schools and other providers to focus on employability. These skills are developed at Key Stage 4 through work-related learning and enterprise education. Functional English, mathematics and ICT will provide learners with a platform on which to develop these wider employability skills.

The functional skills qualifications will therefore be:

- available as **free-standing qualifications** for learners aged 14 and over
- linked to the revised GCSEs in English, mathematics and ICT that will be available nationally from 2010. To achieve a grade C or above, candidates will have to achieve the relevant functional skill at Level 2. During the pilot, candidates who achieve the GCSE standard but do not reach the required level in the functional skill will still receive the GCSE award
- a mandatory component of the new **Diplomas**. The Diplomas are a key area of the reforms set out in *14-19 Education and Skills* (DfES, 2005b). They are employer-led qualifications, designed to offer young people a motivating and relevant learning experience through a high quality programme that combines general education with applied practical learning.

They are intended for young people of all abilities and backgrounds and will offer clear routes for progression, whether to further or higher education or to skilled employment. At each stage of their learning, learners will be able to move from the traditional routes of GCSE/A level and vocational programmes to the Diploma, or vice versa, as well as across Diploma lines.

Teaching and learning functional ICT: General introduction

The Diplomas will extend learners' employability skills through a range of assessed learning and development activities that include:

- a focus on a particular economic sector
- a mandatory functional skills component
- personal learning and thinking skills (PLTS)
- work experience.

The qualifications are being developed jointly by the DCSF, QCA and the Skills for Business Network. Diploma Development Partnerships (DDPs), who represent employers, further and higher education, schools and awarding bodies, are responsible for developing the content.

The Diplomas are being developed in 14 lines of learning which will be introduced in three phases between September 2008 and September 2010.

'Generic learning' is a mandatory component of all the Diplomas and includes:

- functional skills in English, mathematics and ICT
- personal, learning and thinking skills (these link closely to the key skills of Working with Others, Improving Own Learning and Performance, and Problem Solving. It is expected that these key skills qualifications will continue to be available)
- work experience
- a project (extended at Level 3).

Achievement of all three functional skills at the appropriate level is therefore a requirement for gaining a Diploma:

Diploma level	Functional skills level
Foundation	Level 1
Higher and Advanced	Level 2

The Diplomas will be delivered by collaborative local partnerships which will involve a consortium of providers (including schools and colleges). To ensure high quality provision, these partnerships have been required to pass through a 'Gateway' process to confirm their readiness to deliver the Diploma from 2008.

The full specifications for the first five Diplomas will be available to centres by September 2007.

Foundation Learning Tier

The Foundation Learning Tier (FLT) is the umbrella term for all provision below Level 2 that is taken by learners over the age of 14 (ie it includes adult

Teaching and learning functional ICT: General introduction

learners). It therefore encompasses what is currently categorised as pre-Entry, Entry level (split into Entry levels 1, 2 and 3) and Level 1.

Phased implementation of the FLT began in August 2007, with an increasing number of providers due to introduce learning programmes until a full complement is reached in 2010.

Learning programmes in FLT will draw on three curriculum areas: personal and social development, vocational/subject-based learning, and key and basic skills. The functional skills, once developed, will replace the key and basic skills. For details about the Foundation Learning Tier, see www.qca.org.uk/flt

Apprenticeships

Although final decisions have not yet been made about the role of functional skills in apprenticeships, the expectation is that they will replace key skills Communication, Application of Number and ICT at Levels 1 and 2. Level 3 key skills and the wider key skills are likely to remain in frameworks, or could be introduced.

It is anticipated that key skills and Skills for Life will continue to be available for registration until 2010.

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Teaching and learning functional ICT

Overview

The aim of *Teaching and learning functional ICT* is to support teachers as they prepare courses that lead to qualifications that include functional ICT. There are four sections.

The first section, the 'Introduction', sets out what functional ICT is, summarises the vision for functional ICT, explains the basic principles for teaching functional ICT, and explains how to read the functional ICT standards as they are set out in the QCA document: *Functional skills standards: ICT*, including a note on how the levels relate to other qualifications.

Section 2, 'Using ICT to tackle practical tasks', provides a number of scenarios drawn from work, everyday life and education that highlight the role and value of ICT skills in helping young people to solve problems and deal with practical situations.

The third section, 'Activities for developing functional ICT skills', provides a wide variety of teaching and learning activities that teachers can use to help learners develop and apply their ICT skills. These examples have been chosen to illustrate an important theme in functional skills teaching – the value of creating situations where learners take an active responsibility for their work.

The final section, 'Useful resources', gives a list of resources that you may find useful. Many of these are listed at the end of each activity in section 3.

1. Introduction

Contents

- 1.1 What is functional ICT?
- 1.2 The functional ICT vision
- 1.3 Teaching functional ICT
- 1.4 How to read the standards
- 1.5 Progression through the levels

1.1 What is functional ICT?

The DCSF's generic definition of functional skills notes that functional skills will:

‘provide an individual with the essential knowledge, skills and understanding that will enable them to operate confidently, effectively and independently in life and at work. Individuals of whatever age who possess these skills will be able to participate and progress in education, training and employment as well as develop and secure the broader range of aptitudes, attitudes and behaviours that will enable them to make a positive contribution to the communities in which they live and work.’

This statement sets out a vision of what learners need to be able to do in order to be ‘functional’ in their use of ICT. This includes being able to:

- develop the practical applied skills needed for success in work, learning and life
- show confidence in their studies in further and higher education
- show confidence in interaction with people in their lives.

Functional ICT will contribute to tackling the national skills gap and improving productivity, enterprise and competitiveness; learners who are functional in their use of ICT are able to apply technology to a wide range of practical tasks – in life, work, education and in their communities.

1.2 The functional ICT vision

The introduction to *Functional skills standards: ICT* (QCA, June 2007) states that:

‘The term *functional* should be considered in the broad sense of providing candidates with the skills and abilities they need to take an active and responsible role in their communities, in their everyday life, in their workplace and in educational settings. Functional information and

Teaching and learning functional ICT: 1. Introduction

communication technology (ICT) requires learners to be able to use technology in ways that make them effective and involved as citizens and able to operate confidently in life and work in a wide range of contexts.

The aim of the ICT standards is to encourage people to demonstrate their ICT skills in a range of contexts and purposes. They are essentially concerned with developing and recognising the ability of learners to apply and transfer skills in ways that are appropriate to their situation.'

It is important to recognise that ICT skills are rarely if ever used in isolation – ICT is used for a purpose. Similarly, ICT skills are not learned in isolation from other skills.

1.3 Teaching functional ICT

It is not possible to predict all the tasks that your learners will be faced with in their lives where ICT skills can be of value. However, you can help them to apply their ICT skills to the greatest effect. So, helping learners to become functional in ICT means helping them to:

- recognise situations in which ICT can make a positive contribution
- apply their ICT skills appropriately to a range of tasks and problems
- reflect on the role that ICT has played in handling these situations
- become increasingly independent in their learning and in the application of their skills and knowledge.

It is essential to think of learners becoming 'functional in their ICT', rather than imagining that there is a fixed body of knowledge known as 'functional ICT'. The exact skills needed to handle software – and indeed hardware – are constantly changing but the skills used to tackle tasks and problems are transferable: they have long-term and lasting value.

This means that learners should experience tasks and problems that have enough scope to allow these practical and applied skills to flourish. Sometimes this may involve learners using relatively straightforward technology to complete quite complex tasks – the complexity of the task may be just as important as the complexity of the skills used to complete it.

It is important that learners do not know, at the time a problem is set, which of the ICT techniques they have at their disposal will actually be needed. Selecting the right techniques is central in demonstrating functionality.

This means that the tasks and problems that learners meet in school, college or training should be chosen so that they can be tackled using ICT skills and techniques that they have already been introduced to and which they can practise and develop through use and application. The key to making ICT learning 'functional' is that teaching should demonstrate how technology is used in life – giving learners experience of the breadth of applications of the subject.

So, practical application to real tasks must be a major theme in teaching and learning for functional ICT. A second, closely connected, theme is that learning

Teaching and learning functional ICT: 1. Introduction

should be active and engaging. The tasks presented should be plainly relevant to learners and appeal to them by being motivating, interesting and realistic.

Part of the push towards relevance and motivation depends on making the use of ICT integral to other areas of teaching and learning. Functional ICT is clearly relevant to both functional English and functional mathematics. Technology can be used to make sure that communication is clear and 'fit for purpose' – the key to functional English. ICT can be an invaluable tool in using mathematics to solve real world problems – the key to functional mathematics. In addition, of course, ICT can play an important part in other academic subjects – science, geography and so on – in the industry-based knowledge and experience that lie at the heart of the new Diplomas, and in many contexts in work-based learning.

In practice this will often mean that ICT teachers liaise very closely with colleagues, often acting as a resource to advise specialists in other disciplines how they can integrate ICT into their schemes of work and lesson plans in ways that are meaningful and appropriate. The scenarios presented in section 2 of this guide offer some ideas on how this can work in practice.

1.4 How to read the standards

The standards for functional ICT are set out in a document published by the Qualifications and Curriculum Authority (QCA) that covers the levels from Entry 1 to Level 2. The document begins with a short introduction and statement of the purpose of the standards. This is followed by a brief explanation of differentiation between Entry level, Level 1 and Level 2. The main body of the document then sets out the standards for the three components at each level:

- Use ICT systems
- Find and select information
- Develop, present and communicate information

The standards themselves are laid out in tabular form with:

- the level
- the skill standard – this is the crucial statement and should be the overall focus of teaching and learning
- the coverage – this indicates the technical demand of the ICT skills and techniques that are likely to be used by learners performing at that level. Learners at a particular level should also be able to do everything expected in the coverage specified in the earlier levels
- examples/applications that ground the statement of the skill standard in specific aspects of ICT.

A footnote states how the content corresponds, where appropriate, to National Curriculum ICT levels, the ICT Skills for Life standards, the ICT key skill, and the National Occupational Standards (NOS) for IT.

As an example, here is an extract from the Level 2 'Use ICT systems' component of the standards:

Teaching and learning functional ICT: 1. Introduction

Figure 1

Level 2

Level	Skill standard	Coverage	Examples/applications
Level 2*	Learners can:		
	1a select, interact with and use ICT systems independently for a complex task to meet a variety of needs	1.1 use correct procedures to start and shut down an ICT system	log in, log out, use shutdown menu
		1.2 select and use a communication service to access the internet	broadband, dial up, network, mobile device
		1.3 select and use software applications to meet needs and solve problems	word processing, spreadsheet, graphics, browser, email, audio and video software
		1.4 select and use interface features and system facilities effectively to meet needs	desktop, windows, dialogue box, menu, submenu, toolbar, scrollbar, drag and drop, zoom, template, wizard
		1.5 select and adjust system settings as appropriate to individual needs	window size, mouse settings, icon size, screen resolution, desktop contrast, volume, date and time
	1b use ICT to effectively plan work and evaluate the effectiveness of the ICT system used	1.6 use ICT to effectively plan work and review the effectiveness of ICT tools to meet needs in order to inform future judgments	time, convenience, cost, quality, range of facilities, versatility
	1c manage information storage to enable efficient retrieval	1.7 manage files and folder structures to enable efficient information retrieval	create, open, save, save as, print, close, delete, view, rename, move and copy files, create folders and subfolders, name files and folders appropriately
		1.8 insert, remove, label and store media safely	CD, DVD, memory stick, hard drives
	2a follow and understand the need for safety and security practices	2.1 minimise physical stress	arrangement of hardware and cables, wrist rests and other devices
	2.2 keep information secure	keep copies safe, take backups, keep password or PIN secret	

Teaching and learning functional ICT: 1. Introduction

Level	Skill standard	Coverage	Examples/applications
		2.3 understand the danger of computer viruses, and how to minimise risk	use virus-checking software, treat files from unknown sources with caution
		2.4 understand the need to stay safe and to respect others when using ICT-based communication	avoid inappropriate disclosure of personal information, avoid misuse of images, use appropriate language, respect confidentiality, use copy lists with discrimination
	2b troubleshoot	2.5 identify ICT problems and take appropriate action	software freeze, respond appropriately to error dialogue, virus threat, storage full, paper jam, uninstall software, know when and whom to ask for help to fix the problem

*The content corresponds to national curriculum ICT level 5/6; ICT Skills for Life standards and ICT key skill, level 2 and NOS level 2 for Using IT (*Making selective use of IT; Operating a computer; IT trouble-shooting for users; IT maintenance for users; IT security for users; Internet and intranets; Email; Word processing software; Spreadsheet software; Database software; Website software; Artwork and imaging software; Presentation software; Specialist or bespoke software; Evaluate the impact of IT*).

Teaching and learning functional ICT: 1. Introduction

The layout of the standards enables you to follow progression through from Entry level 1 to Level 2 in any one component (eg find and select information) or, alternatively, follow through the requirements for a particular level across all three components.

Note that the standards do not say how functional ICT will be assessed, nor do they give examples of how it should be developed or taught. The standards are designed to be context- and assessment-free.

1.5 Progression through the levels

The functional ICT standards cover the first three levels of the National Qualifications Framework – Entry level, Level 1 and Level 2. As usual, Entry level is subdivided into Entry 1, Entry 2 and Entry 3 to reflect the importance of small incremental steps for learners at these levels.

For ease of reference, Entry 1 is comparable in demand to National Curriculum level 1, Entry 2 to National Curriculum level 2 and Entry 3 to National Curriculum level 3. Level 1 is comparable to GCSE grades D-G and Level 2 to GCSE grades A*-C.

The level of functional ICT – as with the other functional skills – is determined by a combination of:

- the complexity of the situation
- the familiarity to the learner of the situation
- the technical demand of the skill required
- the independence of the learner in identifying and selecting the skills they will need, and in tackling the situation.

1.6 Resources

Functional skills standards: information and communication technology

(QCA June 2007 ref QCA/07/3168). Available from QCA website
www.qca.org.uk/qca_6066.aspx

Amplification of the functional ICT standards

This document gives fuller explanations of the standards, explains relevant terminology (with a glossary) and includes progression tables. Available from QCA from the end of September 2007.

Functional skills ICT exemplification

This gives some examples of purposeful activities for developing learners' functional ICT. Available from QCA from the end of September 2007.

2. Using ICT to tackle practical tasks

Contents

2.1 Introduction

2.2. Case studies

Case study 1: Quiz night

Case study 2: Risk assessment

Case study 3: Nursery trips

Case study 4: Looking ahead

Case study 5: Data collection and analysis

2.1 Introduction

As indicated in the QCA functional skills standards:

‘For ICT to be useful, learners must have the skills and confidence to apply, combine and adapt their ICT knowledge to new situations in their life and work. They need the capacity to identify and understand the role that ICT plays in the world and use ICT in ways that enable them to function as effective citizens and benefit them in life and work’.

The need to use ICT systems is widespread in our society. Most people have bank accounts and use a touch screen to obtain money from their bank. They know the importance of security and the need to use a PIN (personal identity number) and to keep it secure. Many people use mobile phones to send text messages and more and more are using digital cameras. It is important that learners are taught to understand the similarities between the interface features of the different applications that they are familiar with so that they can transfer their skills to meet the changing demands that will be made of them.

There are various factors that will limit the way people use ICT in a functional way. For example, people’s ability in English and mathematics may limit how they can use ICT effectively. Being able to change the format of text, eg make it bold, does not mean that the text should be there or that it is accurate. Being able to set up a spreadsheet, and enter a formula when instructed to do so, does not mean that the learner has understood the many ways a spreadsheet application could be used. Conversely ICT can be used to improve people’s skills and understanding in English and mathematics.

The functional use of ICT means the purposeful use of ICT. The purposeful use of ICT means that ICT is used to meet the requirements of the task and the audience for whom the outcome is intended, for example tutor, employer, general public, classmates, co-workers, family and friends. The case studies that follow provide some illustrations of how people have used ICT to carry out everyday tasks to help them be more effective in their life, work and learning. There is an infinite number of possible illustrations but only a few can be offered in this publication.

