

Guidance and units May 2008

BTEC Short Courses

Edexcel Level 2 BTEC Award, Certificate and
Diploma in Fire and Rescue Services in the
Community

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The Edexcel Level 2 BTEC Award, Certificate and Diploma in Fire and Rescue Services in the Community qualification has been developed in partnership with the Fire Services Youth Training Association, Edexcel and the Fire and Rescue Sector Vocational Standards Group.

References to third party material made in this specification are made in good faith. Edexcel does not endorse, approve or accept responsibility for the content of materials, which may be subject to change, or any opinions expressed therein. (Material may include textbooks, journals, magazines and other publications and websites.)

Authorised by Roger Beard
Prepared by Alison Mitchell

Publications Code

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Qualification titles covered by this specification

This qualification has been accredited to the National Qualifications Framework (NQF) and is eligible for public funding as determined by the DfES under Sections 96 and 97 of the Learning and Skills Act 2000.

The qualification title listed above features in the funding lists published annually by the DfES and the regularly updated website www.dfes.gov.uk/. The NQF Qualifications Accreditation Number (QAN) should be used by centres when they wish to seek public funding for their learners. The QAN for this qualification is listed in *Annexe A*.

This qualification title is as it will appear on learners' certificates. Learners need to be made aware of this when they are recruited by the centre and registered with Edexcel. Providing this happens, centres are able to describe the programme of study leading to the award of the qualification in different ways to suit the medium and the target audience.

Introduction

This document contains the units and associated guidance for the National Qualifications Framework (NQF). Each unit sets out the required outcomes and content and includes advice regarding appropriate delivery and assessment strategies. This guidance contains further details of the assessment and quality assurance of these qualifications. It includes advice about Edexcel's policy regarding access to its qualifications, the design of programmes of study and delivery modes.

BTEC Short Courses are designed to meet a range of different needs. BTEC Short Courses at Levels 1-3 offer:

- maximum flexibility with programmes of usually 90, 180 or 300 hours available across all levels of the NQF
- the opportunity to certificate smaller blocks of learning which are designed to motivate learners and encourage widening participation in education and training
- courses that relate to the particular training and employment patterns in a sector
- courses that may offer preparation for specific jobs and subsequent achievement of NVQs or Apprenticeship Diplomas when in employment
- the opportunity to use a range of delivery methods
- opportunities for learners to develop skills that support career and professional development
- underpinning knowledge, skills and understanding linked, where appropriate, to named NVQs
- programmes that can enable progression either to higher levels of study or to other courses at the same level of study.

BTEC Short Courses at Levels 1-3

NQF level

3

Edexcel Level 3 BTEC Award...

Edexcel Level 3 BTEC Certificate...

Edexcel Level 3 BTEC Diploma...

2

Edexcel Level 2 BTEC Award...

Edexcel Level 2 BTEC Certificate...

Edexcel Level 2 BTEC Diploma...

1

Edexcel Level 1 BTEC Award...

Edexcel Level 1 BTEC Certificate...

Edexcel Level 1 BTEC Diploma...

Guided
learning
hours

Normally up to
90 hours

Normally up to
180 hours

Normally up to
300 hours

Structure of the qualification

The Edexcel Level 2 BTEC in Fire and Rescue Services in the Community is a qualification consisting of one core unit and 23 further optional units.

To gain the BTEC Level 2 **Award** in Fire and Rescue Services in the Community, a learner must successfully achieve the core unit.

To gain the BTEC Level 2 **Certificate** in Fire and Rescue Services in the Community, a learner must successfully achieve the core unit and sufficient optional units to complete a minimum of 120 estimated guided learning hours.

To gain the BTEC Level 2 **Diploma** in Fire and Rescue Services in the Community, a learner must successfully achieve the core unit and sufficient optional units to complete a minimum of 240 estimated guided learning hours.

Unit Number	Unit Title	Estimated Guided Learning Hours
Core Unit		
Unit 1	The Role of the Fire and Rescue Services in the Community	30
Optional Unit		
Unit 2	The Emergency Services Community	10
Unit 3	The History and Changing Roles of the Fire and Rescue Service	10
Unit 4	Hose, Lines, Equipment and Fittings used by the Fire and Rescue Service	20
Unit 5	Pumping Appliances used by the Fire and Rescue Services	20
Unit 6	Special Appliances used by the Fire and Rescue Service	10
Unit 7	The Operation and use of Ladders in the Fire and Service	10
Unit 8	Breathing Apparatus, Equipment and Procedures	20
Unit 9	Casualty Extrication by the Fire and Rescue Service	10
Unit 10	Resource Management within the Fire and Rescue Service	10
Unit 11	Team and Leadership Skills used in the Emergency Services	10
Unit 12	Effective Communication in the Fire and Rescue Service	10
Unit 13	Citizenship and Personal Responsibility with the Fire and Rescue Service	10
Unit 14	Community Safety	10
Unit 15	Improving Our Community with the Fire and Rescue	10

	Service	
Unit 16	Healthy Living for Working in the Fire and Rescue Service	10
Unit 17	Careers Related to the Fire and Rescue Service	10
Unit 18	The Preservation of Artefacts within the Fire and Rescue Service	10
Unit 19	Navigation Skills used in the Fire and Rescue Service	10
Unit 20	Planning, Participating In and Reviewing Residential Experiences	10
Unit 21	Operational Response Simulations and Procedures within the Fire and Rescue Service	10
Unit 22	The Science of fire and extinction	10
Unit 23	Fire Investigation within the Fire and Rescue Service	10
Unit 24	Water Safety and Water Rescue Techniques used by the Fire and Rescue Service	10

Key features

BTEC Short Course Awards, Certificates and Diplomas are designed to provide focused and specialist work-related qualifications in a range of sectors. The qualifications can provide a specialist emphasis for learners following a general vocational programme of study. BTEC Short Courses offer focused qualifications for learners, particularly more mature learners, who wish to follow a short programme of study directly related to their work experience or to an aspect of employment that they wish to move into.

On successful completion of these qualifications, learners may progress into or within employment and/or continue their study in the vocational area.

National Occupational Standards

Where appropriate, BTEC Short Courses are designed to relate to the National Occupational Standards in the relevant sector which, in turn, form the basis of National Vocational Qualifications (NVQs). They do not purport to deliver occupational performance in the sector, which should be demonstrated in a work context. However, the qualifications can provide areas of underpinning knowledge for the National Occupational Standards, as well as developing practical skills in preparation for work and possible achievement of NVQs in due course.

This qualification relates to the National Occupational Standards for Fire Safety.

Level 2 BTEC Award, Certificate and Diploma in Fire and Rescue Services in the Community

These qualifications have been designed to provide:

- education and training for learners interested in the work of the Fire and Rescue Services. This also links to the National Agenda for Public Services and Health, Social and Society Diplomas and therefore learners may have a greater degree of interest in Local Authority Public Sector employment which using parts of this qualification may complete a larger Diploma.
- opportunities for learners to achieve a nationally-recognised Level 2 vocationally-specific qualification which provides an insight into the work of the Fire and Rescue Services or to progress to further vocational qualifications such as the BTEC First Certificate in Public Services
- the skills knowledge and understanding learners would need if they wanted to work in the Fire and Rescue Service
- opportunities for learners to focus on the development of the major key skills and the wider key skills, such as improving own learning and performance, problem solving and working with others, in a Fire and Rescue Service context
- opportunities for learners to develop a range of skills and techniques, personal qualities and attributes essential for successful performance in working life.

Unit format

All units in Edexcel BTEC Short Courses have a standard format which is designed to provide clear guidance on the requirements of the qualification for learners, tutors, assessors and those responsible for monitoring national standards.

Each unit is set out in the following way.

Unit title

The unit title is accredited by QCA and this form of words will appear on the learner's Notification of Performance (NOP).

NQF level

This is the level of study of the qualification as determined by the National Qualifications Framework (NQF).

Estimated Guided learning hours

Guided learning hours is 'a notional measure of the substance of a unit'. It includes an estimate of time that might be allocated to direct teaching, instruction and assessment, together with other structured learning time such as directed assignments or supported individual study. It excludes learner-initiated private study. Centres are advised to consider this definition when planning the programme of study associated with this specification.

Unit abstract

The unit abstract is designed to give the reader an appreciation of the value of the unit in the vocational setting of the qualification as well as highlighting the focus of the unit. It provides the reader with a snapshot of the aims of the unit and the key knowledge, skills and understanding developed while studying the unit. The unit abstract also emphasises links to the sector by describing what the unit offers the sector.

Learning outcomes

Learning outcomes state exactly what a learner should 'know, understand or be able to do' as a result of completing the unit.

Unit content

The unit content identifies the depth and breadth of knowledge, skills and understanding needed to design and deliver a programme of learning sufficient to achieve each of the learning outcomes. This is informed by the underpinning knowledge and understanding requirements of the related National Occupational Standards (NOS). The content provides the range of subject material for the programme of learning and specifies the skills, knowledge and understanding required for achievement of the pass grading criteria.

Each learning outcome is stated in full and then the prescribed key phrases or concepts related to that learning outcome are listed in italics followed by the subsequent range of related topics.

The unit content section will often have lists of topics that provide the range of the subject material required to be covered in order to meet the grading criteria. Subject material may be further detailed by lists enclosed within brackets or an elongated dash which provide the defined elements of the specific topic item. Where the subject material list includes an 'eg', it should be noted that this provides an indicative range of material to support the specific topic item.

Assessment criteria

Each assessment criteria section contains statements of the criteria used to determine the evidence that each learner must produce in order to receive a pass grade. It is important to note that the merit and distinction grading criteria refer to a qualitative improvement in the learner's evidence.

Essential guidance for tutors

This section is designed to give tutors additional guidance and amplification on the unit in order to provide for a coherence of understanding and a consistency of delivery and assessment. It is divided into the following sections.

- *Delivery* – explains the content and its relationship with the learning outcomes and offers guidance about possible approaches to delivery. This advice is based on the more usual delivery modes but is not intended to rule out alternative approaches.
- *Assessment* – provides amplification about the nature and type of evidence that learners need to produce in order to pass the unit or achieve the higher grades. This section should be read in conjunction with the grading criteria.
- *Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications* – sets out links with other units within the qualification. These could be used to ensure that learners can relate different aspects within the qualification and offer opportunities for integration of learning, delivery and assessment. Links to the Occupational Standards will be highlighted here.
- *Essential resources* – identifies any specialist resources needed to allow learners to generate the evidence required for each unit. The centre will be asked to ensure that any requirements are in place when it seeks approval from Edexcel to offer the qualification.
- *Additional Resources* – provides a short list of learner resource material that benchmark the level of study.

Key skills

This section identifies where there may be opportunities within the unit for the generation of evidence to meet the requirements of key skills units. Assessors should take care to become familiar with the key skills specifications and evidence requirements and not to rely on the contents of this section when presenting key skills evidence for moderation. Centres should refer to the QCA website (www.qca.org.uk) for the latest version of the key skills standards.

Assessment and grading

The assessment for the Edexcel level 2 Award, Certificate and Diploma in Fire and Rescue Services in the Community is criterion referenced, based on the achievement of specified criteria. Each unit contains contextualised pass criteria for unit assessment.

In the Edexcel 2 BTEC Award, Certificate and Diploma in Fire and Rescue Service in the Community all units are internally assessed. Centre assessment will be externally verified through the National Standards Sampling process.

The overall grading for the Edexcel level 2 Award, Certificate and Diploma in Fire and Rescue Services in the Community is a pass, based upon the successful completion of all units. **Learners must pass the core unit to achieve the Level 2 BTEC Award in Fire and Rescue Services.**

Learners must pass the core unit and sufficient units to total a minimum of 120 guided learning hours to achieve the Level 2 BTEC Certificate in Fire and Rescue Services.

Learners must pass the core unit and sufficient units to total a minimum of 240 to achieve the Level 2 BTEC Diploma in Fire and Rescue Services.

Centres are encouraged to use a variety of assessment methods, including assignments, case studies and work-based assessments, along with projects, performance observation and time-constrained assessments. Practical application of the assessment criteria in a realistic scenario based simulation should be emphasised and maximum use made of practical work experience.

Assignments constructed for assessment by centres should be valid, reliable and fit for purpose, building on the application of the assessment criteria. Care must be taken to ensure that assignments used for assessment of a unit cover all the criteria for that unit as set out in the assessment criteria section of that unit. It is advised that the criteria which an assignment is designed to cover should be clearly indicated in the assignment to (a) provide a focus for learners (for transparency and to help ensure that feedback is specific to the criteria) and (b) assist with internal standardisation processes. Tasks and activities should enable learners to produce evidence that directly relates to the specified criteria.

The creation of assignments that are fit for purpose is vital to achievement by learners and their importance cannot be over emphasised.

Appeals Procedure

Accreditation of Prior Learning (APL)

Edexcel encourages centres to recognise learners' previous achievements and experience through APL. Learners may have evidence that has been generated during previous study or in their previous or current employment or whilst undertaking voluntary work that relates to one or more of the units in the qualification. Assessors should assess this evidence against the

national standards in the specifications in the normal way. As with all evidence, assessors should be satisfied about the authenticity and currency of the material when considering whether or not the outcomes of the unit have been met.

Full guidance about Edexcel's policy on APL is provided on our website: www.edexcel.org.uk.

Quality assurance

Edexcel's qualification specifications clearly set out the standard to be achieved by each learner in order to achieve the award of the qualification. This is given in the statement of outcomes and assessment criteria in each unit. Further guidance on assessment is given in the *Essential guidance for tutors* section of each unit.

Edexcel operates a quality assurance process, which is designed to ensure that these standards are maintained by all assessors and verifiers. It achieves this through the following activities.

Internal verification

Centres are required to have processes in place that ensure that each assessor's decisions are reviewed so that they are correctly interpreting and applying the standards set out in the specifications. Choice and application of an appropriate system is a matter for individual centres. Edexcel fully supports the use of the centre's own quality assurance systems where this ensures robust internal standardisation. Centres should refer to the *NQF BTEC Levels 2/3 (including Short Courses Levels 1-3) Handbook* (updated annually).

External verification

Edexcel will sample assessors' decisions using subject-specialist external verifiers. This process will follow the National Standards Sampling (NSS) protocol as set out in the *NQF BTEC Levels 2/3 (including Short Courses Levels 1-3) Handbook* (updated annually).

The external verifier assigned to the centre will identify, through negotiation with the programme coordinator, the unit (or units) which will be subject to NSS. Centres will be required to make available work produced by four learners which provides evidence for the assessment (in whole or in part) of the identified unit (or units). The assignment brief (or briefs) on which the work is based must have been internally verified. The learner work **must** have been internally assessed, and at least 50 per cent of it **must** have been internally verified.