The commentary that follows each case study indicates the scope of the activity in relation to the functional skills standards. The examples and applications provided in the functional skills standards are only that – examples. At times a learner may use skills that are at a lower or higher level so the commentary gives only an indication of the overall level of the activity.

It will be helpful to have a copy of the ICT functional skills standards to hand when you are reading the commentaries.

2.2 Case studies

Case study 1: Quiz night

Jason's task

The football team in a college were planning to go on tour. They needed to raise funds for this and decided to hold a quiz night. Jason was given the job of keeping the scores from the various rounds of the quiz on the night, so that he could give the running totals at the end of each round. The football coach had said he could use a laptop computer and data projector if that would be of any help.

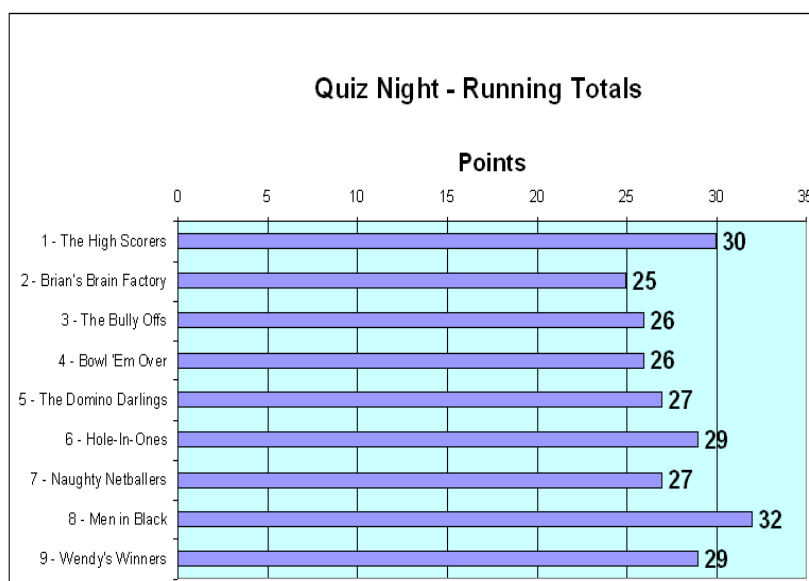
Jason had been to a number of quiz nights and he realised that the scorer was under a lot of pressure to get the scores recorded and added up in the time and then to display them so that everyone could see which team was in the lead.

Jason's solution

Jason knew that setting up a spreadsheet was a reliable and fast way of adding up the scores. He decided to set up a spreadsheet that had a space for the team names and columns in which he could enter the scores for each round. He also set up a 'total' column that would automatically add up all the scores at the end of each round. Once he had this set up, all he had to do at the beginning of the evening was to enter the names of the teams.

To show the scores at the end of each round, he decided to set up a chart (see Figure 2) that would show total scores for each team up to that point. This could be projected on a screen so that everyone could see at a glance the scores and who was in the lead. He was pleased with this idea because he knew that it could be really noisy between rounds and teams were always asking for the scores to be repeated. This way, they could see the scores at a glance.

Figure 2



Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

Commentary

Jason was tackling a fairly straightforward task. It was a non-routine task but it was one with which Jason was familiar – he knew what had to be done because he had been to quiz nights. Jason independently chose to use ICT to help him be more effective in his task.

This activity falls within the scope of Level 1 functional ICT, as shown in Table 1.

Jason had obviously been well taught. He knew the purpose of using a spreadsheet and the advantages of using one in everyday life. He knew that a chart is a quick and visual way of presenting numerical information. Jason could see the benefits of using a chart in this context to meet the needs of the audience (ie the quiz teams).

Table 1

Level 1 Skill standard	What Jason did
1a	Jason independently chose to use a spreadsheet to total the scores and to produce a chart (1.3). We do not know how he used the laptop but he may have adjusted settings to meet his needs.
1b	Jason clearly planned the use he would make of ICT as he realised that this would save him time and make him more effective in his task.
5a	Jason entered information into his spreadsheet and organised this information. He then went on to use a formula to total the values that he entered for the various rounds and to produce a chart.
6a	Jason thought about how to present the information about the scores to the teams at the quiz. Presumably he considered various options, eg reading them out, but chose a chart because this met the needs of the audience.

Case study 2: Risk assessment

Brian's task

Brian had a job in a toyshop that had opened recently. The shop had been open for a couple of weeks when a box fell from a top shelf onto a customer. Thankfully, the customer was not hurt but Brian's boss was concerned. On the business start-up course that she had attended she had heard about the need to do a risk assessment to show that she was taking steps to manage the risk of incidents such as this happening.

She wanted this information quickly but was expecting a delivery and could not leave the shop. She asked Brian to go to the library and use the internet to find out information about carrying out a risk assessment.

Brian's solution

During his course at college Brian had been shown the resource centre and had been encouraged to use the computers there to help him with his work. He had had some practice in using the internet to find information about a holiday he was planning for a project he had to do. He had been told that the public library also had computers that could be used to find information on the internet.

When Brian got to the library the librarian was helpful and took Brian to a computer that was all set up and said all he had to do was enter what he wanted information about and use the mouse to select 'search'. Brian entered 'risk assessment' – or at least he thought he did. He had spelled 'assessment' wrong but the computer pointed out his mistake and he used the mouse again to choose the right spelling. His search then showed that there were about five million websites that could give him information about risk assessment.

Brian read down the first page that came up and saw there was a website called 'Business Link' that ended with '.gov.uk'. He knew that this would be a government website and not a commercial firm trying to sell him something. He followed the link to that website and found another link to a leaflet entitled 'Five steps to risk assessment' that was published by the Health and Safety Executive. He looked through that and thought it looked like the sort of thing his boss needed.

He asked the librarian if he could get this leaflet printed and he was told that he would have to pay for this. That was fine, so the librarian came along and printed it out for him. It only cost 10 pence so Brian did not ask for a receipt.

His boss was delighted that he had got this information for her.

Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

Commentary

Brian was tackling a straightforward task. He had been told the information that was required and where he could locate it. Although he did not know about risk assessment he was familiar with using the internet to find information. Brian needed help in using the ICT system but showed that he could find and select the information required using ICT.

This activity falls within the scope of Entry 2 functional ICT, as shown in Table 2.

Brian could use a mouse to select buttons in a search engine and could follow links to find the information he needed. He had been taught to make sure that the source of the information was reliable and he used this knowledge well.

Table 2

Entry 2 Skill standard	What Brian did
1	Brian used computer hardware for a purpose.
3	Brian used an appropriate source of ICT-based information.
4	Brian found the information he needed, including following links to make sure he had reliable information.

Case study 3: Nursery trips

Kuldip's task

While working in a day nursery, Kuldip was asked to take on the task of providing information to parents about the various trips that had been planned for the toddlers during the summer months. Information had to be given out about one trip at a time to let parents know what the toddler should wear, money needed etc. The nursery had found that if they provided a list of all the trips, some parents got confused or lost the list.

For the first trip, Kuldip printed out a notice with details of the trip. Two days before the trip, she handed out the notices to the authorised adult who was collecting the child at the end of the day. However, on the day of the trip, some of the toddlers turned up without the necessary clothing and/or money and had to stay in the nursery. Some people claimed that they had not been given the notice or that granny must have collected the child on the day the notice was given out and had not passed it on.

Kuldip's solution

Kuldip and her supervisor wondered if there was a better way of giving out notices about the trips and one that made sure everyone got them. They discussed the possibility of using email as a way to send out notices. Kuldip knew that the nursery had a database with contact details for parents/guardians. She asked if she could see this and found that most parents/guardians had an email address either at home or at work. She asked if she could update this list so that she could use it to send out notices. She realised that some did not have an email address but decided that it would be easy to check that these few had received the notices by hand. The email sent to the others with the notice attached would be a way to check that they had received the notice.

Kuldip had learned how to use email at college and used it quite a lot at home to keep in touch with her friends. While at college she had learned how to set up a contacts list for the others in her class. She learned then that any email sent out should not provide anyone's email address to other people (because people might not want strangers to know their personal details) so she had to make sure that everyone's name appeared on the email but not their email address. It would take a while to set up a contacts list but it would be worth it in the end. She knew that, when email addresses changed, she would have to update the database.

Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

Commentary

Kuldip was tackling a straightforward but non-routine task. She discussed the approach to this work with her supervisor. Kuldip had learned about contacts lists at college and so she was familiar with the needs of the task.

This activity falls within the scope of Level 1 functional ICT, as shown in Table 3.

Kuldip was focused on the needs of the audience – the parents and guardians of the children. She needed a reliable way to get information to them. She applied her knowledge about respecting others' privacy when using ICT-based communication by making sure that email addresses were not included in the email.

Table 3

Level 1 Skill standard	What Kuldip did
1a	Kuldip was able to use an email application to set up a contacts list.
2	Kuldip set up the contacts list so that email addresses did not appear – just the peoples' names to respect their privacy (2.4).
5a	Kuldip entered, developed and refined her contacts list (5.1). Although we have no precise evidence it can be assumed that Kuldip organised information from different sources (existing database, notes of email addresses etc) (5.9).
7	Kuldip showed that she could communicate information responsibly and effectively by creating a contacts list and amending or deleting entries as required (7.1 and 7.2).

Case study 4: Looking ahead

Rashidi's task

As part of his Year 10 personal development course, Rashidi was asked to carry out research into a career that was of interest to him and to give a short talk to the rest of his class about that career. Rashidi had previously used a careers information database to find out what sort of career might suit him and had come up with the possibility of becoming an electrical engineer.

Rashidi's solution

Rashidi carried out his research using a range of paper-based and online sources. He decided that he wanted to do a multimedia presentation for his short talk because he knew his classmates would get bored and would not listen if he just stood up and talked. He also thought that it would be good to get an actual electrical engineer to explain what the job involved.

Rashidi took quite a lot of time over this project. First, he set up folders to manage the files that he had downloaded from the internet and the digital photographs that he himself took of examples of the work of an electrical engineer. He made an audio clip of a discussion he had with one of his father's friends who was an electrical engineer and saved this to put in his presentation.

Next, Rashidi planned his presentation. He found that most of this work was similar to what he had done in other applications, for example using a template, inserting information, editing and formatting. He enjoyed experimenting with what he could do with his images and made sure that they were as interesting and as clear as possible to hold his classmates' interest. The menus in the application were easy to follow and there were plenty of icons to help him find out what he needed. He used the 'help' facilities to find out about animating his slides which was a real bonus. He also found that he could print copies of the slides to give to his classmates.

Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

Commentary

Rashidi's task was a complex one in that it was a multi-step task of finding information, processing it, and then presenting it. Rashidi's work was intended to meet a variety of needs:

- his need to find out about career options
- his need to show he could give a short talk
- his classmates' need to be engaged and informed.

Rashidi identified the ICT-based parts of the task, ie finding information using the internet, taking photographs, and making an audio clip, all in formats that could be used in his presentation and using appropriate software.

This was a non-routine task and, although Rashidi was familiar with his classmates, giving a talk in a class situation was something he was not comfortable with. He was not instructed to use ICT as a solution to this task. He chose this option independently and planned how he could use ICT to help him perform effectively in his talk. As with all good speakers, he realised that he had to engage his audience and came up with the idea of a multimedia presentation. He then demonstrated his ability to transfer his ICT skills to meet this new demand.

This activity falls within the scope of Level 2 functional ICT, as shown in Table 4.

Rashidi's solution illustrates his understanding of the use of application software. He was not afraid to try a new application and knew that he could use menus, icons, buttons and 'help' facilities to assist him in his work. He has obviously learned that skills developed in one application could be transferred to a range of applications and had the confidence to transfer those skills.

Table 4

Level 2 Skill standard	What Rashidi did
1a	Rashidi worked independently on a complex task. He selected appropriate applications (1.3).
1b	Rashidi planned how to use ICT effectively (1.6).
1c	Rashidi managed his files and folders effectively (1.7).
3	He selected and used appropriate sources of ICT-based and other forms of information which match requirements. (3.1).
4	He searched the internet (4.1).
5a	He entered, organised and formatted his information to enhance his presentation (5.1). He obtained and manipulated images to fit the purpose of the presentation (5.5).

Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

5b	Rashidi brought together and organised components of images and text (5.11) and organised the information to achieve his purpose (5.12).
6a	He produced information that was fit for its purpose and audience (6.2).

Case study 5: Data collection and analysis

Dervla's task

As part of her Year 11 GCSE Physical Education course, Dervla was required to carry out an investigation into the reasons why people take part in physical activities. The investigation was to focus on the social and other factors that affect participation.

The activity started with a group discussion about the various factors that influence participation. The tutor suggested that the students carry out a survey to find out whether the factors they had discussed were valid. The tutor suggested that each student could do a survey; they could then combine their results and put them into a spreadsheet for analysis. The tutor explained that the more information they collected the more valid their investigation would be and that, by putting the data into a spreadsheet, they could analyse it (eg they could find out the average number of people surveyed who did physical activity once a week) and could produce charts and graphs to present their findings.

The group discussed the sort of questions they should ask; these were listed on the board. Each student, including Dervla, designed a questionnaire to use in their part of the survey.

Dervla's solution

Dervla was happy to design a questionnaire – she already had a list of questions to put in it. She had used word-processing a good deal for various bits of coursework and was able to set up a document and enter the questions. She drew boxes at the end of questions that could be used as tick boxes for 'Yes' or 'No' answers.

She used her questionnaire to gather information from 20 people and brought her results back to the group. The tutor told them to make a tally chart of the answers to the questions. When everyone had tallied their results the tutor totalled them up and told each student to set up a spreadsheet to analyse this information and write a report on what they found from their investigations.

Dervla designed a spreadsheet and entered her data. She found the total number of females who exercised three times a week and the total number of males who did the same. She found that more males than females exercise regularly, while those females who do exercise do so because they think it makes them look better. She wrote a brief report for her tutor on her findings and used pie charts to show the difference between male and female responses to the questions.

Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

Commentary

Dervla and her classmates were tackling a complex task. However the tutor had made the task straightforward for them by breaking it down and had provided them with guidance. In fact Dervla was not given the opportunity to show that she could plan how to use ICT to carry out the task she was given. She did not even get the opportunity to select the software applications required to meet the needs of the task. The tutor told her what to do.

However, Dervla showed a degree of independence when she set up the spreadsheet and decided how the data should be analysed and presented. Dervla's analysis of the numerical information appears to be quite limited and it is unclear whether it met the purpose of the activity – to analyse the social and other factors that affect participation in physical activity.

The level of this activity is probably around Entry 3 although the skill of using a spreadsheet falls within the scope of Level 1 functional ICT, as shown in Table 5.

Table 5

Entry 3 Skill standard	What Dervla did
1a	Dervla demonstrated that she could interact with and use an ICT system to meet needs.
5a	She entered and processed numbers and generated totals although it is unclear whether her processing met the needs of the task (5.4).
Level 1 Skill standard	What Dervla did
5a	Dervla designed her spreadsheet and entered information into it (5.1). She organised her numerical information and developed it (obtained totals) although it is unclear whether that suited her purpose (5.5). She created pie charts but again it is unclear whether these suited her purpose (5.7).

Teaching and learning functional ICT: 2. Using ICT to tackle practical tasks

3. Activities for developing functional ICT skills

These activities are designed to provide learners with opportunities to address some of the issues identified in the standards for functional ICT.

3.1 Use ICT systems

- U1 Message alert
- U2 Security
- U3 Risk assessment
- U4 Password detectives
- U5 How may I help you?

3.2 Find and select information

- F1 Cultural diversity – are we really so different?
- F2 Internet treasure hunt
- F3 Key words

3.3 Develop, present and communicate information

- D1 Setting up a business
- D2 Text and image snap
- D3 The formula for success
- D4 League table
- D5 Formatting and adding data
- D6 Record that tune
- D7 Access all areas
- D8 Grand design
- D9 Formatting challenge
- D10 Fooling the spell-checker
- D11 Communication at your fingertips
- D12 Communication highway

3.1 Use ICT systems

In the world of work and in everyday life, an ICT system is only switched on and used in order to do something, for example to find out some information, to make a purchase, to send a message, to analyse data, or to produce a document of some sort. The teaching of this component of functional ICT must therefore be in a purposeful context and should overlap with the components 'Find and select information' and 'Develop, present and communicate information'.

When using the following activities, the emphasis of the teaching must be on the value and use of ICT to suit the purpose, rather than on the mechanics of using the ICT system itself.

Learners at every level from Entry 1 upwards must learn to use ICT systems for a purpose and follow safe practices. As they progress through the levels, the level of demand rises in terms of:

- the complexity of the situation
- the familiarity to the learner of the situation
- the technical demand of the skill required
- the independence of the learner in identifying and selecting the skills they will need, and in tackling the situation.

The activities in this section are examples of how learners can be introduced to ICT systems. In addition to addressing specific aspects of the standards, each activity also provides an opportunity to explore a wider range of issues. For example, activity U1 'Message alert' is designed primarily to encourage learners to select an appropriate system in order to meet a specific need. However, it also provides an opportunity to raise issues such as:

- personal use of ICT in paid employment
- staying safe online
- disclosure of personal information
- the relationship between cost and convenience
- that the way one person uses ICT might not suit the needs/preferences of someone else.

While opportunities to address these particular issues have been built into the activity, it is clearly up to the practitioner whether or not to raise them, or whether they should be addressed through a different activity. Likewise, when customising an activity to suit their own learners' needs, practitioners may well build in opportunities to raise an even wider range of issues (eg how the cost of software and hardware can affect an individual's capacity to keep up with the latest developments).

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

U1 Message alert

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Use ICT systems' Skill standard 1 – interacting with ICT.

Recognising the similarities between interface features on familiar ICT systems is a useful starting-point for developing skills and understanding of how ICT systems work. For example, a learner who can use a touch-screen on a cashpoint machine to obtain money understands that using a ticket purchasing system or using a self-scan checkout in a supermarket is the same ICT-based process. A learner who can see these similarities can transfer and adapt their skills.

The activity can be adapted to suit the level at which the learner is operating. The activity might revolve around the use of a digital camera; learners could be introduced to the features of the camera and then asked to compare these features with, for example, a mobile phone. The important learning point is that ICT systems and interface features have similarities and that skills and understanding can be transferred from one system to another.

This activity will enable learners to:

- select appropriate ICT systems for a specific purpose
- interact with and use a variety of ICT systems.

First, learners should take part in a group discussion about downloading and using an instant messaging service. Learners should consider:

- what the service is used for
- when it is appropriate to use it
- etiquette in using these services and staying safe online
- situations when it is not appropriate to use, such as personal messages in work time
- health and safety issues, for example disclosing personal information, taking regular breaks
- equipment needed, such as PC, keyboard, mouse, internet connection
- cost, convenience, and download time.

Using an interactive whiteboard or projector, access an instant messaging service. Ask learners about different interface features, such as windows, dialogue boxes, menus, submenus, toolbars, scrollbars, minimise/maximise and 'close' button.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Once the learners are familiar with the different features, they should be given an activity sheet asking them to label each of the interface features. Learners should then discuss and compare their answers.

Extension

This activity can be extended by:

- learners completing additional activity sheets using different applications
- downloading or accessing an instant messaging service and experimenting with the different interface features including audio and video facilities
- learners taking part in a group discussion about how computer settings can be adjusted according to individual needs, such as altering the screen resolution, icon size and volume control. Where possible, learners should access a computer and experiment with different settings.

Rationale

Using an application that learners enjoy will act as a motivational driver to help engage their interest. Many will already understand how to use instant messaging but may not be familiar with the full range of terminology involved. Helping them identify this in an application they are familiar with will help them transfer their knowledge into other applications and give them a more rounded view of software systems.

Using activity sheets will help reinforce learning. Activity sheets will also help in a class of differentiated learners as, after the initial demonstration, they can work through the sheets at their own pace.

Using a familiar and user-friendly application will also provide an informal setting in which to discuss individual settings such as window size, mouse settings, and volume. Learners are more likely to want to adjust settings when they are using an application that they enjoy.

Preparation

You will need:

- an activity sheet asking learners to identify the different interface features
- an answer sheet
- a projector or interactive whiteboard
- an instant messenger application, login address and password.

For the extension activities, you will need:

- an information sheet about adjusting computer settings, eg volume control, resolution.

Figure 3

Instant Messaging Features

Write down the name of each interface feature.

1		6	
2		7	
3		8	
4		9	
5		10	

Prepare an activity sheet similar to the example in Figure 3. Take a screenshot of an application or create a generic application as in Figure 3. Draw numbered boxes pointing to each feature. Underneath the illustration, create a table where learners can write their answers. You will also need to prepare an answer sheet giving learners the solutions to the activity.

Before the lesson, research different instant messaging services. Choose one and download it to your computer. Sign up to the service so that you have a login address and password. Familiarise yourself with the service so that you can quiz learners on the various features during the lesson.

You will also need to prepare an information sheet explaining how to adjust different computer settings, for example altering volume and screen resolution.

Other applications

This activity could be adapted for any application that requires the learner to understand the interface features, such as Microsoft Office (Word, Excel, Access, PowerPoint etc), Lotus Works, Adobe Acrobat, PhotoShop, Paint.

Resources

- Teaching ideas.co.uk – provides instant messenger ideas.
<http://www.teachingideas.co.uk/ict>
- Resources LSN E-learning and Technology. This site allows you to search for events, resources, and examples of e-learning.
<http://www.lsneducation.org.uk>
- Instant Messaging in the Yahoo! Directory. A directory of instant messenger systems.
http://dir.yahoo.com/Computers_and_Internet/Software/Internet/Instant_Messaging/

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

U2 Security

Activity

This activity is designed to introduce learners to the functional ICT component 'Use ICT systems' Skill standard 2 – following safe practices. It can be adapted to suit the various levels.

At Entry 1 and 2 learners need to know about keeping personal information such as their password(s) and PIN secure and, at the higher levels, learners need to know about respect for others, such as not using another person's email address. At the lower levels the activity might be based around a mobile phone, for example the use of a PIN to unlock, or the interface features (icons, buttons, scrolling, keypad etc). However this activity is adapted, it can be used to raise and discuss issues around the need to keep personal information secure when using ICT systems.

This activity will enable learners to:

- explain what checks need to be made before purchasing goods on the internet
- describe the features of a secure website
- recognise the importance of keeping personal information secure.

Learners should take part in a group discussion about what type of items can be bought online. Examples could include mobile phones, clothes, supermarket goods, gifts and holidays. Ask learners to consider that, while they would not hand over cash to a stranger in the street, people willingly hand over their credit card details and/or personal information to companies they do not know.

Learners should be aware that, before anyone enters their credit card numbers on a website, they should make automatic security checks.

Using a projector or interactive whiteboard, access an online store and explain to learners the security features they should always look for, such as https address, padlock symbol, postal address, telephone number, and third party seal of approval.

Demonstrate that the third party seal of approval should link back to the actual address shown.

Divide the learners into pairs and ask them to research three different websites that sell goods online. Give each pair a questionnaire to complete.

Suitable questions include the following.

- Have you used the site before?
- Have you heard about the site before?
- Has this site received good feedback from someone you know and trust?
- Is a postal address provided?
- Is a customer service telephone number provided?

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- Is there a third-party seal of approval?
- Does the third party seal of approval link back to the site that created it?
- Is there a padlock symbol?
- Does the web page begin with 'https'? (Learners should be aware that the 's' in 'https' means that the site has a secure connection.)
- Are there any customer reviews?
- What are the terms and conditions (what's in the 'small print')?
- What is the refund policy?
- What is the shipping policy (what do they charge for postage, and how long will it take to arrive)?
- Is there any need to be extra cautious when buying from certain countries?

At the end of the activity, learners should be brought back together for a question-and-answer session to reinforce their learning. Questions should address the information that the learners have found.

Rationale

As well as learners themselves, their parents and friends often buy goods online and hand over personal and credit card details without verifying that the company is legitimate. This activity is aimed at making learners aware that they should investigate companies before handing over personal details, as online fraud is prevalent.

Researching different companies and working through set questions will give the learner a good foundation of information and knowledge of what to look for the next time they buy goods online.

Preparation

You will need:

- a projector or interactive whiteboard
- copies of pre-prepared questionnaires and answer sheets.

Resources

- Microsoft. Protect yourself information page. This would be a good research tool for learners to visit. Available on <http://www.microsoft.com/protect/yourself/default.aspx>
- ICT security home: A web page of links about different aspects of IT security. Available from: <http://www.itsecurity.com/>
- BBC – Consumer: A web page that gives excellent information about security and privacy when buying goods online. http://www.bbc.co.uk/consumer/guides_to/shopping_onlinesecurity.shtml#startcontent

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- LSN E-learning and Technology. This site allows you to search for events, resources, and examples of e-learning. It can be accessed on: <http://www.lsneducation.org.uk>
- Key skills trainer. An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication, and ICT at levels 1 and 2. There is a useful section on 'Safeguarding information'. <http://www.keyskills4u.com>

U3 Risk assessment

Activity

This activity is designed to encourage the learning required for functional ICT component 'Use ICT systems' Skill standard 2 – following safe practices.

Learners need to know the mechanics of how to work in a safe manner but they also need to understand why this is important. Learners should be encouraged to think outside the 'IT room' and to think about real life situations, for example computers at home where people might spend hours on the internet without breaks or work situations where someone is sitting at a supermarket checkout for long periods of time. The activity can be adapted to suit any context with which the learner is familiar.

This activity will enable learners to:

- demonstrate the correct positioning of seating and lighting when using a computer
- demonstrate the correct arrangement of hardware when using a computer
- recognise potential health and safety hazards when using a computer
- explain the advantages of taking regular breaks.

Working in small groups or individually, learners should be asked to complete a risk assessment of a room where IT equipment is used. They should be asked to identify potential hazards and bad practices and record them on a form provided. This should be similar to the example in Figure 4.

Figure 4

Risk assessment	
Name..... Room Assessed..... Date.....	
Risk	Implications of not addressing this issue

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

When learners have completed the risk assessment, there should be a group discussion about the implications of not addressing the issues raised. The main risks to consider are:

- **incorrect seating:** leading to back and neck pain, stress headaches
- **inadequate lighting:** leading to eye strain, visual fatigue, blurred or double vision
- **poor arrangement of hardware:** leading to RSI, tenosynovitis, carpal tunnel syndrome, poor posture, uneven muscle development
- **food and drink near IT equipment:** leading to damaged equipment, risk of electrocution
- **trailing wires and cables:** leading to accidents
- **overloaded plugs:** leading to accidents, risk of fire.

The discussion should also touch on the importance of taking regular breaks.

Extension

This activity can be extended by:

- asking learners to identify pertinent points of health and safety law in employment. This could be achieved by asking them to use the internet to search for the main regulations covering the use of computer equipment. Alternatively, the tutor could research this subject and produce a handout (see below for a list of useful sources).
- asking learners to resolve issues by repositioning equipment to meet health and safety requirements.

Rationale

Using an IT room that the learners already use will act as a motivational driver to help them engage with the lesson. Learners are more likely to want to rearrange a workspace that will benefit them. Many learners will already understand the importance of maintaining good health and safety practices but may not be familiar with the implications of not adhering to them.

Handouts of activities will help to reinforce learning and, when completed, can be kept in files to be used as portfolio evidence.

Preparation

You will need:

- to familiarise yourself with health and safety law
- to complete a risk assessment of the room being used and, if necessary, introduce hazards from the list above. However, be very careful not to expose learners to risk.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

For the extension activities, you will need:

- access to the internet
- a handout listing the main points of health and safety law (See Figure 5)
- a handout listing health and safety best practices (See Figure 6).


Resources

- From the BBC:
<http://www.bbc.co.uk/schools/gcsebitesize/ict/implications/3healthandsafetyrev1.shtml>
- Health and Safety (Display Screen Equipment) Regulations 1992
- Management of Health and Safety at Work Regulations 1992
- Provision and Use of Work Equipment Regulations 1992
- Workplace (Health, Safety and Welfare) Regulations 1992

Figure 5

Health and Safety Law
<p>The law says that employers must:</p> <ul style="list-style-type: none"> ■ Pay for eyesight tests by a qualified optician ■ Provide foot support where required ■ Provide adjustable chairs ■ Ensure there is adequate lighting ■ Ensure there is adequate heating and ventilation ■ Ensure that workstations are not cramped ■ Provide anti-glare filters ■ Ensure employees take frequent breaks ■ Provide screens that can be tilted. <p>Please note that these regulations do not apply to schools or colleges so make sure you take responsibility for your own health and safety.</p>

Figure 6

Health and safety best practices
<ul style="list-style-type: none"> ■ Food and drink must not be placed on or near computer equipment. ■ Cables and wires should not trail across walkways or desks. ■ Electrical sockets should not be overloaded. ■ Seating should be positioned so that feet can be placed flat on the floor or on a foot support. ■ Seating should be positioned so that the lower back is supported. <div style="text-align: center;">  </div> <ul style="list-style-type: none"> ■ Screen should be tilted to a position that avoids awkward movements. This usually means having your eyes level with the top of the screen. ■ Wrists should be supported by wrist rests. ■ Position the keyboard and mouse so that elbows are slightly bent. ■ Screen filters can be fitted to reduce glare.

U4 Password detectives

Activity

This activity addresses functional ICT component 'Use ICT systems' Skill standard 2 – following safe practices.

While the activity focuses on passwords it could be adapted to include PINs (personal identification numbers) that could be guessed easily (eg birth dates, Christmas Day). While learners know they have to use passwords to get in to their centre's ICT system they may not understand the need for these. They should be encouraged to think about, for example, the contacts list on their mobile phone – what would happen if they did not use a PIN to protect these? The use of PINs with bank cards could be raised, or the whole issue of identity fraud.

This activity will enable learners to:

- recognise that information, particularly computer records, should be kept secure
- explain the best way to format a password
- identify ways of safeguarding information.

Learners should take part in a group discussion. They should consider:

- what type of information is kept on a computer
- what type of information is sensitive and should be kept secure
- what could happen if someone gained unauthorised access to their computer?

Next, ask learners to write down a new password on a piece of paper. They should *not* use an existing password. When they have done this, they should fold the paper over and write their name on the back. Collect in the passwords for safekeeping.

Divide the learners into groups of two or three and explain that they have five minutes to find out as much as possible about each other. For example, date of birth, parents' names, boyfriend/girlfriend's name, pet's name, sisters, brothers, favourite sports teams, favourite musicians etc.

After five minutes, ask the learners to make three suggestions for what they think their partner's password may be. Give each learner his or her original password back. Learners should check their password to see if it has been guessed.

Gather the learners together and explain that many people base their password on family and friends' names, pets' names and personal dates such as birthdays because they are easy to remember. However, this information is often given in general conversation and can therefore be easily guessed.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Learners should also consider:

- How easy was it to guess the password?
- What made it easy to guess? Was it a name, or a sequence of numbers, eg telephone number or date of birth?
- What makes a password difficult to guess? For example, a mixture of uppercase and lowercase letters and numbers?
- What formats should be avoided? For example, replacing letters for similar looking numbers – zero and 'O'.
- How often should a password be changed?
- Should a password be written down?
- What should you do if your password is stolen?

Extension

This activity can be extended by:

- learners researching what other factors could threaten personal information or computer records, eg computer viruses, disclosing personal information over the internet, and the importance of taking care of paper documents, and respecting others' rights to confidentiality
- learners creating a poster or information leaflet about keeping information secure. Topics could include their findings from their online research.