Centres should refer to the *NQF BTEC Levels 2/3 (including Short Courses Levels 1-3) Handbook* (updated annually).

Risk assessment

Edexcel has an approval process which creates a quality profile of each qualification programme in each centre and for the centre as a whole. This profile contributes to the determination of the nature of external verification activity for each programme and will also be used to initiate other quality control measures by Edexcel.

Approval

Where a centre already has approval for a programme that is being replaced by a new programme, the centre will be given 'accelerated approval' for the new programme. Other

centres wishing to offer a programme in a vocational area for the first time will need to apply for approval to offer the programme.

Centres that have not previously offered any BTEC qualifications will first need to apply for, and be granted, centre approval.

When a centre applies for approval to offer a BTEC qualification they will be required to enter into an approvals contract.

The approvals contract is a formal commitment by the head or principal of a centre to meet all the requirements of the specification and linked codes or regulations. Sanctions and tariffs will be applied if centres do not comply with the contract. This could ultimately result in the suspension of certification or withdrawal of approval.

Programme design and delivery

These qualifications consists of a core unit (which is mandatory) and a choice of specialist units, which are designed to provide a specific focus to the qualification.

In the Level 2 BTEC Award, Certificate and Diploma in Fire and Rescue Services in the Community, each unit consists of either 10, 20 or 30 estimated guided learning hours. The definition of estimated guided learning hours is 'a notional measure of the substance of a qualification'. It includes an estimate of time that might be allocated to direct teaching, instruction and assessment, together with other structured learning time such as directed assignments or supported individual study. It excludes learner-initiated private study. Centres are advised to consider this definition when planning the programme of study associated with this specification.

Mode of delivery

Edexcel does not define the mode of study for BTEC qualifications. Centres are free to offer the qualifications using any mode of delivery that meets the needs of their learners. This may be through traditional classroom teaching, open learning, distance learning or a combination of these. Whatever mode of delivery is used, centres must ensure that learners have appropriate access to the resources identified in the specifications and to the subject specialists delivering the units. This is particularly important for learners studying for the qualification through open or distance learning.

Learners studying for the qualification on a part-time basis bring with them a wealth of experience that should be utilised to maximum effect by tutors and assessors. Assessment instruments based on the learner's work environment should be encouraged. Those planning the programme should aim to enhance the vocational nature of the BTEC qualifications by:

- liaising with employers to ensure a course relevant to the specific needs of the learners
- accessing and using non-confidential data and documents from learners' workplaces
- including sponsoring employers in the delivery of the programme and, where appropriate, in the assessment
- linking with company-based/workplace training programmes
- making full use of the variety of experience of work and life that learners bring to the programme.

Resources

BTEC qualifications are designed to prepare learners for employment in specific sectors. Physical resources need to support the delivery of the programme and the proper assessment of the outcomes and therefore should normally be of industry standard. Staff delivering programmes and conducting the assessments should be fully familiar with current practice and standards in the sector concerned. Centres will need to meet any specialist resource requirements when they seek approval from Edexcel.

Resources for the Level 2 BTEC Award and Certificate in Fire and Rescue Services in the Community should include research facilities such as the internet. To add currency and vocational relevance visiting guest speakers, radio and video recordings, video for role play, leaflets, forms, letters, notices, instructions, and extracts from books, journals and handouts should also be available.

Delivery approach

It is important that centres develop an approach to teaching and learning that supports the specialist vocational nature of the Level 2 BTEC Award, Certificate and Diploma in Fire and Rescue Services in the Community. The specifications contain a balance of practical skill development and knowledge requirements, some of which can be theoretical in nature. Tutors and assessors need to ensure that appropriate links are made between theory and practise and that the knowledge base is applied to the sector. This will require the development of relevant and up-to-date teaching materials that allow learners to apply their learning to actual events and activity within the sector. Maximum use should be made of the learner's experience.

Centres should note that the qualification set out in this specification has been developed in consultation with centres and employers. The units are designed to meet the skill needs of the sector and to lead to or support employment within the sector. Centres should make use of the choice available to them within the specialist units in these specifications to meet the needs of their learners, and the local skills and training needs identified by organisations such as the Regional Development Agency and the local Learning and Skills Council.

Access and recruitment

Edexcel's policy regarding access to its qualifications is that:

- the qualifications should be available to everyone who is capable of reaching the required standards
- the qualifications should be free from any barriers that restrict access and progression
- there should be equal opportunities for all wishing to access the qualifications.

Centres are required to recruit learners to BTEC qualifications with integrity. This will include ensuring that applicants have appropriate information and advice about the qualifications and that the qualification will meet their needs. Centres should take appropriate steps to assess each applicant's potential and make a professional judgement about their ability to successfully complete the programme of study and achieve the qualification. This assessment will need to take account of the support available to the learner within the centre during their programme of study and any specific support that might be necessary to allow the learner to

access the assessment for the qualification. Centres should also show regard for Edexcel's policy on learners with particular requirements.

Centres will need to review the profile of qualifications and/or experience held by applicants, considering whether this profile shows an ability to progress to a Level 3 qualification. For learners who have recently been in education, the profile is likely to include one of the following:

- a standard of literacy and numeracy supported by a general education equivalent to GCSEs at grade D - G
- related work experience
- other related Level 2 qualifications

Learners who have not recently been in education may present a more varied profile of achievement that is likely to include experience of paid and/or unpaid employment.

Restrictions on learner entry

This qualification is accredited on the NQF for learners aged 14 and over.

Access arrangements and special considerations

Edexcel's policy on access arrangements and special considerations for BTEC and Edexcel NVQ qualifications aims to enhance access to the qualifications for learners with disabilities and other difficulties (as defined by the Disability Discrimination Act 1995 and the amendments to the Act) without compromising the assessment of skills, knowledge, understanding or performance.

Further details are given in the policy Access Arrangements and Special Considerations for BTEC and Edexcel NVQ Qualifications, which is on the Edexcel website (www.edexcel.org.uk). This policy replaces the previous Edexcel policy (Assessment of Vocationally Related Qualification: Regulations and Guidance Relating to Learners with Special Requirements, 2002) concerning learners with particular requirements.

Key skills

All BTEC Short Courses include signposting of key skills. These are transferable skills which play an essential role in developing personal effectiveness for adult and working life and in the application of specific vocational skills.

In each unit, the opportunities for the generation of evidence for key skills are signposted. These are indicative links only. Staff will need to become familiar with key skills specifications and their evidence requirements and they are advised not to rely on the signposting in the units when presenting key skills evidence for moderation. Centres should refer to the QCA website (www.qca.org.uk) for the latest key skills standards.

Key skills provide a foundation for continual learning. They enable and empower individuals who inevitably face a series of choices in work, education and training throughout their lives. Current and future initiatives such as learndirect, lifelong learning, and widening participation all require a more flexible population in the workplace and key skills play a role in setting the framework.

Learners need the chance to show current and future employers that they can:

- communicate effectively, in a variety of situations, using a wide range of techniques
- work well with others – individuals or teams – so that work can be properly planned and targets met
- manage their own development, so that they are always ready to take on the challenges of change and diversification
- use numeracy, not just within routine tasks and functions but to help them be more effective and efficient in all they do
- use ICT in a range of applications to support all aspects of their role
- solve problems in a variety of circumstances.

The wider curriculum

The study of the Level 2 BTEC Award, Certificate and Diploma in Fire and Rescue Services in the Community provides opportunities for the learner to develop an understanding of spiritual, moral, ethical, social and cultural issues and an awareness of environmental issues, health and safety considerations, and European developments. These wider curriculum opportunities are indicated in the units as appropriate.

Moral, ethical, spiritual, social and cultural issues

The specification gives learners opportunities to develop an understanding of:

- **moral and ethical issues** through an understanding of the impact that hoax calls, arson and other forms of anti social behaviour can have on the work of the Fire and Rescue Services.
- **spiritual, social and cultural issues** through learning to respect others as they work in teams to achieve tasks and goals.

Environmental, health and safety issues and European developments

The specification gives learners opportunities to develop an understanding of:

- **environmental issues** through discussions on the impact of fire on the environment.
- **health and safety issues** through finding out about the work of the Fire and Rescue Service and local and national initiatives to improve fire safety in the home.
- **European developments** through discussions on the relationship between the Fire and Rescue Services in the UK and in Europe eg working together on natural disasters.

Useful publications

Further copies of this document and related publications can be obtained from:

Edexcel Publications
Adamsway
Mansfield
Nottinghamshire NG18 4FN

Telephone: 01623 467 467
Fax: 01623 450 481
Email: publications@linneydirect.com

Related publications include:

- the current Edexcel publications catalogue and update catalogue
- key skills publications – specifications, tutor support materials and question papers
- *Accreditation of Prior Learning* – available on our website: www.edexcel.org.uk
- *The Statutory Regulation of External Qualifications in England, Wales and Northern Ireland* (QCA, 2004).

Edexcel publications on the Quality Assurance System and the internal and external verification of vocationally-related programmes can be found on the Edexcel website and in the Edexcel publications catalogue.

NB: Most of our publications are priced. There is also a charge for postage and packing. Please check the cost when you order.

How to obtain National Occupational Standards

National Occupational Standards for Fire Safety are available from:

Employers Organisation
Layden House
76-86 Turnmill Street
London EC1 5LG
Telephone: 020 7296 6600
Fax: 020 7296 6750

Professional development and training

Edexcel supports UK and international customers with training related to BTEC qualifications. This support is available through a choice of training options offered in our published training directory or through customised training at your centre.

The support we offer focuses on a range of issues including:

- planning for the delivery of a new programme
- planning for assessment and grading
- developing effective assignments
- building your team and teamwork skills
- developing student-centred learning and teaching approaches
- building key skills into your programme
- building in effective and efficient quality assurance systems.

The national programme of training we offer can be viewed on the Edexcel website (www.edexcel.org.uk). You can request customised training through the website or by contacting one of our advisers in the Professional Development and Training team on telephone number 0870 240 9800 to discuss your training needs.

The training we provide:

- is active – ideas are developed and applied
- is designed to be supportive and thought provoking
- builds on best practice.

Our training will also underpin many areas of the FENTO standards for teachers working towards them.

Further information

Edexcel produces regular policy statements on Edexcel qualifications and accompanying procedures. Please check our website for current information.

For further information please call Customer Services on 0870 240 9800 (calls may be recorded for training purposes) or visit our website at www.edexcel.org.uk

Units

Unit 1: The role of the Fire and Rescue Service in the community

NQF Level 2: BTEC Short Course

Guided learning hours: 30

Unit abstract

This is the core unit for this qualification. It will enable learners to gain an insight into the Fire and Rescue Service, its various operational techniques and community safety initiatives.

The Fire and Rescue Service requires a high level of teamwork and communication skills to enable it to meet the diverse needs of its communities.

This unit allows learners to develop an understanding of the range of team and personal skills, knowledge and understanding along with the associated hazards and risks that are an essential aspects of the work of the Fire and Rescue Service Community.

This will be achieved through participation in a variety of different activities; which will culminate in learners having the ability to demonstrate a broad range of skills, knowledge and understanding of the Fire and Rescue Service and its role within the Community.

It is recommended that this unit is delivered first as an introduction to this qualification. Learners can further develop their skills, knowledge and understanding in these areas through specialist units within this qualification.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the role of the Fire and Rescue Service
- 2 Be able to develop basic skills needed to work in the Fire and Rescue Service

Unit content

1 Understand the role of the Fire and Rescue Service

Organisation and structure: structure of Fire and Rescue Service; how the Fire and Rescue Service fits into the broader emergency services community; role e.g. preventative measures, operational response

Risks and safety control measures: main hazards and risks when working within the Fire and Rescue Service environment e.g. major and minor injuries, loss of life, emotional stress; safety control measures e.g. protective clothing, drills, risk assessment; safety words of command used within the Fire and Rescue Service environment

Exercise ground procedures: method used for forming into crews and identifying roles; how to conduct tasks on the drill ground as instructed

Pumping appliances and equipment: the operation and use of a selection of Fire and Rescue Service equipment; e.g. branch, delivery hose, standpipe, key and bar, pump, line, risks and safety features involved when working from a pressure fed supply; effects of jet reaction when holding a jet and demonstrate the method of countering them; how to refill the appliance tank via a pressure fed supply.

Rescue techniques: methods of picking up, carrying and placing down a casualty using two rescuers; method of entering, moving around and exiting compartments and buildings; methods of extricating casualties from different situations

Building safer communities: what is meant by the local community; ways in which the local community can be improved

Cause and effect of your own and other people's actions: consequences of own and other people's actions in relation to personal safety and its impact on the community; i.e. anti-social behaviour including hoax calls, arson and vehicle crime.

2 Be able to develop basic skills needed to work in the Fire and Rescue Service

Teamwork: work effectively as a member of a team; support others to achieve team objectives

Communication skills: effective communication methods in different working environments

Problem solving: know how to collect relevant information in order to make informed decisions; plan, carry out and evaluate plans of action to achieve effective outcomes; identification of alternative strategies

Diversity and equality: define diversity and equality; know how to treat people with respect, consideration and understanding

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Describe the role of the Fire and Rescue Service
P2	Identify three main hazards and risks when working with the Fire and Rescue Service and describe the safety control measures that are in place to reduce these risks
P3	Identify and demonstrate the operation and use of three items of Fire and Rescue Service equipment
P4	Demonstrate the basic skills needed to work in the Fire and Rescue Services
P5	Describe how anti-social behaviour can affect the Fire and Rescue Service community

Essential guidance for tutors

Delivery

It is recommended that this core unit is delivered to learners as the first unit. It should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate teamwork and interpersonal skills. To achieve this, learners will need to be given the opportunity to participate in a range of teamwork/team-building activities. Learners will also need to be given appropriate understanding and underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to develop a range of personal skills reflective of those operating within the Fire and Rescue Service. Particular consideration should be given to relating communication, teamwork, problem-solving and self-management skills within all activities throughout the unit.