Rationale

Many learners think that passwords are created only to help them access online services such as email or online messaging. They are often not aware of the implications of disclosing this information. Through the question and answer session, learners will identify that accessing someone else's information without permission is similar to picking up and reading a personal diary. During this session, they should also be made aware that accessing other people's information without permission is illegal.

Learners are often unaware of how vulnerable their online information is and how easily it can be accessed. They often use passwords that are related to their everyday life such as family, friends' or pets' names. Helping learners to recognise how easy it is to guess passwords will give them the incentive to create strong passwords, guard their information more carefully and recognise the need for online security. Discussing solutions to online security will give them the confidence and knowledge to put safety strategies in place. This activity uses memory skills, teamwork, and problem solving. It therefore works well with all learning styles and introduces an element of cooperation and discussion into the ICT classroom.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Preparation

You will need:

- small pieces of paper for learners to write their passwords on
- an information sheet explaining how to keep information secure. It should give examples of strong passwords and passwords that could be easily guessed. In order to reinforce learning include example passwords and ask the learner to identify whether the password is secure. See Figure 7 for an example.

Figure 7

Keeping information secure

A good way of keeping information secure on your computer is to use a password. A password that is easy to guess is a security risk.

You can make a password difficult to guess by using a mixture of upper- and lowercase letters, numbers and special case characters. Remember, hackers have tools that can check all possible letter combinations, so only using a mixture of letters is not enough.

Examples of weak passwords

sarah, sonia123, fido, password, 562134, 21/01/64

Examples of strong passwords

s@2a>jaP1, P&s5xorD, M>a<ROOn, I_L0vE_w0rE, 22*>thAnU

If you think that someone has guessed your password, change it immediately and inform your tutor or a technician. Remember, a password should be changed every 90 days or more often.

Activity

Do you think these passwords are weak or strong? Tick the box you think is correct.

	Strong	Weak
1. LiMP1Ts%	[]	[]
2. S(1>tev!n)	[]	[]
3. Hello123	[]	[]
4. Sandy	[]	[]
5. HeiiL0!!!	[]	[]

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Resources

- Key Skills Trainer. An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication and ICT at levels 1 and 2. There are sections on 'Safeguarding information' and 'Understanding viruses'. It would be a good research tool for learners. Available from www.keyskills4u.com
- Microsoft: Protect yourself information page. This would be a good research tool for learners to visit. Available as a web page on <http://www.microsoft.com/protect/yourself/default.mspx>
- ICT security home: A web page of links about different aspects of IT security. Available from: <http://www.itsecurity.com/>
- How Stuff Works: An introduction to how computer viruses work. Available from: <http://www.howstuffworks.com/virus.htm>
- LSN E-learning and Technology. This site allows you to search for events, resources and examples of e-learning. It can be accessed on: <http://www.lsneducation.org.uk>
- BBC bitesize: A revision resource for GCSE, including a section on data communications. Available from: <http://www.bbc.co.uk/schools/gcsebitesize/>

U5 How may I help you?

Activity

While all learners need to be aware of problems that might arise when using ICT systems it is only at Level 2 that the functional skills standards explicitly state that learners should be able to identify ICT problems and take appropriate action (functional ICT component 'Use ICT systems' Skill standard 2, coverage 2.5).

This activity will enable learners to:

- recognise potential ICT issues
- explain the appropriate action to take
- describe what information is required when reporting a fault.

Learners should be divided into groups and asked to brainstorm computer hardware and software problems and record their ideas. They should be given a set time to do this. Bring the groups back together to discuss their ideas and capture these on a whiteboard. For each issue, the group should be asked to discuss what appropriate action to take. The following are examples.

- **Error messages:** appropriate action would include: read the message carefully, print screen, respond appropriately to given options, report fault to the tutor or systems administrator.
- **Software freeze:** appropriate action would include: note what you were doing leading up to the freeze and any error messages that appear, soft boot the PC if possible, report fault to the tutor or systems administrator.
- **Viruses:** appropriate action would include: immediately stop what you are doing and report to the tutor or systems administrator, make a note of what you were doing leading up to the virus activating and any error messages that appear, do not use the PC until the virus has been removed, do not try to remove the virus yourself.
- **Printer paper jam:** appropriate action would include: identify where the jam is located, turn the printer off at the mains, open printer and gently remove the paper causing the jam, close printer and turn back on, reset if required. All printers are different so, if you are unsure, use the manual or ask the person responsible for the printer. Do not try to remove the paper by force.
- **Mouse stops working:** appropriate action would include: check that it is securely plugged in to the back of the PC. If it is still not working, use the keyboard to shut down and re-boot. If the mouse is wireless, replace the batteries. If nothing works, ask for a replacement.
- **Keyboard stops working:** appropriate action would include: identify if it is just some of the keys or all of them. If it is just some of the keys, turn the keyboard upside down and gently shake to remove any foreign objects. If it is all the keys, check that it is securely plugged in to the back

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

of the PC. If it still is not working, shut down and re-boot. If the keyboard is wireless, replace the batteries. If nothing works, ask for a replacement.

The points listed above are examples and are not exhaustive. Always make sure that the correct processes have been identified and any other relevant issues have been added.

In order to reinforce learning, it is advisable to produce a handout that includes the main points identified by the group.

Extension

Extensions of this activity could be as follows.

- Dividing the learners into teams and distributing a question sheet to each team. See Figure 8 for example questions. The teams then take it in turns to ask questions. Two points are awarded for a correct answer. If a question is answered incorrectly, it is thrown open for anyone to answer. One point is awarded for a correct answer. To make the quiz more competitive, impose a time limit for each answer.

Figure 8

Q What is a virus?

A A harmful program that loads on to a computer and runs without your knowledge.

Q Which keys can be used to print the screen?

A 'Control' and 'P'.

Q What would happen if you pressed the keys 'Control', 'Alt' and 'Delete'?

A It would prompt Task Manager to appear.

Q What does Task Manager allow you to do?

A Close down a non-responsive application.

Q Which application would most likely produce the error message 'Server not found'?

A An internet browser.

Q Which keys would you use to control Windows menus if the mouse is not working?

A 'Alt' to control, 'Cursor' keys to move, 'Space' key to open menus. An extra point could be given for 'underlined letters of menu items', eg 'F' for file, 'H' for help.

Q What should you do if you suspect your PC has a virus?

A Stop what you are doing and immediately contact the systems administrator.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- Role-playing to help the learner understand what information a systems administrator may need in the event of a problem. This can be done by dividing the learners into teams of two. One learner will play the role of the systems administrator; the other will play the role of a user with a problem. Give each team time to come up with a problem scenario from their own experience and to practise the role-play. After the allotted time, bring the group back together, and ask each team to enact their scenario. Stop at the end of each scenario, or once they have all finished, and discuss the positive and negative aspects of the role-plays. This discussion should answer the following questions.
 - Was the user asked how the problem was identified, eg error message, screen freezing?
 - If an error message appeared, did the user make a note of exactly what it said?
 - Did the systems administrator ask what the user was trying to do directly before the problem occurred?
 - Did the user explain this successfully?
 - Did the systems administrator ask what the user had done to resolve the problem themselves?
 - Did the user explain this successfully?
 - Overall, did the user explain the problem successfully?
 - Did the systems administrator understand the problem?
 - Was the systems administrator able to resolve the problem successfully?
- An alternative would be for the tutor to produce the problem scenarios. This exercise could be given as homework. The scenarios can then be role-played at the next session.

Rationale

Using a system that the learners already use will act as a motivational driver to help them engage with the lesson. Learners are more likely to want to contribute if the content is of direct benefit to them. Many learners will already have had experience of ICT problems but may not be familiar with how to resolve them.

Using handouts will help to reinforce learning.

Preparation

You will need:

- to familiarise yourself with the fault process
- to add any relevant issues to the list of potential problems
- a whiteboard or flipchart paper to capture responses.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

For the extension activities, you will need:

- question sheets, with separate answers
- a watch with a second hand to time the quiz answers
- a selection of problem scenarios (if required).

Resources

- <http://www.ictHubknowledgebase.org.uk/communicatingproblems>
- <http://www.dummies.com/WileyCDA/DummiesArticle/id-1642.html>
- <http://www.pcworld.com/article/id,108734-page,1/article.html>

3.2 Find and select information

When working with ICT to achieve a defined outcome the quality of that outcome is significantly influenced by the information used. Learners are often so keen to 'get on with the job' that they rush the process of finding appropriate sources and consequently select inappropriate or incomplete information.

If learners are to achieve a consistent quality of output, they need to be selective about the information they use. However, many learners think that, simply because they 'know how to use the internet', they can get hold of any type of information they wish. If only it were that easy...

The functional ICT standards remind us that it is important to be able to select and use information from both ICT-based and non-ICT-based sources. How we find and select information is integral to the achievement of quality outcomes.

The higher levels of the functional ICT standards place increasing demands on a learner's research and information-handling skills. For example, at Entry 1, learners may be stretched to obtain up-to-date scores using an interactive TV, while at Level 1 learners need to be able to:

- select and use appropriate sources of ICT-based and other forms of information
- recognise copyright constraints on the use of information
- access, navigate and search internet sources of information purposefully and effectively
- use appropriate search techniques to locate and select relevant information
- use information from a variety of sources and evaluate its match to requirements and fitness for purpose.

When dealing with this component, it is important to take into consideration the vast range of written and visual information available to learners (eg newspapers, books, images, maps, CDs, DVDs, video recordings, text messages, podcasts, websites) as well as aural sources (eg conversations, phone messages, radio broadcasts).

It is also important to find a balance between the sources that are readily available using an institution's own facilities (eg a school or college network) and those that learners have access to outside the institution. This includes access to home computers, cyber cafés and 3G mobile phones and frequent use of products such as messaging, I-Tunes, YouTube, blogs and podcasts. Unfortunately, a combination of expediency, security and regulation means that many of the sources available to learners at home are not normally available within learning institutions. However, the standards clearly indicate that, if learners are to achieve true functionality in ICT, it is essential that the wider world of data sources be addressed through planned programmes of study.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

The activities in this section are designed to provide learners with opportunities to address some of the issues identified in the 'Find and select information' component of the functional skills standards. As in the 'Use ICT systems' section of this resource, each activity, in addition to addressing specific aspects of the standards, also provides an opportunity to explore a wider range of issues. For example, activity F3 'Key words' is primarily designed to encourage learners to build effective search skills in order to be able to find particular types of source material. However, it also provides an opportunity to raise questions such as the following.

- What do we mean by 'clipart'?
- Are there words or phrases that are unlikely to be used to classify items (eg not sport, pretty pictures, hairless)?
- Who owns information on the internet?
- Is there a maximum and/or minimum number of key words for any one item of information?
- What is meant by 'search criteria'?
- What are logical and relational operators?

While opportunities to address these issues arise directly from this activity, it is clearly up to the practitioner whether or not it is appropriate to raise these issues using this particular activity, or whether they should be addressed through a different activity. Likewise, when customising an activity to suit their own learners' needs, practitioners may well build in opportunities to raise an even wider range of issues (eg what constitutes a 'database', how different types of data are classified/organised, if any sources of information are automatically copyright-free, how to deal with copyright issues, what constitutes 'intellectual property', what is meant by the term 'plagiarism'?).

F1 Cultural diversity – are we really so different?

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Find and select information', Skill standard 3. The activity will enable learners to apply their skills in searching for, selecting and evaluating information.

This activity would be suitable for learners operating at Level 1 and 2. It is linked to the Key Stage 4 PSHE curriculum. As with all the activities in this publication the idea is to offer ideas; practitioners should adapt the activity to suit their learners. It may be appropriate to adapt the subject matter for a particular curriculum area.

Before embarking on this activity learners should be familiar with:

- effective search techniques using ICT and non-ICT based sources of information
- evaluating the information they find for reliability, validity and bias
- presenting their findings using presentation software.

Learners should be asked to use ICT and non-ICT sources to gather, collate and present information on the topic. They should work in small groups with each group being given a particular stance to support (eg 'there are significant differences between cultural communities in Britain' or 'the differences between cultural communities in Britain are minor').

- Each group should start by developing a plan for how they are going to tackle the task and assigning roles to each group member.
- They should collect data using systematic searches of information sources (not necessarily limiting their search to the internet). Learners need to make judgements about the sources they select and consider issues of reliability, validity and bias when choosing information to support their stance.
- Learners should keep a log of their searches and records of any sources they use so that they can reference these in their presentations.
- Groups should regularly evaluate their progress, modify the direction of their work (if necessary) and review the information they have gathered in order to develop their presentation.
- Each group should plan and prepare a presentation to show their findings to the others. As a minimum, presentations should include text and images and all sources of information should be acknowledged.
- Learners should be encouraged to self-assess the effectiveness of their presentation, its delivery, and their use of ICT tools and facilities both during research and when developing and giving the presentation. They should also receive feedback from the other groups.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Rationale

This activity brings together the skills of carrying out effective searches and critically evaluating information by applying them to a real research task. Learners will need to do this type of task frequently in order to secure their skills and ensure the transferability that is required to achieve functionality.

Learners need to understand that:

- they are learning skills that they will use and apply in a variety of contexts
- these skills are usually used in combination
- they need to learn to select the skills they need for a particular task.

Preparation

Depending on the previous knowledge and experience of learners you may need to review and revise:

- the skills of refining searches in order to find the information they seek
- how to critically evaluate sources of information
- action planning
- developing a presentation
- delivering a presentation.

Some learners may need support at the planning stage to devise realistic targets and at the review stage to check that they are on track. Some learners may not yet be ready to work independently and will need a structured framework that outlines the steps they need to take to carry out the research project and, perhaps, some initial sources of information.

You will also need to organise an appropriate timetable for the delivery of the presentations.

Other applications

Research and presentation tasks such as this are common to all curricula. All teachers should be aware of the skills developed and applied in ICT and draw on them explicitly in order to ensure transferability. Learners should be given frequent opportunities to practise transferring their skills to real tasks and contexts in the wider curriculum.

Resources

- There is a useful guide to managing a project on the BBC bitesize website:
http://www.bbc.co.uk/schools/gcsebitesize/dida/managing_projects/

F2 Internet treasure hunt

This activity is based on an activity in the 'Exploring e-learning' programme resources developed by the Learning and Skills Network (LSN).

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Find and select information', Skill standard 4.

It will enable learners to:

- apply their understanding of key words
- define effective search criteria in order to find specific items of information.

Learners should be familiar with web browsers and search engines before embarking on this activity. They should have done some preparatory work on the use of key words to formulate search criteria and preferably have some knowledge of multiple search criteria and operators to refine searches.

Learners should be asked to work in pairs and given a limited amount of time (eg 10 minutes) in which to use the internet to find the answers to three factual questions such as those in Figure 9. The length of time available can be modified to accommodate the ability of the group, and the degree of competitiveness. A shorter period of time (eg five or six minutes) encourages focused activity. However, whatever time is allocated for the task, the questions must be motivating and match the interests of the learners.

Figure 9

1. Who holds the record for scoring the most goals in a World Cup football match? (Bonus for the year)
2. Who were the first presenters of the TV programme 'Blue Peter'?
3. How heavy is the brain of an average 12-year-old boy?

While one person searches, the other should record how the search was conducted.

At the end of the 'hunt' each pair should present their answers. Different pairs/groups may come up with different answers, so there may well be disagreements. The main feedback, however, should focus on how the searches were carried out (for example, which search engines were used, which key words and search criteria, any changes/refinements made to the search).

The key message for learners is that there may be a range of different ways of locating the appropriate information, but strategies that use key words, multiple

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

search criteria and operators to refine the search are likely to be more effective and efficient. To reinforce this learning, run through the activity again with different questions. If appropriate, you could offer a small prize for the first pair to get the correct answers.