A number of different approaches can be considered when developing the learners' understanding of their community, the Fire and Rescue Service community and how these interact. This may include local and national safety initiatives appropriate to their community. These approaches could be scenario based simulation with discussion, personal research or delivery based both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. Learners must be given the appropriate underpinning knowledge and understanding prior to involvement in any practical activity. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructive feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion, the learner should describe the role of the Fire and Rescue Service. Answers could include detail on preventative measures taken to reduce the number of incidents, operational responses to different types of incidents

- P2 The learner must identify three main risks when working with the Fire and Rescue Service and describe the safety control measures used to reduce these risks e.g. protective clothing is designed to reduce the possibility of burns and other injury
- P3 The learner must identify three items of equipment e.g. standpipe, key and bar, pump. They must demonstrate how each piece of equipment is used. (Illustrations of different types of equipment could be provided for the learner to identify items). Opportunity must be provided for the learner to complete this task using real equipment a checklist could be designed for recording purposes and the assessor would sign the checklist when the learner has met the learning outcomes.
- P4 This grading criterion could be assessed throughout the delivery of this unit. The learner must be able to show that they are an effective member of the team, have good communication and problem solving skills, respect others and have basic first aid skills. Performance could be recorded through observation checklists, references, peer assessment etc.
- P5 To ensure that this criterion is made relevant to the learner, a task could be given which requires them to review the impact of an incident of anti social behaviour that has been reported by the local media. Alternatively a scenario based simulation with discussion could be given to the learner to explain the impact that anti-social behaviour has had on the Fire and Rescue Service in the community.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 2-24 of this BTEC
- This Unit links to the Fire and Rescue Service National Occupational Standards.
- This Unit links to Level 2 NVQ in Fire Safety and underpins Level 3 NVQ in Emergency Fire Service - Operations in the Community.
- This Unit may link to forthcoming National Diplomas e.g. National Diploma in Public Services
- This Unit links to the National Curriculum:

English:

KS3 EN1 - Many of these objectives will be covered, however this will depend on the style of delivery of the module

KS3 EN2: 9a, 9b, 9c

KS4 EN1 - Many of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN2: 9a, 9b, 9c

Citizenship:

KS3: 1a, 1b, 2c, 3a, 3c

KS4: 1a, 1b, 2c, 3a, 3c

PSHE:

KS3: 1a, 1b, 1c, 2h, 3a, 3b, 3c, 3d, 3i, 3j, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 2h, 3a, 3c, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

- This Unit may link to the Welsh Assembly Government (WAG) National Curriculum

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of their appliances and equipment will need to be available. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars e.g. FSC1/89 - Breathing Apparatus and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.communities.gov.uk
- www.fireservice.co.uk
- www.staywise.co.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skills evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing the risks involved in working within the Fire and Rescue Service Describing the role of the Fire and Rescue Service in the community Researching information from the internet or from text books about the Fire and Rescue Service 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Setting targets to achieve assignments on time Discussing their progress with their tutor 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working in groups to achieve a set task they may identify problems which need to be resolved Demonstrating basic fire and rescue skills Evaluating their assessment outcomes 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working on tasks as a group throughout the teaching of the unit Working together to achieve end goals Reviewing their own performance during and after the completion of different tasks 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 2: The Emergency Services Community

NQF Level 2: BTEC Short Course

Unit abstract

This unit will provide learners with the opportunity to identify the different roles and functions within the Fire and Rescue Service and other emergency services. It is essential that emergency service providers work together to plan for and resolve operational incidents and other non-emergency activities.

This unit allows learners to develop knowledge of all the emergency services and an understanding of the way they work together whilst developing a range of team and personal skills.

Learners will gain an insight into how the Fire and Rescue Service works with the other emergency service providers to help keep the community safe. This will be achieved through participation in a variety of different activities, which will culminate in learners demonstrating a broad range of knowledge and understanding of the emergency services community.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the emergency services roles and responsibilities
- 2 Understand when the Fire and Rescue Service works with other emergency services

Unit content

1 Understand emergency services roles and responsibilities

Fire: community safety; responses to operational incidents; resources, appliances and equipment; regulatory fire safety functions.

Police: crime prevention; types of incidents attended; specialist sections i.e. traffic police; community support officer role; youth engagement activities; types of offences and their consequences; courts of law; police stations; different vehicles; training

Ambulance: incident attended; different vehicles; range of roles; specialist sections; first aid; St. John Ambulance and the Red Cross; training

Other emergency services: mountain rescue; cave rescue; life boat and coastguard

2 Understand when the Fire and Rescue Service works with other emergency services

Major incidents: planning coordinated responses; identification of high risks in the local area i.e. oil refinery, transport systems; communication systems; rehearsals for major incidents i.e. train crash, biological and chemical attack, terrorist attack

Road Traffic Collisions (RTC): coordinated response to vehicle and multiple vehicle collisions;

Combined working: arson; juvenile crime reduction activities; community events; road safety; training

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	describe the roles and responsibilities of emergency service providers
P2	describe when the Fire and Rescue Service works with other emergency services

Essential guidance for tutors

Delivery

Although this unit may appear to be predominantly knowledge based, it is intended that the delivery method should be very practical.

Learners should also be given the opportunity to meet and work with representatives of the Fire and Rescue Service and other emergency services, ideally in the appropriate work setting. Visits to police stations, ambulance stations etc would make this learning more valid. Representatives from the St John Ambulance or the Red Cross could be invited by the learners to speak to them about their work. Some learners may already undertake voluntary work with these organisations and may be willing to share their experiences with the other members of the group.

A broad overview should be provided to the learners on when the Fire and Rescue Services work with other emergency services. It is not intended that detailed information should be given at this stage on how the Fire and Rescue Services work with emergency services. Learners could access information about this learning outcome from the web site e.g. they could consider what types of incidents they are likely to work with other emergency services including major incidents, RTC's (Road Traffic Collisions) and combined working.

If learners want to study this area in more detail then they could consider the National Diploma in Public Services.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources etc. An example could be a record of when the learner interacted with members of emergency services and a description of their roles and responsibilities within their organisation. Video could be used to record learner's interactions with others from within the emergency service community.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 The learner needs to be able to demonstrate knowledge and understanding of the role of two emergency services in addition to the Fire and Rescue Service. They should be able to describe where they may work together e.g. different types of major incidents

P2 In order to achieve this criterion the learner must be able to identify three different circumstances when the Fire and Rescue Service works with other emergency services. Examples should reflect those given in the content of the unit.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 19, 21, 22, 24 and may link to units 3, 16, 18, 20 and 23 of this BTEC.
- This Unit links to the Fire and Rescue Service National Occupational Standards
- This Unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS3 EN2: 9a, 9b, 9c

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN2: 9a, 9b, 9c

Citizenship:

KS3: 2c, 3a, 3c

KS4: 2c, 3c

PSHE:

KS3: 1e, 1f, 2h, 3k, 4d, 4e, 4f

KS4: 1a, 1f, 3d, 3k, 4d, 4e

Essential Resources

Sufficient resources should be available from Fire and Rescue Services and other emergency service providers to support learners through this unit. A variety of personnel from each of the emergency services along with their appliances and equipment will need to be available.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

Local emergency service provider websites for Fire, Police, Ambulance etc

- www.fire.gov.uk

- www.firekills.gov.uk
- www.direct.gov.org
- www.fsyta.org
- www.communities.gov.uk
- www.police.uk
- www.policecouldyou.co.uk
- www.fireservice.co.uk
- www.homeoffice.gov.uk/new_indexes/emerge_serv.htm
- www.mcga.gov.uk
- www.nhscareers.nhs.uk/cgi-site/index.cg1
- www.staywise.co.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing the job role of fire fighter. This may be during an interview with an operational fire fighter. Presenting information on the role of different emergency services. Gathering information about different emergency services. They may use text books, the internet, journals etc. Describing how the Fire and Rescue Service works with the other emergency services. 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Preparing for their assessment. They will need to access the internet to identify the roles of the Fire and Rescue Services. Preparing their assessment. 	<p>IT2.1 Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.</p> <p>IT2.3 Present combined information such as</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
They may use images to show the special roles of a fire fighter and then describe their job role.	text with image, text with number, image with number.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. Choosing which job roles to consider. Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Identify when the Fire and Rescue Service work with other emergency services and how this happens Discussing when the Fire and Rescue Service work with other emergency services. This could be done as a scenario based simulation where the learners are posed a problem and they have to resolve it. Solving the problem identified in the scenario based simulation described 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
above.	

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Researching as a group the different job roles within the Fire and Rescue Service. 	WO2.1 Plan work with others.

Unit 3: The History and Changing Roles of the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

The Fire and Rescue Service has undergone great change taking it from its early beginnings to its present day form. The types of incidents it responds to, the appliances, equipment and techniques it uses in that response have changed dramatically even in recent years.

Knowledge of the history and development of the Fire and Rescue Service will help learners understand the modernised Fire and Rescue Service in its present form.

This unit allows learners to develop a range of team and personal skills whilst learning about the history of the Fire and Rescue Service and its changing roles.

Learners will gain an insight into how the Fire and Rescue Service was organised and operated in the past and how these things have changed. Activities will include community work as well as operational responses. This will be achieved through participation in a variety of different activities; which will culminate in learners having the ability to demonstrate a broad range of knowledge and understanding of the Fire and Rescue Service history and its role within the community.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the history of the Fire and Rescue Service
- 2 Understand the changing role of the Fire and Rescue Service

Unit content

1 Understand the history of the Fire and Rescue Service

Historical timeline: why and how fire brigades were formed; timelines of when different organisations ran fire brigades; the structure of current Fire and Rescue Services in the UK and internationally

Local Fire and Rescue Service history: the history of the formation of local Fire and Rescue Services; interaction and involvement with local community; significant local incidents

Key people and events: key people in Fire and Rescue Service history locally and nationally; key events in Fire and Rescue Service history locally, nationally and internationally; key influences on Fire and Rescue Services

Recording history: different methods of recording history; visit and recognise the importance of a museum

2 Understand the changing role of the Fire and Rescue Service

Role of Fire and Rescue Service: comparison of current and historical role; local, national and international influences on the Fire and Rescue Service

Evolution of equipment: developments in operational equipment; technological advances in fire detection and prevention; alterations in communication methods in different working environments

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Outline the history of the Fire and Rescue Service nationally and locally
P2	Describe how the role of the Fire and Rescue Service has changed over time
P3	Describe how Fire and Rescue Service equipment has developed over time

Essential guidance for tutors

Delivery

A number of different approaches can be considered when developing the learners' knowledge and understanding of the history of the Fire and Rescue Service and how this influences its current role. These approaches could be project based or personal research, both inside and outside their immediate learning environment, or any combination of the above.

Firefighters who have worked for the service for a considerable period of time may be invited to describe the changes that they have experienced over that time. Learners may also be given the opportunity to research the changes that have occurred at their local fire station using archive materials.

This unit should be mainly research based. To achieve this, learners will need to be given the opportunity to research projects using a variety of methods incorporating teamwork/team-building activities. Learners will also need to be given appropriate underpinning knowledge and understanding to help them identify and develop these skills.

The use of the internet will be invaluable when researching the changing nature of equipment over time. Learners could work in small groups to achieve these tasks.

The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation and discussion.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

- P1** Learners are expected to identify the key milestones in the Fire and Rescue Service's history e.g. the first organised firefighting service, the impact of the Fires of London, the first authority to have a fire service in Edinburgh, the introduction of London brigades, the changing of power from local authority control and County and vice versa. The learner should provide a brief history of their local Fire and Rescue Service e.g. when it started, how big it was, what was its' main function. Learners could provide this information as an oral or written presentation. Written work could be given in the form of illustrations with short notes against each picture or it could be presented as a poster or in booklet/leaflet format

- P2** In order to achieve this criterion the learner should explain how the role of the Fire and Rescue Service has changed over time e.g. from predominantly emergency response to work within the community, preventative measures, liaising with other emergency services
- P3** In order to achieve this criterion the learner could choose a station and describe how its equipment has changed over time. Annotated illustrations or a presentation may be used to show the differences over this period of time.

This work could be presented by the learners as a group presentation however it is essential that the work undertaken by each learner is clearly identified.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 2, 4, 5, 6, 7, 8, 9, 11, 12, 14 and 16, 17, 18 and may link to units 10,13, 15,19, 20, 21, 22, 23 and 24 of this BTEC.
- This Unit links to the Fire and Rescue Service National Occupational Standards
- This Unit links to the National Curriculum:

History:

KS3: 1, 2a, 2b, 2c, 2d, 2e, 3a, 3b, 4a, 5a, 5b, 5c, 7a, 7b, 13

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS3 EN2: 9a, 9b, 9c

KS4: EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN2: 9a, 9b, 9c

ICT:

KS3: 1a, 1b, 1c, 5b

KS4: 1a, 1b, 5c

Geography:

KS3: 3a

Citizenship:

KS3: 1f, 1h, 2a, 2c, 3a, 3c

KS4: 1c, 2c

PSHE:

KS3: 3k, 4e, 4f

KS4: 3d, 3k, 4a, 4b, 4, 4e, 4f

Science: Details TBC

Maths: Details TBC

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit. Personal research could be encouraged through integrated learning technology, e.g. fire and rescue web sites or by research through printed resources e.g. leaflets, journals. Visiting speakers to centres could also be arranged.

Fire Service Manuals:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

The web sites provided below are just a small selection of those available. Learners should be encouraged to research their own local Fire and Rescue Service.

Websites:

- www.fire.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk
- www.fireservice.co.uk/history/index.php
- www.merseyfire.gov.uk/pages/history/history.htm
- www.hantsfire.gov.uk/theservice/organisation/history.htm
- www.dorsetfire.co.uk/topic.asp?TopicID=89
- www.cheshirefire.co.uk/aboutus.asp?menuid=9
- www.twfire.co.uk/about/history

The web site given below provides a time line of significant events in the Fire and Rescue Service:

- www.fireservice.co.uk/history/today.php?day=9&month=1

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Application of number level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Researching timelines associated with the development of the Fire and Rescue Service Using timelines to calculate dates, periods of time etc 	<p>N2.1 Interpret information from a suitable source.</p> <p>N2.2 Use your information to carry out calculations to do with:</p> <ul style="list-style-type: none"> a amounts or sizes b scales or proportion c handling statistics d using formulae.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing how the Fire and Rescue Service has developed over time Presenting information to the group about the development of Fire and Rescue Service equipment Research the history of the Fire and Rescue Service 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Improving own learning level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning their assignment or presentation • Using their plan to ensure that they meet targets 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p>
<ul style="list-style-type: none"> • Review the effectiveness of their plan 	<p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Researching for their assessment. Difficulties may be encountered in accessing suitable information. • Discussing with their peer group how to overcome the problem and planning ways to solve it. • Review the problem to find out how well it has been resolved. 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Add ICT here.....

Unit 4: Hose, Lines, Equipment and Fittings used by the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 20

Unit abstract

This unit will enable learners to gain an insight into various hoses, lines, equipment and fittings in operational use within the Fire and Rescue Service.

Learners will develop their knowledge of the different types of hose fittings and associated equipment and be able to demonstrate an understanding of their uses within the Fire and Rescue Services.

In order to achieve this unit it is essential for learners to be able to observe and participate in the identification, assembly, use and disconnection of the appropriate equipment, both individually and as part of a team.

This will be achieved through participation in a variety of different activities, which will culminate in learners having the ability to demonstrate a broad range of skills, knowledge and understanding of operational uses of hose, fittings and associated equipment within the Fire and Rescue Service.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to identify a variety of different types of operational hoses and couplings
- 2 Know different hose and line associated equipment and its location on the appliance
- 3 Demonstrate a variety of methods of use of hose, lines and equipment and an awareness of the risk and safety control measures
- 4 Be able to identify and tie a variety of knots and lines and know their appropriate uses

Unit content

1 Be able to identify a variety of different operational hoses and couplings

Operational hose: hose types e.g. suction hose, hose reel, delivery hose

Types of couplings: e.g. male instantaneous; female instantaneous; hermaphrodite; screw thread; MacDonald

2 Know different hose and line associated equipment and its location on the appliance.

Equipment: standpipe; key and bar; hose beckett; strainer baskets; branches; collecting head; breechings; line; rope access equipment; fire extinguishers;

Extinguishing equipment: Firefighting equipment e.g. hose reels, hydrants, water based fire retardant foam; fire extinguishers; fire blanket; sprinklers

Fire extinguishers: fire extinguisher symbols/labels; contents of extinguishers; hose/nozzle; matching the correct extinguisher to the type of fire; safe and effective use of fire extinguisher

Appliance stowage: lockers; cab; roof

3 Be able to demonstrate a variety of methods of use of hose and associated equipment.

Risk and safety control measures: main risks and safety control measures required when working with delivery hose, hose reel, equipment and fittings; personal protective equipment (PPE) used when working with hose and associated equipment; safety features of a selection of branches; main causes of damage to hose and equipment; control measures used to prevent damage

Hose exercises: running out; under running and making up lengths of delivery hose; connecting hose and using a stand pipe on a hydrant; how to extending a length of hose reel; correct operation of a controlled branch; using a hose reel from a pumping appliance; connecting and removing a collecting head

Working with pressurised hose: holding and operating a selection of hand controlled branches; safety control measures required when working aloft with a jet; moving with a charged length of hose and operating a branch; make and respond to hose drill signals and orders

4 Be able to identify and use a variety of Fire and Rescue Service lines. Identify and use a number of knots used in Fire and Rescue Service procedures.

Knots: general principles of knots and their characteristics; tying knots; types of knot e.g. bowline, clove hitch, half hitch, sheet bend, round turn and two half hitches; use of knots

Lines: personal line; general purpose line; guides line; guy line

Uses of lines: hauling aloft; lowering by line; securing equipment; laying a guide line

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Identify three types of Fire and Rescue Service hose or associated equipment
P2	Describe a risk and appropriate safety control measure when working with pressurised hose
P3	Demonstrate as part of a team the technique of getting a hose to work from a pumping appliance
P4	Identify three types of Fire and Rescue Services lines and describe their appropriate use
P5	Tie three knots regularly used in the Fire and Rescue Services and identify the characteristics of a good knot

Essential guidance for tutors

Delivery

This unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate their skills, knowledge and understanding of hose, lines and associated equipment. The health and safety of all participants should be paramount.

Learners will need to be given an explanation and demonstration of the operation and main parts of hose, lines and associated equipment prior to involvement in any operational activity.

Learners will need to be able to identify a range of different types of hoses and their couplings. Where possible learners should be provided with the opportunity of working with actual equipment however illustrations may be used to reinforce learning. The learner will also need to know where the equipment may be found on the appliance. Working on an appliance would be most valuable however if this is not possible illustrations may be used. Simple games could be provided to reinforce learning e.g. illustrations of hoses to be mapped against their uses.

Health and safety is an essential element of the work of the firefighter, this should be reinforced when developing learning outcome 3. Risk assessments and possible control measures should be considered when working with hoses, hose reels and other related equipment.

Learners should be given the opportunity to participate in a range of hose exercises and must be given the appropriate underpinning knowledge and understanding prior to involvement in any operational activity. These activities must be supervised at all times and learners should not be put at risk.

Identifying and tying different types of knots should be done as a practical activity. Learners must be given sufficient time to practice to ensure that are fully able to meet the learning outcomes. The learner should also know and understand when to use different types of knots.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner should identify three types of Fire and Rescue Service hose or pieces of associated equipment. To achieve this criterion the learner could demonstrate their knowledge and understanding through an oral presentation, prepared and delivered to the group. Alternatively a written description could be provided. This can also be assessed through direct observation of a practical demonstration.

P2 An example should be provided of a risk and its associated control measure. To achieve this criterion the learner could demonstrate their knowledge and understanding through an oral presentation, prepared and delivered to the group. Alternatively a written description could be provided. This can also be assessed through direct observation of a practical demonstration.

P3 In order to achieve this criterion the learner should demonstrate getting a hose to work from a pumping appliance whilst being a member of a team. This could be assessed through direct observation of practical demonstration.

P4 In order to achieve this criterion the learner should identify three types of lines used within the Fire and Rescue Service and demonstrate their appropriate use. To achieve this criterion the learner could demonstrate their knowledge and understanding through an oral presentation, prepared and delivered to the group. Alternatively a written description could be provided. This can also be assessed through direct observation of a practical demonstration.

P5 In order to achieve this criterion the learner should tie three knots regularly used in the Fire and Rescue Service. The learner should identify the characteristics of a good knot. This may be assessed through direct observation of practical demonstration.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 2, 3, 5-12, 17, 18, 21, 22, 23 and 24 and may link to units 13, 14, 15, 16, 19 and 20 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Physics: Details TBC

Maths: Details TBC

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of their appliances and equipment will need to be available in particular hose, lines, equipment and fittings. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Manuals:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> discussing the importance of knots within the Fire and Rescue Service presenting information to a group on the risks and appropriate safety control measures taken when working with a pressurised hose researching information about different types of hoses 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> setting targets as a team member reviewing their progress as a member of the team or as a leader 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Identifying problems as a team 	PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.
<ul style="list-style-type: none"> Resolving problems identified by the team 	PS2.2 Plan and try out at least one way of solving the problem.
<ul style="list-style-type: none"> Reviewing the resolutions to the problem 	PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working as a team and planning tasks together 	WO2.1 Plan work with others.
<ul style="list-style-type: none"> Working as a team towards the goals they have set 	WO2.2 Work co-operatively towards achieving identified objectives.
<ul style="list-style-type: none"> Evaluating their role within the team 	WO2.3 Review your contribution and agree ways to improve work with others.

Unit 5: Pumping Appliances used by the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 20

Unit abstract

Learners will gain an insight into the Fire and Rescue Services various pumping appliances. The unit will allow the learners to develop a range of skills, knowledge and understanding of the different types of pumping appliances and of their various uses within Fire and Rescue Services.

The learner will develop knowledge and understanding of the basic principles of a pump and the operation and different methods of employing pumping appliances to achieve a variety of outcomes.

In order to achieve this unit it is essential for learners to be able to select, use and assemble the appropriate ancillary equipment correctly and ensure the health and safety considerations used by the Fire and Rescue Service when operating pumping appliances are applied appropriately.

This will be achieved through participation in a variety of different activities, which will culminate in learners having the ability to demonstrate a broad range of skills, knowledge and understanding of pumping appliances and the ability to operate pumping appliances in a variety of situations within the Fire and Rescue Service.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the basic principles and limitations of a pump
- 2 Understand different types of pumping appliances and how they operate
- 3 Understand the different types of incidents attended by pumping appliances

Unit content

1 Understand the basic principles and limitations of a pump

Basic principles: pumping; priming; external drive methods

Limitations: practical lift capacity; maximum outputs; sustainable external drive power

2 Understand different types of pumping appliances and how they operate

Pump types: high volume pumps; ultra lightweight pumps; light portable pumps; appliance pumps; specialist foam making pumps; stirrup pump

How pumping appliances operate: centrifugal pump; difference between high and low pressure; what impellers do; venturi principle

Using a pumping appliance: risks and associated control measures; water delivery exercises

3 Understand the different types of incidents attended by pumping appliances

Types of incident: fires e.g. building, vehicle, rubbish, waste ground, derelict buildings; floods; Road Traffic Collisions (RTC); chemical incidents

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Identify and describe the basic principles and limitations of a pump as used within the Fire and Rescue Service
P2	Describe the risks and control measures when working with pumping appliances
P3	Describe and demonstrate the ability to operate a pumping appliance
P4	Identify and describe the operational use of a fire service pumping appliance

Essential guidance for tutors

Delivery

This unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate teamwork and interpersonal skills. To achieve this, learners will need to be given the opportunity to participate in a range of teamwork/team-building activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to use a variety of Fire and Rescue Services pumps and will need to be given an explanation and demonstration of the operation and main parts of a variety of Fire and Rescue Service pumps prior to involvement in any operational activity. Particular consideration should be given to relating communication, teamwork, problem-solving and self-management skills within all activities throughout the unit.

A number of different approaches can be considered when developing the learners' understanding of pumping appliances. These approaches could be scenario based simulation with discussion, personal research or delivery based; both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. Learners must be given the appropriate underpinning knowledge and understanding prior to involvement in any practical activity. The health and safety of all participants must be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written, question and answer activities and scenario based simulation with discussion.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner could describe the basic principles and limitations of a Fire and Rescue Service pump. Answers should include detail on the internal workings of a Fire and Rescue pump and how a variety of Fire and Rescue pumps work and their limitations.

P2 Three examples should be provided of the different types of risks and the associated control measures to be considered when using Fire and Rescue Service pumps. To achieve this criterion the learner could demonstrate their knowledge and understanding through an oral presentation, prepared and delivered to the group. Alternatively a written description could be provided. This can also be assessed through direct observation of a practical demonstration.

P3 In order to achieve this criterion the learner should demonstrate their skills, knowledge and understanding of the operation of a pumping appliance. This could be assessed through direct observation of practical application, discussion or electronic testing.

P4 In order to achieve this criterion the learner should demonstrate their skills, knowledge and understanding of the uses of a pumping appliance. This could be assessed through direct observation of practical application, discussion, electronic testing alternatively a written description could be given.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 2, 3, 6, 7, 10-12, 17, 18, 21, 22 and 24 and may link to units 8 and 9 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Science: Details TBC - Physics Forces, hydraulics, efficiencies

Maths: Details TBC - Fire ground calculations; loss due to friction; head of water etc

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, pumping appliances and equipment will need to be available.

Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.fire-engine-photos.com
- en.wikipedia.org/wiki/The_Fire_Engines
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Discussing the use of a pump as part of the work of the Fire and Rescue Services • Presenting information on different types of pumps and their uses • Gathering information about different pumps. They may use text books, the internet, journals etc. 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Preparing for their assessment. They will need to access the internet to identify different types of pumps and their uses. • Preparing their assessment. They may use images to show the different types of pumps and their uses. 	<p>IT2.1 Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.</p> <p>IT2.3 Present combined information such as text with image, text with number, image with number.</p>

Improving own learning and performance level 2

When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. • Choosing which job roles to consider. • Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Identify when the Fire and Rescue Service use different types of pumps. • Discussing when the Fire and Rescue Service use different types of pumps. 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Researching as a group the different pumps used within the Fire and Rescue Service. 	<p>WO2.1 Plan work with others.</p>

Unit 6: Special Appliances used by the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Learners will gain an insight into the various special appliances and associated equipment used by the Fire and Rescue Service. This unit allows learners to develop skills, knowledge and understanding of the fleet of special appliances used within their local Fire and Rescue Service and an understanding of their importance at a variety of incidents.

This will be achieved through participation in a variety of different activities, which will culminate in learners having the ability to demonstrate a broad range of skills, knowledge and understanding of a range of special appliances and their role within the Fire and Rescue service.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to identify a number of different special appliances and their ancillary equipment
- 2 Understand what type of incidents the special appliances attend and their roles at those incidents

Unit content

1 Be able to identify a number of different special appliances and their ancillary equipment

Special appliances: Fire Rescue Units (FRU), Major Rescue Unit (MRU) Aerial Ladder Platforms (ALP), Command Support Unit (CSU), Urban Search and Rescue unit (USAR), Hazardous Materials unit (HMU), Major Salvage Unit (MSU), Hose Laying Unit, Breathing Apparatus Main Control Unit, FireSpy Robot, Foam Carrying Unit (FCU), Foam Making Unit (FMU), Incident Support Unit (IRU), Personnel / Refreshment Unit (PRU), All Terrain Vehicle (ATV); associated risks and safety measures

Specialist ancillary equipment: BA compressor, inner cordon equipment, lighting, generators, inflatable shelters, fuel, salvage equipment, environmental equipment, foam injectors, bulk foam supplies, heavy rescue equipment, trench rescue equipment, floating paths, vibraphone, 1st aid equipment, lifting gear, remote control JCB, all terrain vehicle, water heaters, personal safety harnesses, communications equipment, other associated equipment; associated risks and safety measures

2 Understand what type of incidents the special appliances attend & their roles at those incidents

Incidents: large road, rail or air traffic collisions; large building fires, biological and chemical incidents; terrorist attacks; high rise fires; oil refinery, chemical incidents; natural disasters e.g. flooding; land slips, earth quakes, collapsed buildings

Role of special appliances: pumping; mass decontamination; search and rescue, damage limitation, environmental protection, supporting fire crews, heavy cutting and lifting; Investigation; securing hazardous materials; associated risks and safety features

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Identify and describe the use of special appliances in Fire and Rescue Service
P2	Describe the main risks and safety features when working with special appliances
P3	Describe the incidents attended by a special appliance and its role there

Essential guidance for tutors

Delivery

This unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate teamwork and interpersonal skills. To achieve this, learners will need to be given the opportunity to participate in a range of teamwork/team-building activities.

Learners will need to be given an explanation and demonstration of the operation and main parts of a variety of special appliances prior to involvement in any operational activity.

Learners will need to be given the opportunity to develop a range of personal skills reflective of those operating within the Fire and Rescue Service. Particular consideration should be given to relating communication, teamwork, problem-solving and self-management skills within all activities throughout the unit.

A number of different approaches can be considered when developing the learners' understanding of special appliances. These approaches could be scenario based simulation with discussion, personal research or delivery based; both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities and must be given the appropriate underpinning knowledge and understanding prior to involvement in any practical activity. The health and safety of all participants must be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner should be assessed by discussion, written project, verbal presentation or electronic quiz. Learner should focus in detail on up to three different appliances.

P2 In order to achieve this criterion the learner could be assessed through scenario based simulation with discussion, or presentation. During the assessment the learner should adhere to risk assessments and should demonstrate safe working practices.