Rationale

This activity encourages learners to apply skills in using key words and multiple search criteria in order to find and identify specific items of information. Many learners tend to rely on vague search terms and then browse the resulting 'hits' hoping to find appropriate information. The activity makes learners focus on pinpointing information as efficiently and effectively as possible.

As the activity is relatively competitive, learners have the incentive to narrow down their search by focusing on key words and, perhaps, making use of multiple search criteria, quotation marks, relational operators etc.

Preparation

You will need to do some preliminary research to devise questions, find the correct answers and be aware of the more and less effective search strategies that learners may use.

You may wish to provide a task sheet for each pair of learners showing the questions and with columns to record the answers and the key words or search criteria they use.

Extension

This type of activity should be repeated frequently.

Learners can be asked to come up with their own sets of questions, requiring them to use their skills to research challenging items of information. Each pair could take it in turns to set the rest of the group an 'Internet Treasure Hunt' challenge.

Other applications

This activity can be adapted for use across the curriculum and can support more focused research on a range of topics.

F3 Key words

This activity is based on an activity in the Continuing Professional Development programme delivered by the Functional Skills Support Programme in 2007.

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Find and select information', Skill standard 4.

The activity will enable learners to:

- understand the concept of 'key words'
- build effective search skills.

Before embarking on this activity, learners will need to be reasonably familiar with online clipart collections, web browsers and search engines.

- Ask learners to work in pairs. Give each pair a set of images cut up into individual cards such as the ones in Figure 10.

Figure 10



- Ask each pair of learners to sort the images into two sets. Allow a few minutes then ask learners to justify their responses with reference to the images.
- Ask learners to write down on the back of each image which set the image belongs to. For example, men/women, sport/work, line drawing/photograph etc.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- Next, ask learners to sort the images into different sets. Again they should be able to justify their responses and write down on the back of the image the set to which they belong.
- Ask learners to consider why each image has two 'key words' associated with it. The message is that an image can belong to many different sets and may have many key words associated with it but, for a user to find the right image, they have to select the right key word.
- Ask learners to use key words to find clipart in a word-processing package, or an internet search, or to look at the source of a web page to identify the 'key words' tag.

During the activity take feedback and use questions to ensure that learners justify their responses with reference to the images.

Draw the activity to a close by summarising the use of key words in searching the internet. Make the following points.

- Understanding of key words is vital to searching effectively
- The user has to interpret the information they are looking for in 'key words'
- To be successful requires an understanding of the way the key words have been applied.

Extension

This activity could be extended by asking learners to write on the back of each card any other key words they would associate with the image. With the cards placed face down, test the key words with questions such as:

'Select an image I could use to illustrate a written article. The key word I am using is....' Depending on the images you are using, refer to keywords such as:

- Hallowe'en
- construction
- golf
- IT industry
- medicine
- teamwork.

The activity can be extended even further by using the questions to introduce the concept of searching using multiple keywords (ie use AND and OR). For example, search for images using the keywords 'women' and 'medicine', or 'sport' and 'teamwork'. If possible, select some key words that you know have not been used earlier, such as 'holiday'. After each question, select a learner to explain the key words associated with the image. Reject, with reasons, any images that do not match the key words. You could ask learners to select key words of their own.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Rationale

An understanding of key words is essential before a learner can use search criteria, search within results, and use relational operators.

Most search facilities use the principle of key words but learners seldom have the time to understand what key words are and how they work. Many modern search engines will return acceptable results using whole sentences and many learners do not progress beyond this stage. However, the functional skills standards emphasise 'appropriate search techniques' and learners often have difficulty in finding suitable information because they lack the fundamental concept of key words.

This activity helps to build skills and understanding in using key words. Activity F2, 'Internet treasure hunt' provides a fun way of applying these skills in context.

Preparation

You will need enough sets of images, similar to Figure 10, cut up into individual cards.

It will be useful to have a flipchart or whiteboard available to record the key points from the discussion.

Other applications

Key words are an example of classifying, and classification occurs throughout the functional skills standards (as well as throughout GCSEs and other qualifications). The concept of classification can be extended to such areas as database field headings, data collection forms, questionnaires, photo albums and collections of MP3 music tracks, and as an introduction to tagging websites.

This activity can be adapted for use across the curriculum and can support more focused research on a wide range of topics.

3.3 Develop, present and communicate information

There are three themes in this component. Learners must know how to:

- enter and, from Entry 3 onwards, develop information (Skill standard 5)
- present information in a way that is fit for purpose, including (for levels 1 and 2) audience (Skill standard 6)
- use ICT-based communication (Skill standard 7).

The functional skills standards do not specify the type of ICT application to be used; they specify only that 'appropriate' applications are used. The differences between applications are disappearing and new applications are emerging all the time. Using ICT in a functional way means that the learner must concentrate on the type of information to be developed and the audience for whom that information is intended, rather than on a particular application. This is a crucial test of whether learners can use ICT in a functional way.

At Entry 1 learners need to show only that they can enter single items of information and make sure that it is accurate so that the audience for that information (eg a banking system, a travel ticketing system) can use it correctly. At Entry 3 learners must show that they can handle information in the form of text, images and numbers. Traditionally it would be assumed that numbers can only be processed in a spreadsheet but there are now other applications that allow numbers to be entered in a table and a menu selection allows for the generation of a total for those numbers.

At the higher levels learners must be able to enter, combine, organise, develop, refine, format and present information in the form of text, tables, images, numbers, charts and records to meet needs, using appropriate software applications. At Level 1, for example, learners need to be able to:

- 5a enter, develop and format information to suit its meaning and purpose (using text and tables, images, numbers, graphs and records)
- 5b bring together information to suit content and purpose
- 6a present information in ways that are fit for purpose and audience
- 6b evaluate the selection and use of ICT tools and facilities used to present information
- 7 select and use ICT to communicate and exchange information safely, independently, responsibly and effectively.

When working with this component it is important to take into account the wide range of software applications available to learners. It is particularly important to strike a balance between those applications that they are likely to encounter during the programmes of study, those that they are likely to encounter in the workplace, and those that they may have access to at home.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

In most educational institutions learners will have access to a core suite of programmes and, while they are likely also to have access to a range of additional software, this core will vary from institution to institution. In most centres, learners will have access to web browsing, word-processing, spreadsheet, database and presentation software. While in most cases this is likely to be part of a proprietary package (for example Microsoft Office, Lotus Suite) it is important to remember that, in order to achieve true functionality, learners should be taught not just the mechanics of any one programme (ie the buttons to press to do something) but should understand how they are interacting with the ICT system to get something done. They should understand that, faced with a different system and different software, they can transfer the skills they have developed.

The activities in this section are designed primarily to provide learners with opportunities to address some of the issues identified in the 'Develop, present and communicate information' component of the functional skills standards. However, each activity also provides an opportunity to explore a broader range of issues. It is clearly up to the practitioner as to whether or not it is appropriate to raise these issues using any particular activity, or whether they should be addressed through different activities. Likewise, when customising an activity to suit their own learners' needs, practitioners may well build in opportunities to raise an even wider range of issues.

D1 Setting up a business

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

The activity will help learners understand the need to think about the users (the audience) of various documents. Given the nature of the documentation (text and tables) and the context of the activity, it is most suitable for learners on business-related programmes at Levels 1 and 2. While it is set in a large commercial context, this activity could be adapted to reflect an area more relevant to the learners, for example a family-owned travel company.

The activity will enable learners to:

- recognise different styles of text and table layout and formatting
- create documentation to meet specific needs
- maximise clarity and enhance presentation of text and tables.

Divide learners into teams of between three and five members. Explain that the aim of the activity is to set up a small company.

Each team should discuss and decide the type of business they are in. They should nominate a team leader and identify relevant department roles for each team member.

At their first meeting, they should:

- create a name and brand for the company
- identify the responsibilities of each team member
- identify what product or service they are selling, including details of price
- identify how many staff they employ
- identify their target market.

Each team member should take minutes of the meeting. They should write a short report describing the above points, with a bulleted list describing what responsibility has been allocated to which team member.

To add an element of competition, each learner should design a business logo. They should experiment with different styles of font, style and size. At the next meeting, learners should decide which logo to adopt for their business.

At the second meeting, each team should brainstorm the type of documentation each department in the company would require. For example:

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- Human resources: application form, overtime request, timesheet, performance review.
- Marketing: survey questionnaire, analysis checklist, cost analysis.
- Accounts: accounts payable, expenses report, cash receipt, daily cash report.

Daily Time Sheet				
Name		Department		Location
Time record for:	Shift	Job	Contract	Other
Date	Employee no.	Soc. sec. no.	Payroll classification	File no.
Task description	Time started	Time stopped	Initials	Total time
Total				
Employee		Department head		
Supervisor		Payroll department		

Demonstrate to learners how they can find advice and information on the internet. They should print out copies of example forms and make notes about the different ways the documents are presented. Explain that all the information in a company is seen by other people and therefore needs to be clear, logical and well set out. Using formatting techniques such as bullets, numbering, sub-numbering, alignment, tabs and line spacing makes a document look professional and enhances its presentation as well as making it easier to read.

Using a projector or interactive whiteboard, show an example of a company form (if you are using one from the internet, remove the company branding and check the copyright licence). Demonstrate to learners how they can enhance the presentation and professionalism of a document by adding shading and borders and making the vertical and horizontal text alignment consistent.

Each team member should then produce the required company documentation using:

- a clear, logical layout
- paragraphs where appropriate

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- tables where appropriate
- correct punctuation and grammar
- formal vocabulary to show professionalism
- techniques to enhance presentation.

Delivery dates should be agreed for each document. If possible, each document should be distributed to other team members before the next meeting so they can be reviewed. At subsequent meetings, the documentation produced should be reviewed and feedback given until each document can be signed off.

The final meeting should be used to put together a presentation of all the outputs from the project. Learners can use all available resources, eg handouts, projector, whiteboard, ICT technology, digital cameras, digital recorders. The teams should be reminded that equipment needs to be booked in advance; the tutor must be informed, preferably in writing.

All meetings should produce well-formatted, logical minutes. There should be an action list included in the minutes that allocates specific tasks to people. At subsequent meetings, the list is updated to ensure tasks have been completed. Members of the team should take turns to produce the minutes.

Once all teams have completed the assigned tasks, the groups should be brought together to see the presentations. A group discussion should follow, focusing on the documentation produced and considering:

- good and bad practices
- format styles
- fitness for purpose and audience
- errors.

As an additional incentive, learners could vote for their favourite document with a small prize for the winning team or individual.

Note This activity is a mini-project so would need to be delivered over a number of sessions. Some of the work may be allocated as homework. As such, a handout should be produced detailing the main tasks involved so that team members can refer to it at a later date, if required. Regular monitoring will also be needed.

An alternative activity for learners at Level 1 would be to complete this project as a group with the tutor taking the role of team leader. Each individual would be required to produce one text document and one document formatted as a table.

Rationale

This activity is designed to allow learners to think about formatting text and tables in a simulated 'real world' situation. Encouraging learners to think about the purpose of a document will build useful foundations for future work. Because of the unusual approach, learners are more likely to remember the techniques used and apply them in different contexts. Working in teams

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

introduces an element of healthy competition and will motivate the learners to improve and extend their skills.

Preparation

You will need to:

- research the different business areas in a small company
- research what type of documentation each department would require
- produce a handout containing the main tasks
- arrange for learners to have access to the internet
- arrange to have facilities and resources available as required for the presentations.

Resources

- <http://www.entrepreneur.com/formnet/index.html>
- <http://www.businesslink.gov.uk/bdotg/action/home?r.s=m>

D2 Text and image snap

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

This activity will enable learners to:

- recognise why images are used in documents
- understand the phrase 'fit for purpose'.

Learners should take part in a group discussion about why images are used in different documents, for example to instruct, inform, add interest, add impact. Examples that could be shown are: how to lift up a heavy object correctly, a 'before' and 'after' poster, or a 'no smoking' notice.

Learners should then be given an activity sheet that includes an array of images and of documents that serve different purposes, such as an advertisement, a notice, an information leaflet, a report, a list of instructions or a web page. See Figure 11 for an example. They should match each document to the most appropriate image by drawing a line between them. This could be done on paper or using word processing software. Learners should also make a note of the purpose of the image.

Once the task has been completed, a question-and-answer session should follow to check the answers and reinforce learning.

Extension

Depending on the level of learners this activity can be extended as follows.

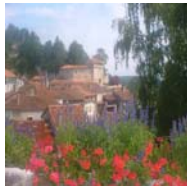

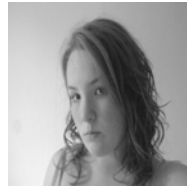

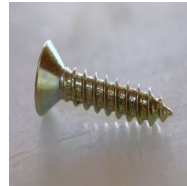

- Learners can identify in a given document where they think an image should be placed to achieve its purpose. For example, in a DIY leaflet an instructional diagram or photograph would be most useful next to or just above a set of instructions.
- Learners can open a pre-prepared document such as an information leaflet and insert the most appropriate graphics from an image library or the internet. The image should be correctly positioned so that the document is fit for purpose. For example, in a leaflet about the dangers of smoking, appropriately positioned images could add a powerful impact to the text.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Figure 11

Inserting images fit for purpose

Draw a line from each document to the most appropriate image. Write down the image purpose in the answer box.

<p style="text-align: center;">Polite Notice</p> <p>Please note that due to the new ban on smoking in public places, this restaurant will be a no-smoking establishment from 26 March 2006.</p>	<p style="text-align: center;">Holiday in France</p> <p>Why not visit France this year? Imagine: total relaxation, wandering around quaint villages with the smell of wild flowers in the air. Try the local cuisine or sip wine in the 18th century vineyard.</p>	<p style="text-align: center;">Global Warming Report</p> <p>This report is based on the effects of global warming in the 20th century. With the present changes in climate, severe weather changes are predicted.</p>	<p style="text-align: center;">Welcome to my site!</p> <p>Hi, my name's Ellie. I'm 14 years old and go to school in Bingley. I love all kinds of music and dancing and I'm in the drama group at school.</p>	<p style="text-align: center;">House for Sale</p> <p><i>Beautiful thatched cottage in an idyllic village in Somerset.</i></p> <p>Lavender Cottage is set in stunning gardens amongst established shrubbery and lavender bushes.</p>	<ol style="list-style-type: none"> 1. Position the shelf in the correct place. 2. Check for any electric cables or pipes running behind the wall. 3. To fix the shelves to the wall you will need four size 3 screws.
					
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Rationale

Many learners do not consider the appropriateness of an image when inserting it into a document. They often struggle with what is meant by the term 'fit for purpose'. This activity will help learners understand that, for an image to add value, it must create interest, instruct, inform or add impact to the text.

This activity requires problem solving, teamwork, speaking and listening skills and practical application. It is therefore suitable for the majority of learning styles.

Preparation

You will need:

- a library of images that are copyright-free
- a variety of types of document, such as an advertisement, a notice, an information leaflet, a report, a list of instructions, a web page
- word-processing software
- an information sheet explaining how to insert and position images
- a pre-prepared text document, for example a 'stop smoking' leaflet

Start by creating a number of different types of documents such as an advertisement (see Figure 12 for an example), a notice, an information leaflet, a

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

report, a list of instructions or a web page. They only need to be short but each one should have a different purpose.

Position the documents along the top of the page and the matching images at the bottom, in random order. Draw a text box underneath each image.

Your finished worksheet should look similar to Figure 11.

Print out hard copies of the activity sheet, or save the files in a shared area as a read-only file.

If you have learners who are inserting and positioning images in a pre-prepared document, you will need to produce guidance notes about positioning techniques such as copy and paste, drag and drop, and horizontal alignment.

Figure 12



Opportunities for integration

Learners could set up their own 'business', using an approach that would provide opportunities for all three functional skills. ICT and English could provide the promotional literature. Mathematics could provide the market research.