P3 In order to achieve this criterion the learner can demonstrate their knowledge and understanding relating to a specific special appliance about the types of incidents it attends and what its role is whilst at these incidents. This could be done by oral, visual or written presentation.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1-5, 7-12, 17, 18, 21, 22 and 24 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of their special appliances and equipment will need to be available. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.fire-engine-photos.com
- en.wikipedia.org/wiki/The_Fire_Engines
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> discussing in a group the purpose of different special appliances giving a talk on the skills needed to operate a special appliance researching information on special appliances researching work for their assessment 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. using their plan to help them achieve their target dates discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> identifying the risks involve when using special appliances planning how the risks may be minimised observing fire fighters using special appliances to find out if their solutions were realistic 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Unit 7: The operation and use of ladders in the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Ladders are essential pieces of equipment used within the Fire and Rescue Services for a variety of different purposes. This unit will introduce learners to a variety of those ladders and enable them to develop skills, knowledge and understanding to select and use an appropriate ladder for a given task. The learner will be introduced to a number of the different types of ladders and will learn about their construction, use and versatility.

The ladders used throughout this unit will allow the learners the opportunity to work as part of a team. This unit will enable learners to develop their team, leadership, communication and practical skills; all of which are essential for safe, effective ladder work within the Fire and Rescue Service.

The health, safety and welfare of learners are an essential consideration when working with ladders. Learners will find out how to use ladders safely and be able to identify the hazards and risks involved when working with different types of ladders.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the operation and use of a selection of Fire and Rescue Service ladders

- 2 Be able to demonstrate the appropriate use of Fire and Rescue Service ladders
- 3 Understand safe techniques for working on and from ladders

Unit content

1 Understand the operation and use of a selection of Fire and Rescue Services Ladders

Operational Ladders: types of ladder e.g. 13.5 metre, 9 metre, triple extension ladder; operational terminology e.g. head, heel, round, string, jack beam ;

Uses of different types of ladder: to gain access at height; other uses include triple extension ladder - improvised dams, improvised stretcher

2 Be able to demonstrate the appropriate use of Fire and Rescue Service ladders

Operating procedures: lifting and moving with ladders, siting and extending ladders; mounting, ascending, descending and dismounting ladders; housing and storing ladders.

3 Understand safe techniques for working on and from ladders

Standard safe operating techniques: working aloft; risks and safety control measures when operating a ladder; safe working practices when using ladders e.g. leg lock, three points of contact when mounting and dismounting from the head or heel of a ladder; safety words of command

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	identify different types of ladders and describe the use of each ladder
P2	identify and describe the terminology used when operating a Fire and Rescue Service ladder
P3	demonstrate the correct method of operating a Fire and Rescue Service ladder as part of a crew

Essential guidance for tutors

Delivery

Throughout this unit the health and safety of all participants must be paramount. The unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate aspects of working with Fire and Rescue Service Ladders.

It is recognised that not all learners will be able to demonstrate the use of all ladders used in the Fire and Rescue Service. The learners should have available ladders that are suitable for their use.

To achieve this, learners will need to be given the opportunity to participate in a range of activities based around the use of Fire and Rescue Service ladders. Learners will also need to be given an explanation and demonstration of the operation and main parts of a variety of ladders prior to involvement in any operational activity.

Learners will need to be given the opportunity to develop a range of team, leadership, communication and practical skills reflective of those operating within the Fire and Rescue Service. Particular consideration should be given to working as a member of a crew, problem-solving and self-management skills within all activities throughout the unit.

A number of different approaches can be considered when developing the learners' understanding of the ladders and their uses. These approaches could be scenario based simulation, personal research or delivery based both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. Learners must be given the appropriate underpinning knowledge and understanding prior to involvement in any practical activity.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion learners' should identify at least three different types of ladders that are used by the Fire and Rescue Service and provide a description of how each ladder may be used. This could be assessed through direct observation or through written or oral presentation.

P2 In order to achieve this criterion learners' should describe the meaning of at least four examples of terminology that is used when working with Fire and Rescue Service ladders. This could be through written or oral presentation. A checklist may be a useful tool for recording performance.

P3 In order to achieve the learner must be able to demonstrate how to safely operate a Fire and Rescue Service ladder. A checklist may be a useful tool for recording performance or a witness testimony may be provided.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1-6, 9-12, 17, 18, 21, 22 and 24 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Physics: Details TBC - moments around a fulcrum; deflection; tension under load

etc

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of Fire and Rescue Service ladders will need to be

available. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Manual:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.fire-engine-photos.com
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Discussing how a ladder can be operated safely • Describing the meaning of different terminology used when working with ladders • Researching information on different types of ladders 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Setting targets when preparing to work with ladders • Reviewing their progress as a member of the team or as a leader 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> identifying problems as a team e.g. how to operate the ladder Operating the ladder evaluating how the problem could be avoided in future 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> working as a member of the crew working as a crew member to achieve the goals they have set evaluating their role within the team 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 8: Breathing Apparatus Equipment and Procedures

NQF Level 2: BTEC Short Course

Guided learning hours: 20

Unit abstract

Breathing apparatus is an essential piece of equipment for those working within the Fire and Rescue Service. Personnel must be able to identify different types of breathing apparatus

equipment and know when to use it and how to use it safely. Teamwork and effective communication is critical to ensure the safety of all those using breathing apparatus and ancillary equipment.

This unit focuses on different types of breathing apparatus, how it is used and when it is used. Learners will develop their understanding of breathing apparatus procedures and the techniques that must be implemented when using such equipment. Learners will experience a variety of scenarios where breathing apparatus equipment may be used and they will understand the importance of ensuring the Health and Safety of themselves and their crew at all times. A variety of search and rescue techniques will be explored culminating in learners having the ability to use their skills in a range of different circumstances.

Teamwork, effective communication and the development of personal skills will be an important element of this unit.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to identify breathing apparatus and ancillary equipment
- 2 Understand and demonstrate breathing apparatus procedures
- 3 Understand and demonstrate breathing apparatus search and rescue techniques

Unit content

1 Be able to identify breathing apparatus and ancillary equipment

Breathing Apparatus & ancillary equipment: risks and safety features involved when working with breathing apparatus; breathing apparatus set cylinder, entry control and communications boards, guidelines, torch, personal line, automatic distress signal unit etc

2 Understand & demonstrate breathing apparatus search and rescue procedures

Breathing apparatus search procedures: identification and selection of breathing apparatus set; acceptance test; fitting and adjustment of breathing apparatus set; wearing a breathing apparatus set; removing a breathing apparatus set; personal line procedures; guideline procedures; entry control officer procedures

3 Understand & demonstrate breathing apparatus search and rescue technique

Standard operating techniques: search and rescue techniques when working within a compartment and in open spaces; working off a guideline; main risks and safety control measures required when working in breathing apparatus; left or right hand lay procedures; working in different sized teams

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Identify and describe the use of breathing apparatus in Fire and Rescue Service
P2	Describe the main risks and safety features when working with breathing apparatus
P3	Identify and describe the operation and use of breathing apparatus and ancillary equipment
P4	Demonstrate the skills needed to be part of a search and rescue team
P5	Identify the main risks and control procedures when working in a search and rescue team

Essential guidance for tutors

Delivery

Health and safety and team work are critical when working with breathing apparatus and ancillary equipment. Throughout the teaching of this unit, learners should become increasingly aware of the importance of health and safety issues, the need for following procedures and working together as a team. This could be achieved through group practical activities using different breathing apparatus.

Learners need to be able to name and describe different types of breathing apparatus. Ideally this should be a 'hands on' activity however research could be undertaken on the internet or illustrations could be provided to reinforce learning.

Learners should also be able to identify the risks of working with breathing apparatus and also describe the safety features on different pieces of equipment.

Helping the learner to understand the importance of following operational procedures could be achieved through the use of practical activities or role play. Video clips could also be used of real life situations which would illustrate the need for procedures to be followed and the potential consequences if they are not followed.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. Learners must be given the appropriate underpinning knowledge and understanding prior to involvement in any practical activity. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner should be able to identify breathing apparatus and provide a description of its use by the fire service should be provided. This could be assessed by an observed scenario based simulation with discussion or presentation.

P2 In order to achieve this criterion, the learner should identify the main risks and safety features. This assessment could be through an observed scenario based simulation with discussion or presentation utilising a breathing apparatus set.

P3 The assessment of this criterion should include a practical assessment using the actual equipment. Through discussion the learner should demonstrate an understanding of how to operate breathing apparatus and ancillary equipment.

P4 In order to achieve this criterion the learner needs to be able to demonstrate the skills needed to be part of a search and rescue team. This criterion can be assessed through a scenario based simulation with discussion or a verbal presentation.

P5 In order to achieve this criterion, the learner should demonstrate knowledge of the main risks and control procedures. This assessment could be through a presentation using relevant breathing apparatus and associated equipment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1-7, 9-12, 17, 21, 22, 23 and may link to unit 18 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3: 3c

KS4:

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, ideally this should be a 'hands on' activity however research could be undertaken on the internet or illustrations could be provided to reinforce learning. If breathing apparatus equipment is used access to sufficient outdoor facilities will be essential. Personnel must be qualified to the relevant level to lead practical sessions.

Manual:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars e.g. FSC1/89 - Breathing Apparatus and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing in a group the different types of breathing apparatus used by the Fire and Rescue Service Give a talk on how breathing apparatus is used Researching information about different types of breathing apparatus Preparing assessment work 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Gathering information about the success rates of breathing apparatus Design a checklist for managing the use of breathing apparatus used during a fire Present statistical data on the success rates of incidents where breathing apparatus may be used 	<p>IT2.1 Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.</p> <p>IT2.2 Enter and develop the information to suit the task and derive new information.</p> <p>IT2.3 Present combined information such as text with image, text with number, image with number.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. • Choosing which areas to include in their assessment • Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Add working with numbers

Unit 9: Casualty Extrication by the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

This unit will enable learners to gain an insight into the casualty extrication procedures used by the Fire and Rescue Service.

The unit aims to develop learners' skills, knowledge and understanding relating to scene management, extrication methods, equipment used and the health and safety considerations used by Fire and Rescue Services at these types of incidents.

This will be achieved through participation in a variety of different activities, which will culminate in learners having the ability to demonstrate their skills, knowledge and understanding across a range of scenarios and using a range of equipment.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the operational procedures applied by the Fire and Rescue Service when

attending a rescue type incident

- 2 Know how to assess a casualty at an incident
- 3 Understand the casualty extraction methods, techniques and equipment that may be used at a rescue type incident

Unit content

1 Understand the operational procedures applied by the Fire and Rescue Service when attending a rescue type incident

Operational procedures;

Safety precaution: scene management; risk assessment and appropriate control measures i.e. safety of personnel and equipment through the correct positioning of fire appliances; signboards and marker cones; protective clothing i.e. high visibility jacket, eye wear, gloves etc

Incident assessment: prioritising activities; dealing with fires where persons are trapped; dealing with other fires; taking note of special risk i.e. fuel sources/chemical hazards; organising and directing personnel; assessing which special equipment might be needed; assessing if casualty should be moved; liaison with police and other emergency services.

2 Know how to assess a casualty at an incident

Casualty assessment; Initial assessment e.g. ensure open airway, check breathing, check for circulation/ blood loss etc

Casualty stabilisation: preliminaries i.e. restoration of breathing; serious bleeding control; broken bones; protecting the casualty i.e. heat, vibration, sound; moving the casualty, preparation i.e. stretcher; splints, dressings; lifting i.e. to the standing position, to the lifting position, to the stretcher; use of blankets to lift; special circumstances i.e. snatch rescue; casualty care

3 Understand the casualty extrication methods, techniques and equipment that may be used at a rescue type incident

Extraction methods: evacuation i.e. main passenger doors, escape slides, emergency stairs; forced entry with little damage i.e. obvious points of entry such as doors; forced entry with considerable damage i.e. removal of door, roof, breaking through different materials

Fire and Rescue Service equipment and other equipment: special appliances; ladders; lowering lines; guy lines; rapid intervention set; step blocks; blocks and wedges; break glass tools; glass cutter; foam; tape; dust masks, blankets; slings; stretchers, seats, wheelchairs

Extrication techniques: e.g. vehicle stabilisation; glass management; space creation; dash board roll; cutting e.g. removing roof/door/safety straps; air bag stabilisation; stretchers carried above head level due to seat restrictions e.g. planes

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Explain the principles of incident assessment and scene management.
P2	demonstrate a casualty assessment and a relevant casualty extrication method using appropriate techniques and at least one piece of equipment used by the Fire and Rescue Service
P3	demonstrate how to maintain the Health and Safety of a casualty during extrication at a Fire and Rescue Service incident

Essential guidance for tutors

Delivery

This unit introduces the learner to different extrication techniques used by the Fire and Rescue Services. Practical demonstrations of these techniques would be an ideal learning tool however this may not always be possible. Alternative methods of delivery could include descriptions provided by guest speakers (uniformed personnel) and/ or the use of video clips. Quizzes, worksheets or role play may be used to support learning in this area.

Learners will need to be given an explanation and demonstration of the different casualty extrication techniques and associated equipment prior to involvement in any operational activity.

Safety of all personnel working at any incident is crucial. Learners could be encouraged to discuss the potential risks and any control measures that may be put in place to ensure safety at the incident. Illustrations of incidents or video clips can be used to enable learners to identify the risks. They should then recommend or demonstrate appropriate control measures that could be taken to ensure safety.

To achieve this, learners will need to be given the opportunity to participate in a range of teamwork/team-building activities. Learners will also need to be given appropriate understanding and underpinning knowledge to help them identify and develop these skills. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 The learner should provide two examples of incident assessments and scene management applied by the Fire and Rescue Service when attending an operational incident. This could be assessed through direct observation of practical demonstration or verbal, visual or written presentation.

Three examples should be provided of the different types of risks and their associated control measures. This could be through verbal, visual, written presentation or demonstration.

P2 The learner should demonstrate assessment of a casualty and provide an example of a relevant casualty extrication method using at least one piece of equipment used by Fire and Rescue Services. To achieve this criterion the learner could demonstrate their knowledge and understanding through an oral presentation, prepared and delivered to the group. Alternatively a written description could be provided. This can also be assessed through direct observation of practical demonstration.

P3 The learner should provide one example of casualty care stabilisation and Health and Safety consideration used by the Fire and Rescue Service during an extrication. To achieve this criterion the learner could provide an oral description of knowledge and understanding followed by practical application of skills using either a dummy or role play.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with Units 1-8, 10-12,16-18 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety
- This Unit links to the Welsh Assembly Government National Curriculum
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of their appliances and equipment will need to be

available. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk (key stage 4 education pack)
- www.staywise.co.uk
- www.communities.gov.uk
- www.ROSPA.co.uk
- www.dft.gov.uk/think/teacher/
- www.thinkroadsafety.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> discussing the dangers of drink driving and the effectiveness of national campaigns presenting a talk to a group on the importance of road safety researching information on road safety and national campaigns 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Setting targets as a team member Reviewing their progress as a member of the team or as a leader 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> identifying problems as a team e.g. improving road safety in the community trying to identify effective ways of reducing road safety evaluating the resolution to the problem 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> working as a team and planning tasks together working as a team towards the goals they have set evaluating their role within the team 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 10: Resource Management within the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Fire and Rescue Fire Services rely on the effective management of the vast number of resources in order to support its delivery of services to the community.