Resources

- Key skills trainer. An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication and ICT at levels 1 and 2. Available from: www.Keyskills4u.com
- LSN e-learning and technology. This site allows you to search for events, resources and examples of e-learning. <http://www.learningtechnologies.ac.uk>

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- LSN Skills for Life training materials. How to guides: Create and insert a sound file, Insert digital images into Microsoft Word, Drag and drop with images, Adding video to Microsoft PowerPoint presentations. Available to download from: <http://www.lsneducation.org.uk/skillsforlife/materials/>

D3 The formula for success

This activity is based on an idea in a sample lesson on the Teachers' TV website: KS3/4 ICT spreadsheets. <http://www.teachers.tv/video/3418>

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

Entry 3 learners must be able to enter and process numbers to meet needs (5.4). While this could be done in a number of applications, it might be useful, though it is not required, to introduce spreadsheets to learners at this level.

Level 2 learners must be able to enter, develop and organise numerical information that is fit for purpose (5.6) and to format numerical information appropriately (5.7). The level of complexity of the task and the level of technical demand are the main differences between Level 1 and Level 2.

Activity

This activity will enable learners to understand how to construct formulas and use them in calculations.

Before embarking on this activity, learners should have been introduced to formulas and the use of functions in spreadsheets.

Show learners a spreadsheet containing a fairly large set of data, ie at least 30 items. Explain that their task is to devise a formula to calculate the total of one of the columns.

Give a small group of learners a set of large cards (similar to the ones in Figure 13) each of which has an element of the required formula printed on it.

Figure 13



Ask the learners each to hold up one card and to line up in the order that will display the correct formula to the whole group. Other members of the group can advise, if necessary.

Pin the cards up on the wall to act as a visual reminder while learners enter the correct formula into their own copy of the spreadsheet and check the result.

Extension

For Level 1 learners this activity could be extended to introduce other functions such as MAX and MIN. For Level 2 learners, functions such as AVERAGE, MEDIAN, MEAN could be included, plus some functions that are not in fact needed for this particular formula.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

You could ask learners to devise their own formulas for others in the group to sort. In this case, you will need to provide some blank pieces of card and marker pens.

You could ask learners to carry out the given calculations using a calculator – leading to a discussion of the benefits of using a spreadsheet with a large data set.

This type of kinaesthetic sorting activity can be used to support learners' understanding of a range of processes that require elements to be arranged in an accurate order.

Rationale

This activity provides an engaging and active way to build a formula. When presented with large sets of data, many learners – especially those who do not have a good grasp of number – just see rows of figures that they do not understand. A kinaesthetic activity such as this one, coupled with a visual reminder, gives learners confidence as they start to understand the syntax of formulas.

Preparation

You should prepare a spreadsheet containing a fairly large set of data, eg with at least 30 items, suitable for using with a range of calculations. You will also need some sheets of card with elements of some appropriate formulas for use in the sorting activity.

Resources

This activity is based on an idea in a sample lesson on the Teachers' TV website: KS3/4 ICT Spreadsheets <http://www.teachers.tv/video/3418>. The website also includes sample spreadsheets and a lesson plan. There is also a useful spreadsheet containing data about mobile phones available for download.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

D4 League table

This activity is based on a Key Stage 3 National Strategy teaching unit for ICT (7.4 Lesson 2).

Activity

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

The activity would be suitable to develop Level 2 skills in using multiple operators in formulas and absolute cell referencing. Simpler spreadsheets could be used for learners at the lower levels.

The activity will enable learners to:

- use spreadsheet software to investigate and amend a simple model
- practise entering, formatting and labelling data appropriately
- enter rules or formulas that test whether the simple model operates satisfactorily.

Before embarking on this activity, learners will need to know how to enter simple formulas into a spreadsheet, how to sort data in a spreadsheet, and some simple formatting techniques

Figure 14

	A	B	C	D	E	F	G	H
1							win :	3
2							draw :	2
3							lose :	0
4	Team Name	Won	Lost	Drawn	Played	Points		
5	Arsenal	2	6	5				
6	Blackburn Rovers	1	6	6				
7	Chelsea	8	0	3				
8	Everton	2	7	4				
9	Liverpool	5	2	5				
10	Manchester United	3	5	6				
11	Middlesbrough	0	9	3				
12	Newcastle United	5	3	2				
13	Sunderland	6	1	4				

Ask learners to work in pairs and to open a pre-prepared spreadsheet containing a football league table such as the one in Figure 14.

Ask learners how they could use the spreadsheet to calculate the total number of games played and the total number of points gained, with three points for a

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

win and one for a draw. Learners need to understand that they should take particular care with the position of the 'multiply' operator. When they have reached agreement, they should enter formulas and replicate them into the appropriate cells.

Next, show learners the results in Figure 15 and ask them to add them to their spreadsheets.

Figure 15

Matches this week finished with these results			
Liverpool	2	Blackburn Rovers	1
Arsenal	0	Chelsea	0
Sunderland	3	Newcastle United	4
Manchester United	1	Everton	1
Middlesbrough didn't play this week			

Tell learners that the spreadsheet is to be printed in a local newspaper and should be organised and formatted to suit this purpose. Then ask learners to evaluate the way they have organised and formatted the information: for example, have they sorted the data in any particular order, have they used a bold font or text alignment for a purpose?

Next, ask learners some 'What if ...?' questions to predict what might happen in the future, for example:

- The next three results for Newcastle United are a win, a defeat and a draw. How many points does Newcastle United have now?
- Liverpool lose all the rest of their games. How many games would Middlesbrough have to win to have more points than Liverpool?
- The number of points for a draw is changed to two. Which team now has the most points?

You will need to remind learners to reset values after each question by reloading the original file or using the 'undo' function.

Finally, learners should be asked to develop some questions of their own and ask a partner to answer it using the spreadsheet.

Extension

Following this activity, you could ask learners to apply their skills to another investigative project on a topic such as climate change or healthy eating, where they find data themselves, and set up and interrogate the model.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Rationale

This activity provides a motivating context for introducing how a spreadsheet can be used as a modelling tool to simulate different possibilities or 'what if' questions, rather than being merely an 'electronic calculator'. It helps learners to understand that, once a model has been set up, it is possible to input different data and see how this affects the outcome or output. If appropriate to the group, explain how such modelling is an essential activity in businesses when costing and pricing projects.

This can lead to a discussion about other ways in which we can model events that would be difficult or costly to try out in reality, for example, testing orbital paths of rockets, testing how different designs or models of car behave in serious accidents, predicting the weather or climate change.

Preparation

Prepare a spreadsheet with a league table similar to the one shown. You may wish to choose local teams or another sport to match the interests of your learners.

In addition, prepare a question sheet that asks questions similar to the examples given above. Have the answers ready.

You may also wish to prepare some additional information to support the discussion on other uses of modelling. The Hot Topics section of the BBC Science and Nature website has a wealth of information on topics including climate change and football.

Resources

- The Hot Topics section of the BBC Science and Nature website
<http://www.bbc.co.uk/science/hottopics/>

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

D5 Formatting and adding data

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

This activity is suitable for Level 2 learners who need to understand about database applications and unique record identifiers.

Activity

This activity will enable learners to take control over the way that data is stored and presented.

Ask learners to work in pairs and to open a pre-prepared database of residential properties, as in Figure 16. Tell learners that this is a simple database created by an estate agent to keep track of the properties they are selling.

Figure 16

Reference	Location	Description	Price	Beds	Heating
101238	Aldstone	Detached house	650,000	3	Gas
102561	Lower Stoke	Mobile home	68,000	2	Gas
102784	Clifton on Sea	Terraced house	105,000	1	Gas
103256	Langwick	Detached bungalow	285,000	3	Electricity
103789	Tidsdale	Detached house	460,000	3	Oil
110907	Guyfields	Semi-detached house	345,000	2	Gas

The following questions provide a focus for this activity.

- What is the purpose of the reference field?
 - Ask learners to produce a list of possible codes that would simplify entering data in this field.
- Is it necessary to type a full description for the type of each house?
 - Ask learners to identify the benefits of simplifying the description, and then produce a list of other ways of creating a description for each record.
- What is the problem with the way that the price information is presented?
 - Ask learners to produce a list of different ways that the data in this field could be shown (eg £145000, £145,000, £145,000.00) and to decide which is the most appropriate for this particular set of data (eg property prices do not need to show pence).
- What other information could usefully be added to this database?
 - Ask learners to produce a list of additional fields that would be useful to an estate agent (eg Under Offer, owner's phone number, garage, double glazing, en-suite bathroom).

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Having discussed these questions, and after a short demonstration of how to use the drop-down menus to change the data types and field properties, ask learners to:

- change the data type of the price field to an appropriate currency format
- add a new field called 'Under Offer' and set the data type as logical
- use 'Table view' to amend the data to show that some of the properties are 'under offer'.

Figure 17

Properties : Table	
Field Name	Data Type
Reference	Number
Location	Text
Description	Text
Price	Currency
Beds	Number
Heating	Text
▶ UnderOffer	Yes/No ▼

Field Properties	
General	Lookup
Format	▼

Extension

Ask learners to add and format some of the additional fields that they identified earlier (eg owner's phone number, garage, double glazing, en-suite bathroom), and enter suitable data into these fields. This provides a good opportunity to discuss why phone numbers (and other numbers starting with a zero) need to be formatted as text.

Learners could also be invited to experiment with the 'field properties' to find out how many ways a logical field can be represented (eg tick box, yes/no, true/false, on/off).

To complete this extension activity successfully, learners will need to be familiar with opening database tables and be able to switch between the database table (ie 'table view' or 'data sheet view') and the table structure (ie 'design view').

This activity could be further developed by encouraging learners to create a simple database of their own by entering and formatting fields in design view and then entering data in table view.

Rationale

One of the main problems when introducing databases to learners is that database software is not as 'user-friendly' as most other applications. When opening a word processing document learners are presented with a blank page on which they can start entering text straight away; when opening a

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

spreadsheet learners are presented with a table into which they can start entering data. However, when opening a database learners are usually presented with a series of menus, which makes accessing the database quite daunting.

Trying to build a database from scratch without prior knowledge of how the software works can be exceedingly off-putting for learners. Opening a simple database and learning about its structure by trying things out in an organised but flexible manner is a good way for learners to build their knowledge and understanding through practical experiment.

Preparation

Use local newspapers to create a database of residential properties that are for sale. To protect the privacy of the real vendors, change place names to fictitious ones.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

D6 Record that tune

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5. It could be used as a Level 1 or Level 2 activity.

Learners at Level 1 do not need to be able to use a database application. They may be able to enter and develop records in a spreadsheet application if that is more suitable.

Activity

This activity will enable learners to:

- enter, organise, select and edit records using field names and headings, data types and unique record identifiers
- recognise how databases are used in everyday life to organise information.

Remind learners that a database is a set of data records that are organised and structured so that information can be found easily. Divide the learners into groups of two or three. Ask them to think of five examples of a database that they use frequently in everyday life. If they find this difficult, give an example such as iTunes. Explain that iTunes is a database of music that is organised in such a way that it can be searched quickly and effectively. This should prompt learners to think about databases in more general terms.

After five minutes, ask learners to give some examples of databases. If necessary, prompt with more examples such as lists of numbers on mobile phones, PDAs, the internet, iPods, MP3 players, online banking, YouTube, online shopping sites etc.

Ask learners to revert back to their groups and search the internet for five different examples of a database. Give each group a question sheet that includes questions such as the following and ask them to write down the answers for each database.

- What type of information does the database contain?
- How many fields does the database contain?
- Do the fields contain clear field headings?
- Do the records have a unique ID number? Give an example eg track 1, order number 65 etc.
- How could the database be better organised? eg add an extra field, make the field headings clearer.

See Figure 18 for an example.

Figure 18

Using databases to organise information

Student's name:

1. What type of information does the database contain?
2. How many fields does the database contain?
3. Do the fields contain clear field headings?
4. Do the records have a unique ID number? Give an example, eg track 1, order number 65 etc.
5. How could the database be better organised? eg add an extra field, make the field headings clearer etc.

Ask each group to find an image of each type of database and build a montage using word processing software. When they have done this, they should print out their work and then explain and compare their findings. This will build up a picture of how many types of database learners actually use and how differently each database is organised.

Extension

This activity could be extended by asking learners to create their own music database using field headings similar to ones they found in their research.

Rationale

Learners often find databases daunting. They worry about the terminology, and the information in many databases is very dry. This activity is designed to enable the learner to understand that databases are in effect storage areas that can be easily searched.

Using databases such as online music stores, mobile phones and iPods allow the learner to fully understand the concept of a database. It helps build their confidence as they are working with information they already understand and are familiar with. This gives a sound foundation for discussing difficult concepts such as 'unique record identifier'. For example, the track number on an album or an online music store could be explained as a unique record identifier.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Answering questions about the different types of databases will enable learners to think about how information is organised and displayed. When they create their own databases, they will be able to recall their research, what worked and what did not, and think about the best way to organise information.

This activity will engage learners of all learning styles as it uses problem solving skills, teamwork, speaking and listening and practical application.

Preparation

You will need:

- access to the internet
- access to word processing software
- copies of activity sheets
- a list of different types of databases
- a question sheet similar to Figure 18. Leave enough room between questions for learners to write down their answers.

You will also find it useful to have a list of different types of websites such as iTunes, an iPod, mobile phone, or YouTube so that, if learners are struggling, you can easily prompt.

Resources

- LSN e-learning and technology. This site allows you to search for events, resources and examples of e-learning: Available to download from <http://www.learningtechnologies.ac.uk>
- Key skills trainer. An online resource designed to help learners check, learn and apply their Key Skills. It covers Application of Number, Communication and ICT at levels 1 and 2. Available from: <http://www.keyskills4u.com>
- BBC: data processing. This site is based on the key skill Information and Communication Technology. The Data Processing section gives activities on records and fields. This site is primarily aimed at key skills but could be used to adapt exercises to functional skills. Available from: <http://www.bbc.co.uk/keyskills/it/index.shtml>
- The Key Skills Support Programme shared resources. A bank of key skills material developed by schools, colleges and training providers that can be downloaded and adapted. <http://www.keyskillssupport.net/supporting/resources/shared>

D7 Access all areas

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

From Entry 3 onwards learners should be able to bring together information to achieve a purpose (5b).

Entry 3 – learners can organise information of different forms to achieve a purpose (5.5).

Level 1 – learners can organise information of different forms or from different sources to achieve a purpose (5.9).

Level 2 – learners can bring together and organise components of images and text (5.11) and organise information of different forms or from different sources to achieve a purpose (5.12).

Activity

This activity will enable learners to:

- identify and practise different methods of organising images and text
- appreciate the importance of considering the target audience.

Divide the learners into groups of two or three. Give each group a document showing a different layout, such as a poster, newsletter, web page, catalogue, brochure or PowerPoint presentation. When each group has studied their document, they should fill in an activity sheet containing the following questions.

- Who is the document aimed at? eg children, adults, customers
- Does the document contain headings and subheadings?
- Does the document contain numbering or bullet points?
- Does the document contain an image? If so, what is its purpose?
- Does the document contain text wrapping?
- Does the document contain a graph or chart?
- Does the document contain any text boxes? If so, what is their purpose?
- What features are used to make information stand out?
- Is the document appropriate for the target audience?

They could annotate their document to emphasise the answers, as in Figure 19.

Figure 19

Learners should share and discuss their findings with other groups.

Show a pre-prepared PowerPoint demonstration to emphasise what the learners have discovered by demonstrating organisational techniques. For example:

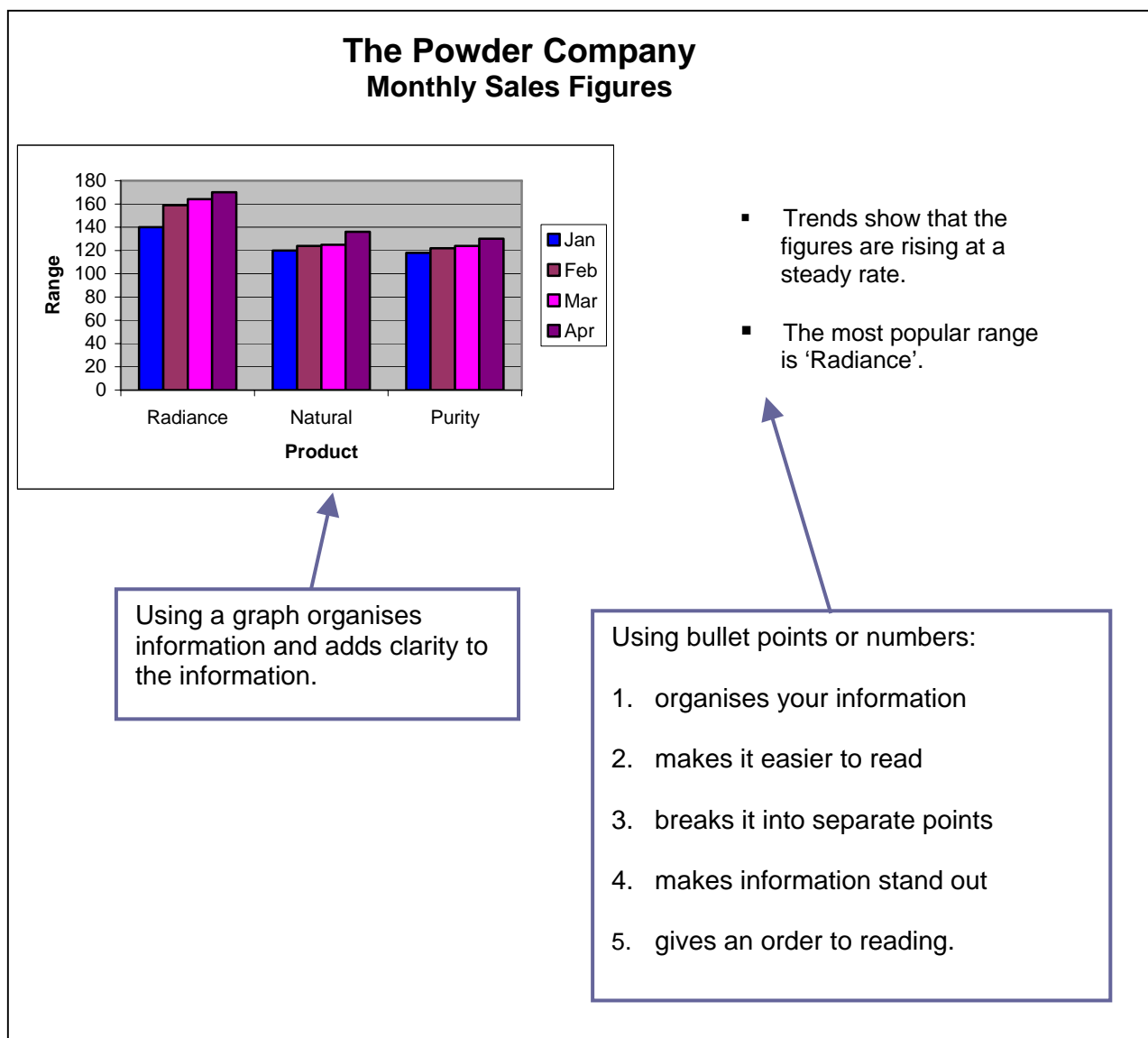
- text wrap
- bullets, numbering and tables.

Remember to reinforce the advantages of using these techniques.

Extension

This activity could be extended by encouraging learners to create their own PowerPoint presentation about 'Organising information'. Each learner should be given the task of creating a document for a particular audience. The PowerPoint presentation should include the reason why they have chosen to organise information in a particular way and using particular design features, as in Figure 20.

Figure 20



Rationale

This activity is designed to help learners understand the different ways they can organise information. Some will design, for example, a web page without giving any thought to the intended audience. Some choose a font that they think looks 'trendy' and organise information without considering how easy it will be for people to read.

This activity will make learners aware that it is important to consider the audience they are designing for, for example children, adults, business clients, general public. Features such as images, coloured backgrounds and shapes can be introduced to add interest. However, text should still be laid out logically and clearly.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Preparation

You will need:

- a collection of documents such as a poster, newsletter, screenprint of a web page, catalogue, brochure, printed copy of a PowerPoint presentation. The documents should include examples of text wrapping, bullets and numbering, headings and sub-headings. They should be aimed at a variety of audiences, for example a child's book poster, a health and safety notice, a school's newsletter, a business website
- an activity sheet containing questions about the organisational features of a document
- a pre-prepared PowerPoint presentation featuring the documents you have collected. The display should contain examples of all the organisational features you have found, with reasons as to why they are useful to use in a document.

Resources

- Key skills trainer. An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication, and ICT at levels 1 and 2. There is an 'Organising information' section which would be useful for learners. Available from: <http://www.keyskills4u.com>
- Skills for Life: training materials. An online resource that contains training materials. There is a section that contains materials for 'Inserting digital images into Microsoft Word'. Available from <http://www.lsneducation.org.uk/skillsforlife/materials/>
- LSN e-learning and technology. This site allows you to search for events, resources, and examples of e-learning. There is a comprehensive section on inserting images. It can be accessed on: <http://www.learningtechnologies.ac.uk>
- Key Skills Support Programme: Shared resources. This website contains resources submitted by staff in schools, colleges, and training organisations. Primarily aimed at key skills but materials could be adapted to use with the functional skills. Available from: <http://www.keyskillssupport.net/supporting/resources/shared/>

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

D8 Grand design

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 5.

The functional skills standards do not specify the type of ICT application to be used; they specify only that appropriate applications are used. While the creation of a website is not explicitly specified in the functional skills standards, it is often part of other qualifications that learners may be following. Creating a web page provides learners with many opportunities to transfer a range of skills in different applications, especially when considering layout of pages and formatting for particular audiences.

This activity is particularly useful for learners at Levels 1 and 2.

Activity

This activity will enable learners to:

- describe the different techniques used to create and format a website
- identify positive and negative formatting techniques
- practise bringing text and images together and organising them using text wrap, tables, bullets, and numbers.

Learners should take part in a group discussion about their experiences of planning and designing a website, for example 'MySpace' or 'Piczo'. Discuss how much thought goes into planning their sites, for example: do they think about who will be reading it? do they consider how easy it is to read? what is its purpose?

Using the internet, compare two websites. For each, ask learners to consider:

- Who is the intended audience?
- Is the website easy to understand and read?
- Is the information clearly laid out?
- What techniques have been used to make the site attractive?
- How have the different types of information been formatted?
- Do the images instruct, inform, or add impact?
- How could the design and layout be improved?

Ask for volunteers to show their websites. Go through the above questions but explain to learners that feedback should be constructive, not negative.

Inform learners that they are going to plan a website using appropriate software. Information on the website could include: Name, age, likes, dislikes, favourite groups, hobbies, friends, clubs etc. It should of course not include any information that might threaten learner safety.

Each web page should include at least one example of grouped images, a bulleted or numbered list, a table of information, and an example of text wrap.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Rationale

Learners often spend a long time creating and uploading images on to sites such as MySpace and Piczo. This activity will encourage them to plan their work and think about who their audience is and how the information could be presented effectively.

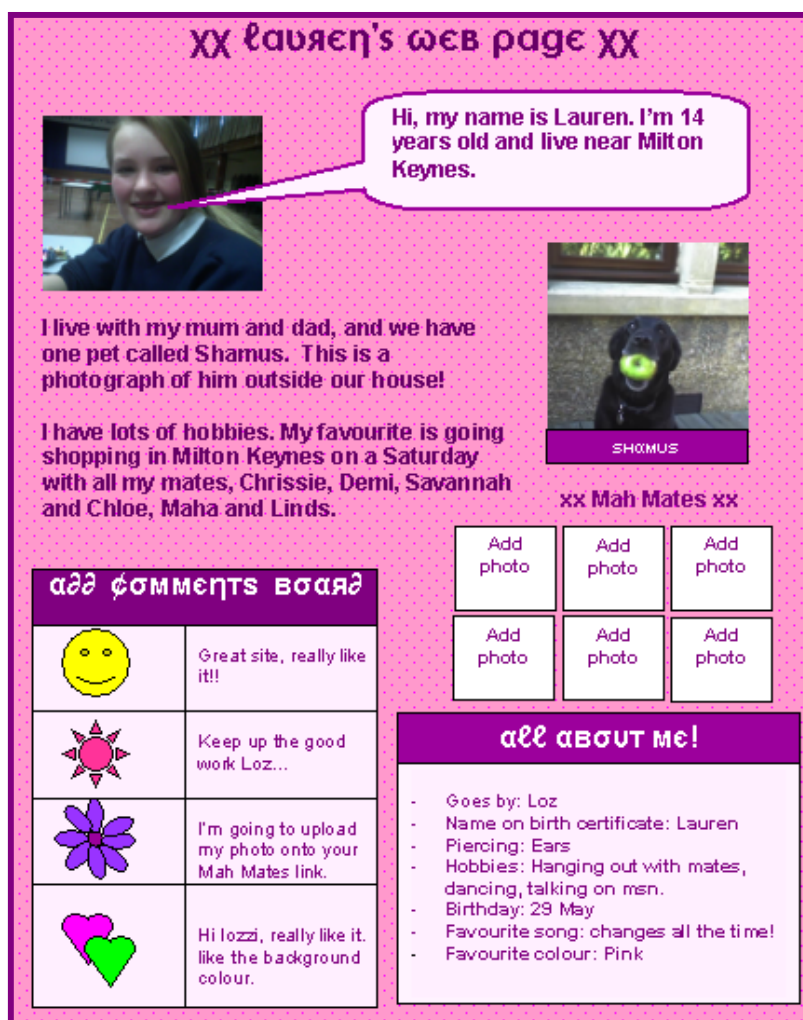
Planning a website will encourage learners to put text wrapping, grouping and inserting images into practice through an activity that they enjoy and feel motivated to finish.

Preparation

You will need:

- the URL addresses of different learners' websites
- the URL address of a website with a good layout and another with a poor layout
- an example of a planned web page saved to your user area/desktop.

Figure 21



Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Prepare an example of a planned web page similar to the one in Figure 21. It should contain an example of images grouped together, a bulleted or numbered list, a table, and an example of text wrap. Save the document to your user area or desktop so that, during the lesson, you can demonstrate examples of grouping and inserting images

Resources

- Internet4Classrooms: A resource that helps teachers use the internet effectively. There is a helpful section on using the drawing menu in a word processing application.
http://www.internet4classrooms.com/msword_toolbar_drawing.htm
- Free computer tutorials. A free tutorial site that provides information on Microsoft Word, Excel, Web Design, Style Sheets etc. There is a useful section on the Drawing Toolbar. <http://www.homeandlearn.co.uk/>
- www.keyskills4u.com An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication, and ICT at levels 1 and 2. The ICT section provides useful information about organising information and using bullets and numbers. It can also be used as a refresher for learners inserting information into tables.

D9 Formatting challenge

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 6.

At Entry 2, learners must be able to present information that is fit for a purpose (6.2). At Entry 3, the method of presentation includes email message, letter, poster, web page (6.2).

Activity

This activity will enable learners to practise formatting a document in an accepted layout – in this case, a letter.

Before embarking on this activity, learners should be familiar with the accepted format for a business letter and with simple formatting techniques in a word-processing package.

Ask learners to open a document file containing a block of unformatted text such as that in Figure 22.

Figure 22

The Big Cheese Company 39 Gloucester Road Belton
Cheshire SY13 4RL Mr W Wallace 62 West Wallaby
Street Wigan Lancashire WG7 7FU 24th December 2007
Dear Mr Wallace Re: Cheese Hamper Thank you for your
recent letter telling us about your prototype self-renewing
all year round cheese hamper. We are fascinated by the
idea, however we fear that it may lead to a decrease in
sales and profits for our company. Therefore, we do not
think that we shall be able to invest money to develop
your idea further as you requested. Thank you for your
interest in our company. Yours sincerely Mr J
Wensleydale (Managing Director).

Ask learners to format the text as a business letter, using the appropriate conventions for the name and address of the sender, the date of the letter, the salutation etc.

Learners should use a range of formatting techniques, save their letter with an appropriate file name and print out the finished document.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Extension

The length and complexity of the text could be varied to suit learners working at a higher level (eg learners could be required to use a wider range of formatting techniques such as bullets, numbering, tabs etc).

Learners could be asked to devise a logo and/or letterhead appropriate to the company.

Rationale

Although learners may be familiar with the layout of an informal letter they may need to be introduced to the use of an accepted layout for a business letter. This activity allows learners to practise appropriate formatting and layout before applying their skills to a letter of their own.

Preparation

You will need to prepare a document file containing the text of the letter. This should be saved in an area that can be readily accessed by the learners.

You may need to revise the accepted format for a business letter with learners prior to the session and it may be useful to have some examples of real letters to show them. This will create powerful links with their work in functional English.

Other applications

This activity can be adapted to help learners become familiar with a range of different document formats such as memos, posters, reports, newsletters etc.

D10 Fooling the spellchecker

This activity is based on an activity developed for the Key Skills Support Programme training event 'Communication: standards, portfolios and tests'.

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 6.

Learners must accept responsibility for the accuracy of any information they enter into an ICT system. From Entry 1 onwards learners must appreciate that data entered must be correct, for example PIN or password. Many learners will benefit from using software facilities such as a spell-checker but they must understand the limitations of software and know the GIGO principle 'garbage in, garbage out'.

Activity

This activity will enable learners to recognise that the spell-checking facility in a word-processing package is not infallible, ie just because the spellchecker has not found any errors does not mean that the words are the right ones. It is always essential to proof-read a document.

Before embarking on this activity, learners should be familiar with using a word-processing package and the spell-checking facility.

Learners should access a file containing the poem in Figure 23 (or something similar).

Figure 23

Eye Halve a Spelling Chequer

Eye halve a spelling chequer
It came with my pea sea
It plainly mark's four my revue
Miss steaks eye kin knot sea.

Eye strike a quay and type a word
And weight four it two say
Weather eye am wrong oar write
It shows me strait a weigh.

As soon as a mist ache is maid
It nose bee fore two long
And eye can put the error rite
Its really ever wrong.

Eye have run this poem threw it
I am shore your pleased two no
Its letter perfect in it's weigh
My chequer tolled me sew.

(Sauce unknown)

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Learners should highlight the text and run the spell-check to see if there are any spelling errors in the poem (the check should not find any, though there may be some suggestions about grammar). Next, ask learners to read the poem carefully, correct the spelling errors they can find, and re-draft it in correct English with correct spelling. They can then discuss and share the results.

Extension

Learners can try to compose a short poem or piece of prose that works in the same way – using homophones to produce correctly spelt but nonsensical text – to try and fool the spell-checker.

Rationale

Many learners think that, because they have used a spellchecker on a document and no errors have been found, they need to do no more to ensure that spelling is accurate. This activity highlights the kind of errors that can 'fool' a spellchecker and the necessity to proofread carefully as well as use a spellchecker.

Preparation

You will need to prepare a document file containing the poem. This should be saved in an area that can be readily accessed by the learners.

You will also need dictionaries so that learners can check spellings. You may find it useful to access a homophone dictionary (see Resources).

Resources

You may find it useful to access a homophone dictionary such as the one at: <http://www.earlham.edu/~peters/writing/homophone.htm#r>

D11 Communication at your fingertips

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' Skill standard 7.

The functional ICT standards at Entry 1 state that the learner must be able to receive ICT-based communication (7.1). The degree of sophistication in the use of, for example, email, increases as learners progress through the levels. The need to safeguard personal information is also an important part of the standards (Skill standard 2).

The activity can be adapted to meet the needs of learners at different levels.