This unit will provide an insight into the resources used by the Fire and Rescue Service and how the use of those resources are efficiently planned and allocated in order to deliver an effective service to the public. In addition to learning about Fire and Rescue Services

resources and the management of those learners will apply the same principles to the effectively manage of their own resources including personal money, equipment etc

They will achieve this through participation in a variety of different activities which will culminate in learners having the ability to demonstrate their skills and knowledge and understanding of resource management.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the importance of resource management within the Fire and Rescue Service
- 2 Understand how resources are managed within the Fire and Rescue Service
- 3 Know how to manage personal resources

Unit content

1 Understand the importance of resource management within the Fire and Rescue Service

Resources: The meaning of the word 'resources'; types of resources available within the Fire and Rescue Service - financial, human, Information and Communications Technology (ICT) and physical e.g. vehicles, equipment and property; importance of resource management eg limited budget, appropriate use of staff, ensuring quality and efficiency

Resource Management: reasons for managing resources - meeting present and future needs, managing change and development

2 Understand how resources are managed within the Fire and Rescue Service

Financial: funding sources e.g. public money, grants, and charity events; budgets; petty cash

Human: personnel e.g. fire service staff; managing human resources including ensuring operational coverage; shift systems; individual needs, team needs, task needs, equality and diversity considerations, training and development

Physical resources: vehicles; reasons for placement of different appliances and support vehicles; planning for vehicle maintenance including using reserve appliances; equipment - provision of technical equipment, programming repair and maintenance of operational equipment; equipment testing procedures; property-repair and maintenance of premises

Information and communications technology (ICT): ICT used by the Fire and Rescue Service e.g. telephones, computers, radios, pagers, mobile phones, electronic mail etc for staff; use of ICT

3 Know how to manage personal resources

Financial skills: managing personal money; review personal spending and saving patterns; different types of bank accounts

Managing multiple resources: resources for an event e.g. people, equipment, venue, budget, basic accounting

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	explain the importance of effective resource management within the Fire and Rescue Service
P2	identify and describe the effective management of 2 different types of Fire and Rescue Service resources and one personal resource
P3	identify and manage a resource for a planned event

Essential guidance for tutors

Delivery

A wide range of resources are used within the Fire and Rescue Service. This unit introduces the learner to how Fire and Rescue Service resources are managed. A detailed knowledge is not expected. Initially the learner will understand the meaning of the term 'resource'. This could then be related to the Fire and Rescue Service. It is likely that the learner will already have a good understanding of different resources if they have achieved other specialist units e.g. vehicles, personnel, property. The learner will also find out the importance of managing resources effectively. Role-play situations could be used to help explain this concept e.g. the learners could be asked to organise the shifts for the coming week.

Ideally the learner will have the opportunity to observe how resources are managed first hand. If this is not possible, scenario based simulations could be provided which would act as stimuli for discussion e.g. the scenario based simulation could be based on an actual fire station and descriptions could be provided on how different resources are managed.

In the final learning outcome, the learner has the opportunity to manage their own personal resources. Research could be undertaken on different types of bank accounts that are available. Comparisons could be made to find out the most effective account. Facilitators should be aware that some learners may not have money of their own and any tasks given should take this into account.

To help the learner understand how to effectively manage resources, they should undertake a project, as part of a group or manage a resource during a planned event. If the learner is working as a member of a group planning a project then the purpose of the project should be identified e.g. selling home made produce at their centre in aid of charity. This would involve identifying individual tasks and allocating personnel, costing the project to ensure they make a profit and not a loss, working as a team, selecting a suitable venue, gaining permission etc. A review could then be undertaken when the project has been completed. If the learner is given the responsibility to manage a resource during a planned event then they should be able to identify their role and evaluate their strengths and weaknesses at the end of the event.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation. Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion, the learner should explain the importance of resource management. This could be by taking part in a scenario based simulation with discussion. If this method is used, the individual learner's contribution must be evidenced.

P2 The learner must select two different types of Fire Service resources and one personal resource. The learner should research and explain how these are effectively managed and provide evidence of how the personal resource is effectively managed.

P3 The learner should demonstrate an ability to manage resources by taking responsibility for a resource during an event. This could be for example keeping the accounts, organising the rota of personnel, purchasing food and other resources for the event, advertising the event or planning the running order for the event. For assessment purposes, a checklist could be used to show how successful the learner was at managing the resource.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1 to 9, 11, 12, 15, 17, 20 and 24 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3: 1c, 3a

PSHE:

KS3: 1a, 1g

KS4: 1a, 1e

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk

- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> discussing their role in managing a resource in a planned event 	C2.1a Take part in a group discussion
<ul style="list-style-type: none"> presenting information to the group on how they managed their resource 	C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> researching how the Fire and Rescue Service manages resources 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> set targets for managing their own money eg saving a set amount of money a week or month from their pocket money or salary 	LP2.1 Help set targets with an appropriate person and plan how these will be met.
<ul style="list-style-type: none"> discuss their success with their personal tutor and if appropriate show evidence of their success 	LP2.3 Review progress with an appropriate person and provide evidence of achievements.

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Identifying problems as a team 	PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.
<ul style="list-style-type: none"> Resolving problems identified by the team 	PS2.2 Plan and try out at least one way of solving the problem.
<ul style="list-style-type: none"> Reviewing the resolutions to the problem 	PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working as a team and planning tasks together 	WO2.1 Plan work with others.
<ul style="list-style-type: none"> Working as a team towards the goals they have set 	WO2.2 Work co-operatively towards achieving identified objectives.
<ul style="list-style-type: none"> Evaluating their role within the team 	WO2.3 Review your contribution and agree ways to improve work with others.

Unit 11: Team and Leadership Skills used in the Emergency Services

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Teamwork and leadership skills are vital for people working within all the emergency services. The response to any emergency requires a coordinated team response, with a designated person taking the lead. This is particularly important during a multi-agency response to an

incident where teamwork between the various emergency services ensures an incident is dealt with quickly and safely.

All teams should consist of a team leader and team members. The team leader will decide on action and direct team members to carry out those actions to achieve specified objectives. All team players require specific skills, knowledge and understanding in order to operate effectively.

This unit allows learners to develop a good knowledge of the role of teamwork and leadership skills within the emergency services. Learners will gain an understanding of the different styles of leadership and the benefits of teamwork. This will be achieved by giving the learners opportunities to work in a team in different situations including allowing the learner to lead a team in a task. This will culminate in learners demonstrating knowledge of their own leadership style and having improved teamwork skills.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the need for teamwork within the emergency services
- 2 Understand the role of leadership within the emergency services
- 3 Demonstrate ability to make positive contributions in team activities

Unit content

1 Understand the role of teamwork within the emergency services

Teamwork: The meaning of team and teamwork; qualities of a good team; team dynamics; types of emergency service teams e.g. Fire and Rescue Service Urban Search and Rescue, Breathing Apparatus crews, station watches, fire investigation, and Fire and Rescue Service control and ambulance crew, police dogs and handlers, police traffic section, drugs team, air ambulance, British Transport Police; how teams and team members work together to achieve shared objectives

2 Understand the role of leadership within the emergency services

Leadership: the meaning of leadership; qualities of a good leader; the link between role and leadership within the emergency services; necessity for different leadership styles for different situations e.g. leadership at operational incidents, leadership in an office environment, personal leadership

Being a leader: lead a group in a task; direct individual and groups during a task; being open to feedback to improve personal leadership skills; carry out a task with no specified leader in order to demonstrate the benefits of leadership.

3 Demonstrate ability to make positive contributions in team activities

Being a member of a team: team building activities, selecting people for teams and team positions, recognising the roles of other team members, participating in team activities to complete a variety of tasks; communicate effectively with team members; providing and receiving feedback following participation in an activity and evaluate team and individual performance upon completion of task; apply learning to improve individual and team performance following participation in team activities

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	describe the role of one team within the Fire and Rescue Service and one team from another emergency service
P2	demonstrate the ability to complete a task whilst working within a team
P3	lead a team or an individual to complete a task

Essential guidance for tutors

Delivery

This unit should be practical and discussion based working with other emergency service colleagues where appropriate, with consideration of suitable and sufficient resources for risk assessed activities. To complete this unit, learners will need to be given the opportunity to meet and work with representatives of the Fire and Rescue Service and other services using during relevant activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop teamwork and leadership skills.

Scenario based simulations are useful resources for helping the learner develop their teamwork and leadership skills. Role play activities could help the learners' understand the importance of effective communication strategies in working together in a team e.g. the learners could be asked to follow incomplete instructions. The learners could discuss the impact that this can have on the outcome. Alternatively two groups could be asked to work on the same task but one team would have a designated leader and the other would not.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answer activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructive feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner must describe the role of two teams one within the Fire and Rescue Service and the other from another emergency service. The description may include the size of the team, skills required, the main purpose of the team etc. Assessment can be through a written project, verbal presentation, discussion etc.

P2 This criterion can be assessed through a scenario based simulation with discussion. The candidate should demonstrate the ability to work as part of a team to complete the task. The task could be problem solving or an operational activity where teamwork is required. The learner may demonstrate this criterion in other units so it may be possible to demonstrate learning through a witness statement from a tutor, work placement supervisor, firefighter etc.

P3 This criterion could be assessed through a scenario based simulation with discussion. The candidate should demonstrate the ability to lead a team to complete a task. The task could be problem solving or an operational activity where teamwork is required.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with all other units of this BTEC qualification.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3: 1c, 3a

PSHE:

KS3: 3k

KS4: 3K

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient Fire and Rescue Service resources should be available to enable learners to achieve this unit.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk
- Emergency services - www.homeoffice.gov.uk/new_indexs/emerge_serv.htm
- London Ambulance Service - www.lond-amb.sthames.nhs.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Discussing projects or team roles as a group 	C2.1a Take part in a group discussion
<ul style="list-style-type: none"> • Presenting information as a leader to their team 	C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> • Researching the role of different teams within the Fire and Rescue Service 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Setting targets as a team member 	LP2.1 Help set targets with an appropriate person and plan how these will be met.
<ul style="list-style-type: none"> • Reviewing their progress as a member of the team or as a leader 	LP2.3 Review progress with an appropriate person and provide evidence of achievements.

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Identifying problems as a team 	PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.
<ul style="list-style-type: none"> • Resolving problems identified by the team 	PS2.2 Plan and try out at least one way of solving the problem.
<ul style="list-style-type: none"> • Reviewing the resolutions to the problem 	PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working as a team and planning tasks together Working as a team towards the goals they have set Evaluating their role within the team 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 12: Effective Communication in the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

This unit will allow learners to understand how the skill of communication is essential to succeed in a range of activities within the Fire and Rescue Service. They will also learn of the importance that communication plays in education, training and in everyday life.

Learners will develop a good understanding of effective communication and how to adapt communication styles to suit different purposes and different audiences. They will also learn how effective communication plays a vital role in the delivery of all Fire and Rescue Services and the range of communication techniques and equipment Fire and Rescue Services use to support this.

This will be achieved through participation in a variety of different activities; which at the completion of this unit, will culminate in learners having demonstrated a range of communication skills, knowledge and understanding used within the Fire and Rescue Service.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the importance of communication
- 2 Know how to adapt communication styles to suit different purposes
- 3 Be able to demonstrate a range of communication methods, techniques and equipment used within the Fire and Rescue Service

Unit content

1 Understand the importance of communication

Communication: The meaning of the word communication; importance of effective communication e.g. personal development, relationships with others, academic and professional success e.g. difficulties encountered with poor communication

Why we communicate: reasons for communicating; who we communicate with; benefits of effective communication; communication difficulties e.g. language barrier; misunderstanding intentions; misuse of communication tools e.g. causing offence to others either intentionally or unintentionally; bullying and harassment; verbal abuse; sexual harassment; hoax calls and ways to prevent and recognise communication difficulties

What can be achieved through communication: conveying messages; feelings; exchanges of information

2 Know how to adapt communication styles to suit different purposes

Ways to communicate: verbal; non-verbal e.g. body language, expression, expressive behaviour and hand signals; written word; spoken word; audio/visual media; electronic means

Communicating with different audiences: one to one; group; peer/non-peer; influences; personalities; politics; types of information transmission; language used

Effective communication: appropriate timing; regular communication; simplicity; communicate clearly; consider relevance; constructive use to improve individual and team productivity and performance; feedback e.g. knowledge/ability of receiver, clarifying, interpretive, judgemental, personal reaction; teamwork; confirmation of understanding

3 Be able to demonstrate a range of communication methods, techniques and equipment used within the Fire and Rescue Service

Methods and techniques: verbal and non-verbal e.g. phonetic alphabet, body language, expression, expressive behaviour and hand signals; written word; spoken word; audio/visual media; electronic means

Equipment: personal e.g. pens and paper, computer, telephone line, mobile and fixed, pager, role insignia, torch; organisational e.g. mobilising, emergency calls, teleprinters, visual and audible warning devices, VHF radio, maps, premises information folders

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criterion for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Explain the importance of communication within the Fire and Rescue Service
P2	Identify 5 different methods of communication used within the Fire and Rescue Service, explain where they would be used and demonstrate 2 examples using appropriate equipment.
P3	Demonstrate different communication methods, techniques and equipment whilst working with others

Essential guidance for tutors

Delivery

This unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate teamwork and interpersonal skills. To achieve this, learners will need to be given the opportunity to participate in a range of teamwork/team-building activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to develop a range of personal skills reflective of those operating within the Fire and Rescue Service. Particular consideration should be given to relating communication, teamwork, problem-solving and self-management skills within all activities throughout the unit.

A number of different approaches can be considered when developing the learners' understanding of effective communication. These approaches could be scenario based simulation, personal research or delivery based both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

Assessment guidance note

P1 In order to achieve this criterion the learner should participate in a scenario based simulation with discussion which highlights the importance of communication. This should be followed by a debrief to discuss how the exercise went and how this translates to the emergency services.

P2 In order to achieve this criterion the learner should identify 5 types of communication used in the Fire and Rescue Service. Learners should choose three of these to research in greater depth; this can be through discussion with fire service personnel or through internet

and library research. The findings should be assessed through, presentation, computerised aided learning systems e.g. Educlick, written project or discussion.

P3 This criterion could be assessed throughout the delivery of this unit. The learner must be able to show that they have good communication skills and can use a variety of methods, techniques and equipment to communicate. The learner should be assessed during a range of activities, giving them chance to use a variety of different communication styles.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with all other units of this BTEC qualification.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3: 1c, 3a

PSHE:

KS3: 3k

KS4: 3K

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient Fire and Rescue Service resources should be available to enable learners to achieve this unit. Access to computerised aided learning systems would be beneficial.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Computerised Aided Learning Systems:

- EduClick - www.educlick.com
- Qwizdom - www.qwizdom.com

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing in a group the different methods of communication used within the Fire and Rescue Service Give a talk on communication techniques used within the Fire and Rescue Service Researching any aspect of work related to this unit or across the qualification Preparing assessment work 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Gathering information about different communication techniques 	<p>IT2.1 Search for and select information to meet your needs.</p> <p>Use different information sources for each task and multiple search criteria in at least one case.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. • Choosing which areas to include in their assessment work. • Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Using communication techniques and encountering difficulties e.g. signal failure • Trying to solve the difficulty of poor communication • Review the solution to evaluate the effectiveness of it. 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Add W021/W023

Unit 13: Citizenship and Personal Responsibility within the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

The Fire and Rescue Services serve a diverse community. This unit will give learners the opportunity to discover more about the community their local Fire and Rescue Services serve. Learners will have the opportunity to meet different representative groups within their community and find out how they influence the community. As citizens the learners will identify their place within their local community. They will consider what their responsibilities are as citizens.

This unit allows learners to develop a good knowledge and understanding of the community where they live. This will be achieved by giving the learners opportunities to meet people from different sections of the local community and by considering how they can be a good citizen. This will culminate in learners demonstrating a broad range of skills, knowledge and understanding about being a good citizen and how their local community is structured.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand an individual's responsibility within the local community
- 2 Understand the structure of the local community

Unit content

1 Understand an individual's responsibility within the community

Being a citizen: definition of what a community is; opportunities locally for young people; making choices that affect the community

Responsibilities: making positive contributions to the local community e.g. charity work, community service, uniformed organisations, youth groups, clubs and societies; influencing other young people

2 Understand the structure of the local community

Formal structure: local MPs; local council; local area partnerships; elections; how these people influence the local area; how the local community fits within the national structure e.g. country, county, borough, ward

Informal structure: ethnic groups; religious groups; community leaders; religious leaders; youth groups; group culture among young people; meet representatives from different parts of the community; negative and positive influences on the local community

Perception of local community: how young people are seen locally; changing perceptions about young people; how young people see others within their community; changing the perceptions of young people about other people e.g. the elderly, the police etc.

Activities for young people: activities available locally for young people; use of taster sessions; ways young people can influence what happens locally e.g. youth council, youth forum, youth consultations

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Describe how a young person can make a positive contribution to the local community
P2	Describe the role of one group that has a positive influence within the local community
P3	Review one activity that is available within the local community that is new to the learner

Essential guidance for tutors

Delivery

This unit should be practical and discussion based working with employees of the Fire and Rescue Service and representatives from the local community, with consideration of suitable and sufficient resources for risk assessed activities. To complete this unit, learners will need to be given the opportunity to meet and work with representatives of the Fire and Rescue Service and representatives of the local community using communication skills and relevant activities. Learners will also need to be given opportunity to identify ways they can make a positive difference as a citizen.

Learners will be given opportunity to meet people who work in variety of roles within the local community. They will be able to ask the people they meet questions to enable them to understand fully the person's role within the community. A number of different approaches can be considered while developing the learners understanding of the structure of the local community and how they fit into it. These could include discussions, practical sessions, training and observations, both inside and outside their immediate learning environment. The methods used should reflect the learning strategy and the development needs of the learner.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner should show they have an understanding of how young people can make a positive contribution to the local community. The use of time, money and skills could be included in their assessment. This outcome could be assessed by presentation, discussion or by the young person actually contributing something in a positive way to the local community.

P2 This criterion could be assessed through discussion or presentation. The learner should demonstrate an understanding of the role of one group within the local community.

P3 Learners could try out an activity available to them within the local community. This criterion could be assessed by observation of the learner trying out the new activity and a discussion afterwards or by a verbal or written presentation.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 2, 3, 11,12,14,15 and 17 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 1a, 1b, 1g, 1i, 2b, 2c, 3b, 3c

KS4 - 1a, 1b, 1f, 1i, 2b, 2c, 3b, 3c

PSHE:

KS3: 1b, 2g, 3a, 3b, 3d, 3h, 3i, 3j, 3k, 4c, 4f

KS4: 1d, 3a, 3b, 3c, 3d, 4c, 4f

Essential Resources

Sufficient resources should be available to enable learners to achieve this unit. Identification of visiting speakers from community groups would be beneficial to learners.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing in a group the meaning of citizenship 	C2.1a Take part in a group discussion
<ul style="list-style-type: none"> Give a talk on how they can be an effective citizen within their community 	C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> Researching the meaning of citizenship 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.
<ul style="list-style-type: none"> Preparing a leaflet to show how young people can make a positive contribution to their community 	C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. 	LP2.1 Help set targets with an appropriate person and plan how these will be met.
<ul style="list-style-type: none"> Choosing which areas to include in their assessment and meeting targets 	LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:
<ul style="list-style-type: none"> Discussing their progress with their personal tutor. 	LP2.3 Review progress with an appropriate person and provide evidence of achievements.

Unit 14: Community Safety

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

One of the primary objectives of the Fire and Rescue Services is to make people safer; from fire in the home, on the roads and also within the community. This includes reducing loss of life, injury and damage to property due to fire or accidents.

This unit will enable learners to develop their skills, knowledge and understanding of community safety initiatives designed to make people safer in their home and the wider community. They will participate in initiatives aimed at fire prevention, detection and escape from fire as well as those aimed at good road and personal safety.

Learners will gain an insight into how the Fire and Rescue Service implement National and local campaigns and activities and will participate in educational initiatives and other local safety activities in order to make their local community safer.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the main principles employed by Fire and Rescue Service to make the community safer
- 2 Understand what to do in the event of a fire
- 3 Understand how the Fire and Rescue Service promote safety in the local community and nationally

Unit content

1 Understand the main principles employed by Fire and Rescue Service to make the community safer

Services: Home safety visits, installation of smoke alarms and other specialist fire safety equipment e.g. fire retardant bedding, deep fat fryers

Education: Fire safety: different types of smoke detectors, installation, maintenance, positioning; precautionary measures; fire safety equipment; encouraging the removal of rubbish and abandoned vehicles Road safety: speeding, drinking whilst under the influence of drugs or alcohol, reckless driving Personal Safety: e.g. Smoking cessation, HeartStart and slips, trips and falls

Engagement: Youth engagement programmes and local Fire and Rescue Service specialist teams

2 Understand what to do in the event of a fire

Initial responses: raise an alarm e.g. shout for help, activate fire; react to smoke alarm

Fire escape plan: steps to preparing a plan at home; what to do if: there is a fire in the home, the escape route is blocked, if clothes catch fire; evacuation procedures for public buildings

3 Understand how the Fire and Rescue Service promote safety in the local community and nationally

Community campaigns: purpose; how they meet local needs; types of campaigns e.g. public event attendance, demonstration units; advertising and media

National campaigns: purpose; role of Government in creating, publicising and funding of national campaigns; types of campaigns e.g. safety education programme, advertising and media

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	carry out a fire safety check at home or in a simulated home setting
P2	design a fire escape plan for their own home
P3	describe a local or national safety campaign

Essential guidance for tutors

Delivery

The main purpose of this unit is to raise the learner's awareness to the potential risk of fire in their own home and in the community and how to prevent it happening. It is therefore important that the learner relates to their own home or a simulated home setting and their own community throughout the delivery of this unit.

There are a wealth of materials available to support this unit from <http://www.firekills.gov.uk/leaflets/index.htm> including leaflets on fire safety in the home. The internet is also an invaluable source of information for local and national campaigns.

This unit should be practical and discussion based, with consideration of suitable and sufficient resources for risk assessed activities. Learners could be given the opportunity to fit and check smoke detectors, and to create a fire escape plan preferably in a home/simulated home setting. Provision could also be made for role play exercises on moving in smoke and contacting the emergency services in the event of fire. It is also important to stress the consequences of hoax calls to the Fire and Rescue Services.

Learners will need to be given the opportunity to develop a range of personal skills to help them understand the function of community fire safety and the need to communicate this information to members of the public.

Different approaches can be considered when developing the learners' understanding of community fire safety. These approaches could be discussion based, training orientated or practical sessions, both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

- P1 Learners could design their own checklist of potential fire hazards in the home. The risks could then be identified. Alternatively the learner could be provided with an illustration of a room(s) within a house and asked to identify potential fire hazards.
- P2 In order to achieve this criterion the learner should design a fire escape plan for their own home. This should include reference to suitable exit routes and alternatives, safe rooms, accessing keys and involving everyone in the discussion
- P3 In order to achieve this criterion the learner needs to be able to demonstrate that they know and understand the purpose of a local or national safety campaign. They will need to name the campaign and be able to describe the purpose.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1 to 4, 10 to 13, 15 and 16 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety and underpins Level 3 NVQ in Emergency Fire Service - Operations in the Community.
- This unit links to the National Curriculum:

English:

KS3: EN1 3a, 3b, 9a

KSC 4: EN1 3a, 3b, 9a

Citizenship:

KS3: 1a, 1c, 1g, 2a, 2b, 2c, 3a

KS4: 1a, 1h, 2a, 2c, 3a

PSHE:

KS3: 1a, 1b, 1c, 1e, 2d, 3d, 3h, 3i, 3k, 4c, 4e, 4f, 4g

KS4: 1a, 1b, 1c, 2h, 3d, 3k, 4e

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit. Relevant Community Safety literature and classroom material should be provided.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Website:

- www.fire.gov.uk
- www.community-fire-safety.org.uk
- www.firesafetytoolbox.org.uk

Additional Resources

Websites:

- www.fsyta.org

- www.odpm.gov.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing in a group the measures that can be taken to prevent fires in the home Give a talk on how they could prevent fire in their local community Researching local and national campaigns carried out by the fire and rescues services Preparing assessment work eg describing their fire exist plan 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Gathering information about the potential fire risks in their home from the internet. Designing a checklist based on fire risks in the home. They will enter the information gathered for IT2.1 and create additional information. Presenting statistical information on the number of 	<p>IT2.1 Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.</p> <p>IT2.2 Enter and develop the information to suit the task and derive new information.</p> <p>IT2.3 Present combined information such as text with image, text with number,</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
call outs to homes and the types of fires that are most common in home.	image with number.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. • Choosing which areas to include in their home safety checklist and designing their fire escape plan. • Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Designing their fire escape plan. They will need to think through potential scenario based simulations e.g. what happens if the back door is blocked, what are the alternatives? They will then be required to suggest alternatives. • Designing their fire escape plan they could then try out at least one of the suggested solutions. • Designing their fire escape plan they can assess the success of their plan and identify ways to improve it. 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Unit 15: Improving Our Community with the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Fire and Rescue Services are embedded in the community as a service provider and partner agency for many aspects of community life. This unit will enable learners to identify the benefits of working within the community, which could include volunteering, liaising with key members of local community groups and planning and completing a community project.

Learners will develop a good knowledge of groups and agencies within the local community and the issues they face, and will gain an understanding of how they can positively contribute to their local community whilst developing a broad range of team and personal skills.

Learners will gain an insight into the variety of work the Fire and Rescue Service undertakes to improve fire safety and build relationships within the local community. This will be achieved through partnership with the local community in a variety of different activities, which will culminate in learners understanding the value of making a positive contribution to their local community and bringing different groups together in a cohesive way.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to plan a project to benefit the local community
- 2 Be able to implement and evaluate a project that benefits the local community

Unit content

1 Be able to plan a project to benefit the local community

Project selection: potential projects based on local needs; benefits to community; local community's perceptions; group decision on final project; benefits to individuals e.g. skills development

Project plan: seeking permission and support for the project e.g. local authorities, school, community group; timetable and task breakdown; risk assessment; prioritisation of tasks; budget and sourcing funding i.e. fundraising, local businesses, Fire and Rescue Service; resource implications i.e. availability, cost, timescales, sustainability identifying specialist skills required; logistics;

2 Be able to implement and evaluate a project that benefits the local community

Project implementation: task assignments; meeting timescales; applying new skills; working in different roles within the team; identifying and resolving difficulties i.e. delays, lack of resources; negotiating and communication skills; management of budget; following project plan; reporting difficulties

Evaluation: review project outcomes against project plan; identify good practice and areas for improvement and development

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describes the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Identify a suitable community project and describe the expected outcome such a project could have on the local community
P2	Plan, implement and evaluate the project as part of a group

Essential guidance for tutors

Delivery

This unit should involve planning and practical work with key members of the community where appropriate, with consideration of suitable and sufficient resources for risk assessed activities. To complete this unit, learners will need to be given the opportunity to meet and work with representatives of the local community and Fire and Rescue Service using planning, negotiating and communication skills whilst completing relevant activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to learn and develop a range of skills to help them complete the project and understand how they can positively impact the local community. Particular consideration should be given to project planning and resource management working practices. Teamwork, problem-solving and self-management skills will be an integral part of this unit. Throughout this unit, the learner will work as part of a small group.

A number of different approaches can be considered when developing the learners' understanding of their ability to have a positive impact on the local community. These approaches could be discussion based, training orientated or practical sessions, both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve the learner must identify an appropriate project and be able to describe the impact that the project may have on the local community e.g. benefits to the community, raising awareness of the role of the Fire and Rescue Service.

P2 In order to achieve this criterion the learner must plan the project as part of a group. Information could include time scales, task breakdown, allocation of tasks, risk assessment,

budgeting, resources etc. The individual learner's contribution to the planning process must be available for assessment purposes. The learner must then carry out the project as part of the group after the project is completed, its impact within the community should be evaluated by the group.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1,2,3,10,11,12,13,14,16,17 and may link to Units 4-9,18 and 19 of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety and Level 3 NVQ in Emergency Fire Service - Operations in the Community.
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS3 EN2: 1d

KS3 EN3: 1h

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN2: 1d

KS4 EN3: 1h

Mathematics:

KS3 MA2: 3a, 3h, 3o, 3q

KS3 MA3 and MA4: There may be possible links with these sections depending on the nature of the project

Citizenship:

KS3: 1b, 1c, 1f, 1h, 2a, 2b, 2c, 3b, 3c

KS4: 1b, 1f, 2b, 2c, 3b, 3c

PSHE:

KS3: 1a, 1b, 1c, 1g, 3b, 3h, 3i, 3j, 3k, 4a, 4b, 4c, 4d, 4e, 4f

KS4: 1a, 1b, 1c, 1e, 3d, 3f, 3k, 4a, 4b, 4c, 4d, 4e

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Other National Curriculum Subjects:

Depending on the project there is likely to be links to the following subjects: Design and Technology, Information Communication Technology, History, Art and Design, Music and Religious Education

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of project resources will need to be made available.