Activity

This activity will enable learners to:

- recognise some basic email facts
- identify safe email and instant messaging protocol
- create, access and respond to emails appropriately.

In a group discussion, ask learners to consider the following questions, and record their responses on a whiteboard or flipchart.

- What equipment would you need to send or receive an email?
 - Internet connection, email software, email address, internet provider, mobile phone, PDA, television etc.
- What are the advantages and disadvantages of using email?
 - Advantages could include: instant communication 24 hours a day 7 days a week; access all over the world; cheap and efficient; having an information trail.
 - Disadvantages could include: people not reading or replying to emails; junk mail; spam; sending an email without checking it; accidentally sending an email to the wrong person.
- What type of language should you use in an email?
 - Remind learners that, although email language tends to be thought of as less formal than a letter, if they are addressing a person who they do not know very well, or someone in the workplace, then the tone of the language should be similar to that of a letter.
 - It is also important that learners do not write anything in an email that they would not say to someone's face. Remind them that email is not secure and they cannot be certain who will be reading their emails. The same care should be taken with instant messaging or when entering information in a blog journal.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- Remind learners that all emails, even those to friends and family, should be re-read and spell-checked.
- Learners should recognise when to adapt the style of their language to their audience. For example, the style of language to a friend would be different from that used when emailing a tutor or line manager.
- What is the reason for the subject line?
 - Explain that a subject line is necessary for people to quickly understand what the email is about.
 - When sending an email to people you do not know, they may delete the email if the subject line is not informative.
- What types of email should you not reply to?
 - Junk or spam mail, eg people asking for personal or financial information.

Ask learners to set up a new email account. This can be used for emailing any work to tutors or members of their class. Explain that the email address must be appropriate for use in portfolios etc. When the learner has set up their account, they should send you an email informing you of their new address.

Extension

This activity can be extended by the following.

- Set up a class email blog. Ask a learner to write a couple of lines about themselves and forward it to the person sitting next to them. That person should contribute to the blog, writing a couple of lines about themselves, and so on round the group. The entire group should take part in this activity. When the blog is complete, it can be printed and read out to the group. This activity can also be used as an icebreaker.
- Send the learner an email with an attachment. The attachment should contain a table in which the learner can enter their name and email address before sending it back to you.

Rationale

Although many learners use email as a form of communication, they do not always consider language, appropriateness and email etiquette. This activity will help them identify when email is the best form of communication, and how to email effectively using helpful subject lines. Tips such as not typing in the recipient's address until they have finished writing the email will help avoid email misunderstandings and help the learner to create a good impression.

Preparation

You will need:

- to check the school's/college's/training provider's policy for downloading email

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

- an information sheet giving email tips.

Prepare an information sheet giving learners tips on good email practice. This should include information such as useful subject lines, signatures and sign-offs and when to copy people into emails. You should also add a section about internet safety, eg not giving out personal or financial information, protecting against viruses.

For the extension activities, you will need to prepare an attachment that includes a table with the heading 'Student email addresses' and consisting of two columns with the headings 'Student name' and 'Student's email address'.

Resources

- Key Skills trainer. An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication, and ICT at levels 1 and 2. The ICT section provides useful section on sending, replying, and attaching emails. Available from: <http://www.keyskills4u.com>
- How stuff works: How e-mail works. An interesting web page describing how email works. Useful for an understanding of email terminology. Available from: <http://www.howstuffworks.com/email.htm>
- Learn the Net: Harness E-Mail. A site that explains the step-by-step process of sending, receiving, and managing emails. <http://www.learnthenet.com/english/section/email.html>
- LSN e-learning and technology. This site allows you to search for events, resources and examples of e learning.

D12 Communication highway

This activity is designed to develop the skills and understanding outlined in the functional ICT component 'Develop, present and communicate information' skill standard 7. From Entry 1 onwards the functional skills standards state that learners must be able to use ICT-based communication (Skill standard 7). The degree of sophistication in the use of, mostly, email increases as learners' progress from level to level. The need to safeguard personal information is also an important part of the standards (Skill standard 2). This activity can be adapted to meet the needs of learners at different levels.

Activity

This activity will enable learners to:

- recognise that email is now one of the main forms of communication
- identify good email practices
- describe how to manage an email account effectively.

Using the interactive whiteboard/projector, access your email account, (pre-prepared for the lesson). Show learners an example of each of the following managing facilities:

- Identifying new mail: often identifiable by an envelope symbol or bolded text.
- Deleting emails and emptying the trash can: explain why it is important to delete old emails, eg to stop the storage box becoming full.
- Organising information into folders: explain that this helps with organisation when searching for emails.
- Naming new folders: the importance of having clear folder names and making the distinction between work and personal files.
- Sorting emails into date or sender order: explain that this is useful for identifying emails in date order, or when searching for an email from a particular source.

Learners should take part in a group discussion about good email practice such as deleting spam, using spam filters, not responding to junk emails, setting time aside to check emails etc.

Learners should access their email account and delete old emails. They should archive important emails by creating and managing folders. They should take screen shots of their progress.

This activity can be extended by demonstrating how to add, delete, and manage folders in a contact list. Learners should then edit or add to their own contact list.

Teaching and learning functional ICT: 3. Activities for developing functional ICT skills

Rationale

Most learners use email as their main source of written communication. Often their personal emails are mixed with school/college or training provider information and junk mail. A key issue for learners is the size of their storage box. Often inboxes are full because learners are simply not deleting old or irrelevant emails. Helping learners recognise the value of deleting unnecessary emails immediately and storing information in folders will help them be more organised in their work.

Preparation

You will need:

- an email address containing different emails, eg work, leisure, personal
- items that could be stored in folders
- a whiteboard or projector
- an information sheet explaining 'managing email' techniques.

Set up an email account with examples of emails from colleagues, friends and family and junk mail. Then, prepare a handout giving learners support about the different ways you can manage emails. For example, identifying, deleting, creating and naming folders, sorting emails by date or name order.

Resources

- Key Skills trainer. An online resource designed to help learners check, learn and apply their Key Skills. It covers Application of Number, Communication, and ICT at levels 1 and 2. The ICT section provides useful section on sending, replying and attaching emails.
<http://www.keyskills4u.com>
- How stuff works: How e-mail works. An interesting web page describing how e-mail works. Useful for an understanding of email terminology. Available from: <http://www.howstuffworks.com/email.htm>
- Learn the Net: Harness E-Mail. A site that explains the step-by-step process of sending, receiving, and managing emails.
<http://www.learnthenet.com/english/section/email.html>
- LSN E-learning and Technology. This site allows you to search for events, resources, and examples of e learning.
<http://www.learningtechnologies.ac.uk>

4. Useful resources

Free computer tutorials

A free tutorial site that provides information on Microsoft Word, Excel, Web Design, Style Sheets etc. Available from: <http://www.homeandlearn.co.uk/>

How stuff works: How computer viruses work

Available from: <http://www.howstuffworks.com/virus.htm>

How stuff works: How email works

A web page describing how email works. Useful for an understanding of email terminology. Available from: <http://www.howstuffworks.com/email.htm>

ICT security home

A web page of links about different aspects of IT security. Available from <http://www.itsecurity.com/>

Internet4Classrooms: Helping teachers use the internet effectively

A site that gives tutorials for teachers to help them make effective use of technology in the classroom. <http://www.internet4classrooms.com>

Key Skills Support Programme: shared resources

A bank of key skills material developed by schools, colleges and training providers, which can be downloaded and adapted for personal use. <http://www.keyskillssupport.net/supporting/resources/>

Key skills trainer

An online resource designed to help learners check, learn and apply their key skills. It covers Application of Number, Communication and ICT at levels 1 and 2. Available from: www.Keyskills4u.com

Learn the Net: Harness E-mail

A site that explains the step-by-step process of sending, receiving, and managing emails. <http://www.learnthenet.com/english/section/email.html>

Level crossing

Originally designed for key skills, this resource includes a number of ICT activities that could be used to support candidates working on functional ICT at Entry 3/Level 1. Downloadable from KSSP website. www.keyskillssupport.net

LSN e-learning and technology

This site allows you to search for events, resources, and examples of e learning. <http://www.learningtechnologies.ac.uk>

Teaching and learning functional ICT: 4. Useful resources

Microsoft: Protect yourself information page

This would be a good research tool for learners to visit. Available on <http://www.microsoft.com/protect/yourself/default.aspx>

Sample teaching units for the Key Stage 3 National Strategy

<http://www.standards.dfes.gov.uk/secondary/keystage3/respub/ictpubs/>

Skills for Life: Training materials, 'How to...' guides

Create and insert a sound file; Insert digital images; Drag and drop with images; Adding video to presentations. Available to download from: LSN Skills for Life materials. <http://www.lsneducation.org.uk/skillsforlife/materials>

Supporting ICT – Key Stage 3 National Strategy

The section on 'Teaching and Learning' also applies to teaching functional ICT.

Supporting Information and Communication Technology

Publication from the Key Skills Support Programme, aimed primarily at work-based learning providers.

Teaching and Learning Information and Communication Technology

Publication from the Key Skills Support Programme, aimed primarily at schools and colleges. Downloadable from KSSP website www.keyskillssupport.net

Teaching ideas.co.uk

<http://www.teachingideas.co.uk/ict>

Teaching and learning functional ICT: 4. Useful resources

Acronyms

BSA

Basic Skills Agency. The Basic Skills Agency has merged with the National Institute of Adult and Continuing Education (NIACE) and will work in alliance with Tribal. Its full name is now 'The Basic Skills Agency at NIACE'. See www.basic-skills.co.uk

CBI

Confederation of British Industry. A not-for-profit organisation, incorporated by Royal Charter in 1965. It represents the business sector in the UK, provides membership services, conducts research and provides 'a voice for business' at national level. See www.cbi.org.uk

CEL

Centre for Excellence in Leadership. CEL's remit is to foster and support leadership improvement, reform and transformation throughout the sector. It serves the existing and future leaders of all providers through programmes, events, support services and bespoke consulting assignments. See www.centreforexcellence.org.uk

CPD

Continuing professional development.

DCSF

Department for Children, Schools and Families. Established in June 2007; successor organisation to DfES. Responsible for functional skills policy. See www.dcsf.gov.uk

DDP

Diploma Development Partnership. There are 14 Diploma Development Partnerships – one for each line of learning – developing content for each of the Diplomas. See www.qca.org.uk/qca_5400.aspx

DfES

Department for Education and Skills. In June 2007, divided into DCSF and DIUS. See www.dfes.gov.uk

DIUS

Department for Innovation, Universities and Skills. Established in June 2007; successor organisation to DfES. Responsibility for key skills and Skills for Life policy. See www.dius.gov.uk

Entry 1, Entry 2, Entry 3

Entry levels in the adult literacy, adult numeracy, adult ICT and ESOL core curricula.

Teaching and learning functional ICT: 4. Useful resources

EFL

English as a Foreign Language.

ESOL

English for Speakers of Other Languages.

FLT

Foundation Learning Tier. The umbrella term for all provision below Level 2 that is taken by learners over the age of 14. It therefore encompasses what is currently categorised as pre-Entry, Entry level (split into Entry levels 1, 2 and 3) and Level 1.

ILP

Individual Learning Plan. Document used to plan and record a student's learning.

Jobcentre Plus

Government agency that provides help and advice on jobs and training for people who can work and financial help for those who cannot; helps employers to fill vacancies. Part of the Department of Work and Pensions (DWP). See www.jobcentreplus.gov.uk/

Key Stage 3

Usually, the first three years of secondary education – Years 7, 8 and 9 – but sometimes condensed.

Key Stage 4

Years 10 and 11 of secondary education.

KSSP

Key Skills Support Programme. Delivered on behalf of QIA by the Learning and Skills Network consortium, consisting of LSN, Learning for Work and CfBT Education Trust. Supports the delivery and implementation of key skills in all post-14 settings. Provides advice, training, information and resources to learners, teachers, trainers and managers. See www.keyskillssupport.net/

LA

Local Authority, the education function of which is now incorporated into 'Integrated Children's Services'.

learndirect

The largest provider of e-learning in the world. Aims to enable adults without a Level 2 or Skills for Life qualification to gain the skills and qualifications they need to find a job or to achieve and progress at work. See www.learndirect.co.uk

Teaching and learning functional ICT: 4. Useful resources

LLN

Literacy, Language, Numeracy.

LLUK

Lifelong Learning UK. Responsible for the professional development of all those working in libraries, archives and information services, work-based learning, higher education, further education and community learning and development. See www.lluk.org.uk

LLU+

National consultancy and professional development centre for staff working in the areas of literacy, numeracy, dyslexia, family learning and ESOL. See www.lsbu.ac.uk/lluplus

LSC

Learning and Skills Council. Responsible for funding and planning education and training for learners over 16 years old in England. See www.lsc.gov.uk

LSDA

Learning and Skills Development Agency. See LSN.

LSN

Learning and Skills Network. Independent not-for-profit organisation launched in April 2006; took over some of the role of LSDA. See www.lsneducation.org.uk

NAA

National Assessment Agency. Launched in April 2004 to develop and deliver high quality national curriculum tests and supervise the delivery and modernisation of GCSE and A level examinations. See www.naa.org.uk

NCSL

The National College for School Leadership exists to help to make a difference to the lives and the life chances of children and young people through the development of world-class school leaders. See www.ncsl.org.uk

NIACE

National Institute of Adult Continuing Education – England and Wales. Non-governmental organisation working for more and different adult learners. See www.niace.org.uk

NVQ

National Vocational Qualification. NVQs are work-related, competence-based qualifications, accredited by QCA and included in the National Qualifications Framework. See www.qca.org.uk/14-19/qualifications/index_nvqs.htm

Teaching and learning functional ICT: 4. Useful resources

OECD

Organisation for Economic Cooperation and Development. The OECD groups thirty member countries sharing a commitment to democratic government and the market economy. See www.oecd.org

Ofsted

Non-ministerial government department responsible for inspecting and regulating the care of children and young people, and education and skills for learners of all ages. See www.ofsted.gov.uk

QCA

Qualifications and Curriculum Authority. Non-departmental public body, sponsored by government. Maintains and develops the national curriculum and associated assessments, tests and examinations as well as accrediting qualifications in colleges and at work. Also regulates awarding bodies and exams to ensure they are fit for purpose. See www.qca.org.uk

QIA

Quality Improvement Agency. Non-departmental public body; successor to LSDA. Works across the entire learning and skills sector. See www.qia.org.uk

QTLS

Qualified Teacher Learning and Skills. Non-subject-specific qualifications that give qualified teacher status; effective from September 2007.

QTS

Qualified Teacher Status – awarded to a teacher who is fully qualified in terms of training, certification and experience.

Skills for Life

National strategy for improving adult literacy and numeracy skills in England. See www.dfes.gov.uk/readwriteplus

SNS

The Secondary National Strategy for school improvement is part of the Government's major reform programme for transforming secondary education to enable children and young people to attend and enjoy school, achieve personal and social development and raise educational standards in line with the 'Every Child Matters' agenda. See www.standards.dfes.gov.uk/secondary/about/

SSAT

The Specialist Schools and Academies Trust is the leading national body for secondary education in England, and delivers the Government's Specialist Schools and Academies programme. Is responsible for CPD for the Diplomas. See www.specialistschools.org.uk

Teaching and learning functional ICT: 4. Useful resources

SSC

Sector Skills Council. SSCs are independent, employer-led UK-wide organisations licensed by the Secretary of State for Innovation, Universities and Skills to tackle the skills and productivity needs of their sector throughout the UK. See www.ssda.org.uk

TDA

Training and Development Agency for Schools: responsible for funding the provision of teacher training in England, and providing information and advice on teaching as a career. See www.tda.gov.uk

UFI

University for Industry. The organisation behind learndirect. It has a mission to use technology to transform the skills and employability of the working population, in order to improve the UK's productivity. See www.ufi.com

Teaching and learning functional ICT: 4. Useful resources