Manuals:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skills evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Discussing the project to be planned 	C2.1a Take part in a group discussion
<ul style="list-style-type: none"> • Present the project to other groups or external representatives e.g. local authority personnel 	C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> • Researching information from the internet or from text books about the planned project 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Setting targets to achieve assignments on time 	LP2.1 Help set targets with an appropriate person and plan how these will be met.
<ul style="list-style-type: none"> • Discussing their progress with their tutor 	LP2.3 Review progress with an appropriate person and provide evidence of achievements.

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working in the group to plan the project. Problems may arise which need to be resolved. Resolving problems during the planning and implementation of the project Evaluating their assessment outcomes 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working on the project Working together to achieve end goals Reviewing their own performance during and after the completion of different tasks 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 16: Healthy Living for Working in the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Being healthy is essential for anyone wanting to work in the Fire and Rescue Services. A healthy lifestyle is a key factor in the success of any employee within the Fire and Rescue Service. A poor lifestyle can lead to illness, injury and an inability to perform well.

Understanding the factors which affect healthy living allows learners to explore food choices, exercise, the consequences of using illicit substances and sexual health issues.

This unit allows learners to develop a broad range of skills, knowledge and understanding of the factors contributing to a healthy lifestyle whilst developing a range of team and personal skills.

Learners will gain an insight into how healthy living enables fire and rescue service personnel to stay fit and active for their role. This will be achieved through participation in a variety of different activities; which will culminate in learners demonstrating a broad knowledge of factors contributing towards a healthy lifestyle.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the concept of a healthy lifestyle
- 2 Understand how personal choices can impact on a healthy lifestyle
- 3 Be able to assess their own lifestyle

Unit content

1 Understand the concept of a healthy lifestyle

Balanced diet: national guidelines and recommended daily allowances e.g. salt, fat, sugar; Health Service initiatives e.g. 5 a day; recognise different food groups to combine them in order to achieve a balanced diet.

Exercise and fitness: different ways of increasing fitness e.g. circuit training, attending gym, team sports; ways to incorporate exercise into normal daily routines, for example change method of travel from catching to bus to walking.

2 Understand how personal choices can impact on a healthy lifestyle

Sexual health: Sexually Transmitted Diseases (STDs); HIV and AIDS; contraception; pregnancy; support organisations;

Drugs: legal drugs i.e. prescription medications, alcohol, cigarettes, solvents; illegal drugs i.e. cannabis, cocaine, heroin

Age Expectancy: benefits of healthy livings; benefits of positive personal choices

3 Be able to assess their own lifestyle

Collecting and collating information: e.g. food and exercise diary, type, amount, timings, feelings

Assess: comparison against national guidelines and initiatives; setting appropriate goals

Report: identify strengths and weaknesses for areas of improvement e.g. eating different types of food, eating at different times, drinking more fluids, exercising in different ways and at regular times, reducing habits e.g. smoking, drinking alcohol

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	review their own life style in relation to national guidelines and set appropriate targets to improve their life style
P2	describe how personal choices can affect an individual's health

Essential guidance for tutors

Delivery

This unit should be practical and discussion based using external professionals where appropriate. If learners are under 18 years of age, their primary carers must be informed of this unit's subject matter in advance and all activities must be risk assessed.

To complete this unit, learners will need to be given the opportunity to explore a wide range of issues relating to healthy living using communication skills and relevant activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to develop a range of personal skills to help them understand the importance of a healthy lifestyle both inside and outside the Fire and Rescue Service. Particular consideration should be given to exploring personal choices relating to learners' health and fitness. Teamwork, problem-solving and self-management skills will be an integral part of this unit.

A number of different approaches can be considered when developing the learners' understanding of healthy living both inside and outside the Fire and Rescue Service. These approaches could be discussion based or personal research, both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner. The health and safety of all participants should be paramount and professional support and advice should be available for learners if required.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and scenario based simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this learning outcome the learner must be able to demonstrate that they understand the meaning of a 'healthy lifestyle'. Over a period of twenty four hours, the learner should complete a reflective diary including information about their diet, exercise, rest and sleep times. They could also include information on activities, time spent with peer groups etc. Having recorded this information they should then compare their day with national guidelines e.g. appropriate diet for someone of their age, sugar and salt intake, recommended amount of exercise per day etc. This will then highlight any areas, which could

be improved upon. The learner should then set at least two targets which are realistic and achievable and with a short time scale e.g. they could drink a bottle of water instead of a fizzy drink for a day.

P2 To achieve this criterion the learner should choose one example related to sexual health and one example related to drugs and describe how each one can have an impact on their lifestyle e.g. unprotected sex could result in unwanted pregnancy, sexually transmitted diseases etc.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 11, 12, 13 and 17 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS3 EN2: 1d, 5a, 5b, 5c, 5d, 9a, 9b, 9c

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN2: 1d, 5a, 5b, 5c, 5d, 9a, 9b, 9c

Science:

KS3 SC2: 2f, 2g, 2h, 2m

KS4 SC2: 5e

Physical Education:

KS3: 4a, 4b, 4c, 4d

KS4: 4a, 4b, 4c, 4d

There will be links in both key stages to some aspects of the Breadth of Study

PSHE:

KS3: 2a-h, 4e, 4g

KS4: 2a-h, 4e, 4f

Essential Resources

It would be useful for learners to have access to dietary charts showing compositions of the main food groups and other related material produced for teaching health education. Visits from drug advisors and sexual health advisors would be greatly beneficial.

Manuals:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Website:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

- **Key skills**

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Discussing the importance of a healthy life style • Presenting information on how they could improve their own life style in order to be fit for the Fire and Rescue Service 	C2.1a Take part in a group discussion C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> • Researching information on what constitutes a healthy lifestyle. 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.

Improving own learning level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Setting targets to improve their own life style • Carrying out their lifestyle plan • Reviewing the success of their lifestyle plan 	LP2.1 Help set targets with an appropriate person and plan how these will be met. LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by: LP2.3 Review progress with an appropriate person and provide evidence of achievements.

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Reviewing their own life style to identify areas of strengths and weaknesses • Identifying and planning ways to overcome their weaknesses • Reviewing the success to which they have overcome their challenges 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Unit 17: Careers Related to the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

The Fire and Rescue Service provides a vast array of employment opportunities suitable for people from all abilities, experiences and backgrounds.

This unit allows learners to develop knowledge of the variety of roles available within the Fire and Rescue Service. Learners will gain an understanding of the different Fire and Rescue related work and the skills, knowledge and experience required for people employed in those roles. This will be achieved by giving the learners opportunities to meet people who work in different roles within the local Fire and Rescue Service. Learners will also be given the opportunity to experience various methods of selection procedures for recruitment used both within the Fire and Rescue Service and in external agencies.

This will culminate in learners demonstrating knowledge and understanding surrounding the work opportunities and processes of recruiting new staff to the Fire and Rescue Service. In addition, they will learn to identify and develop skills that will aid their chosen career progression.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to identify a range of roles in the Fire and Rescue Service
- 2 Understand the different elements of a recruitment process
- 3 Develop skills that will aid personal career choices

Unit content

1 Be able to identify a range of roles in the Fire and Rescue Service

Operational roles: fire fighter and associated roles; position with specialist training e.g. appliance driver, hazardous materials, trainer, Senior Accident Investigator, Urban Search and Rescue; fire investigation;

Other roles: e.g. control operators, schools education officers, administrators, legal advisors, finance officers, procurement officer, IT officer, human resource support roles, regulatory safety inspecting officers, public relations officer

2 Understand the components of a recruitment and selection processes

Recruitment process: application form; interview; psychometric tests; numeracy tests; literacy tests; fitness test; observed group task

3 Develop skills that will aid personal career choices

Career choice: career options; qualifications required for potential career e.g. BTEC, GCSE, A Level, Degree, vocational training, and apprenticeship; access career services e.g. Connexions; recruitment open days

Initial application: completing applications forms; writing a CV; qualifications to increase employability; covering letters

Assessment: interview skills; practice psychometric, numeracy and literacy tests; practice observed group tasks; preparing for fitness tests

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	describe three different roles within the Fire and Rescue Service
P2	describe three different components of the recruitment and selection process

Essential guidance for tutors

Delivery

This unit should be practical and discussion based working with employees of the Fire and Rescue Service and representatives from external agencies, with consideration of suitable and sufficient resources for risk assessed activities. To complete this unit, learners will need to be given the opportunity to meet and work with representatives of the Fire and Rescue Service and external career advice agencies using communication skills and relevant activities. Learners will also need to be given opportunity to identify and develop skills that will aid their career progression.

Learners will be given opportunity to meet people who work in variety of roles within the Fire and Rescue Service. They will be able to ask the people they meet questions to enable them to understand fully the person's job role. A number of different approaches can be considered while developing the learners understanding of careers within the Fire and Rescue Service. These could include discussions, practical sessions, training and observations, both inside and outside their immediate learning environment. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given appropriate explanations and demonstrations of any planned practical activities prior to their involvement.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner must describe an operational and a non-operational job within the Fire and Rescue Service. Assessment can be through a written project, verbal presentation, discussion.

P2 This criterion can be assessed through discussion, verbal presentation or electronic quiz. The candidate should demonstrate an understanding of the various parts of a recruitment process and an understanding of how to prepare for each part.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1 to 16, 18, 19, 23 and 24 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Services National Occupational Standards
- This unit links to the National Curriculum:

Citizenship:

KS3: 1a, 1c, 2a, 2c, 3c

KS4: 1a, 1h, 2b, 2c, 3c

English:

KS3: 2f, 3a, 9a, 9c

KS4: 2a, 2f, 3a, 9a, 9c

PSHE:

KS3: 1e, 3c, 3d, 3k, 4b, 4e, 4f

KS4: 1f, 2b, 3d, 4f

Essential Resources

Sufficient resources relating to careers within the Fire and Rescue Service should be available to enable learners to achieve this unit i.e. career leaflets, recruitment pack, videos. It is recommended that learners have access to the internet and recruitment officers.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Website:

Local Fire and Rescue Service websites

- www.fire.gov.uk
- www.fsyta.org
- www.communities.gov.uk
- www.fireservice.co.uk/recruitment/

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing in a group potential jobs within the Fire and Rescue Service Give a talk on one job role Researching different job roles in the Fire and Rescue Service Preparing assessment work 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Gathering information about different careers in the Fire and Rescue Service Designing a checklist showing the different requirements for each job role within the Fire and Rescue Service Presenting statistical information on the number of brigades in the country and personnel involved 	<p>IT2.1 Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.</p> <p>IT2.2 Enter and develop the information to suit the task and derive new information.</p> <p>IT2.3 Present combined information such as text with image, text with number, image with number.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. • Choosing which areas to include in their assessment. • Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Unit 18: The Preservation of Artefacts within the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Preservation of Fire and Rescue Service history and related artefacts allows the community to understand the reasons for its establishment and continued role within today's society.

This unit allows learners to develop a good knowledge and understanding of the history of the Fire and Rescue Services and preservation of artefacts whilst developing a range of team and personal skills.

Learners will gain an insight into the Fire and Rescue Service, its history and artefacts. This will be achieved through participation in a variety of different activities; which will culminate in learners having the ability to demonstrate a broad knowledge and understanding of the Fire and Rescue Service history and artefacts.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand what an artefact is and why they should be preserved
- 2 Understand how to present and display a range of artefacts

Unit content

1 Understand what an artefact is and why they should be preserved

Artefacts: definition; different types of artefacts e.g. paper based, objects, textiles and clothing, equipment; reasons for preserving artefacts

Preservation: reasons for preservation; identification and correct handling of artefacts; different methods of preservation used by museums; factors affecting preservation including storage conditions

Damage to artefacts: damage and causes of damage; methods of repairing damage and preventing further damage to artefacts

Local conservation: locally listed or heritage buildings, monuments, museums or fire stations; preservation of local buildings

2 Understand how to present and display a range of artefacts

Curator: roles and responsibilities

Presentation of artefacts: different methods of presentation; storage conditions; venue and accessibility of artefacts; promotion of the collection of artefacts

Display techniques: methods of displaying visual/audio information; research about artefacts; use of appropriate language for target audience; producing additional resources required for different target groups i.e. children, people with disabilities and people speaking different languages

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Explain the term artefact and the benefits of preserving them
P2	Demonstrate different methods of presenting artefacts

Essential guidance for tutors

Delivery

This unit should be practical with some research and consideration of suitable and sufficient resources for risk assessed activities. To achieve this, learners will need to be given the opportunity to preserve and present artefacts using a variety of display and communication methods incorporating teamwork/team-building activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to develop a range of personal skills to help them understand the history of the Fire and Rescue Service and the preservation of its artefacts. Particular consideration should be given to relating preservation, presentation, research, and communication skills. Teamwork, problem-solving and self-management skills will be an integral part of this unit.

A number of different approaches can be considered when developing the learners' understanding of the preservation of Fire and Rescue Service artefacts. These approaches could be project based or personal research, both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

P1 In order to achieve this criterion the learner should explain the meaning of the word artefact this can be through discussion or as part of a quiz. The learner should be able to explain why artefacts should be preserved.

P2 The learner's skills can be assessed by observation of the young person presenting items for display and by discussion. A range of different methods on display should be used and the assessment carried out when the young person shows the assessor around the artefacts they have presented giving an explanation for the way they have chosen to display each artefact.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1 to 4, 6 to 9, 11,12,14,15,17 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Service National Occupational Standards
- This Unit links to the National Curriculum:

History:

KS3: 2a, 2c, 2d, 2e, 3a, 3b, 4a, 4b, 5a, 5b, 5c, 7a, 7b, 13

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS3 EN2: 1d, 1j, 4a, 4b, 5a, 5b, 5c, 5d, 9a, 9b, 9c

KS3 EN3: 1e, 1f, 1g, 1h, 2a, 4d, 4e, 5a, 5c, 9b

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN2: 1c, 1d, 1j, 4a, 4b, 4c, 4d, 5a, 5b, 5c, 5d, 9a, 9b, 9c

KS4 EN3: 1e, 1f, 1g, 1h, 2a, 4d, 4e, 5a, 5c, 9b

Design and technology:

KS3 - Parts of the Design and technology curriculum may be covered in producing tactile resources for the museum

KS4 - Parts of the Design and technology curriculum may be covered in producing tactile resources for the museum

ICT:

KS3: 1a, 1b, 1c, 3a, 3b, 3c, 5a, 5b

KS4: 1a, 1b, 3a, 3b, 5c

Geography:

KS3: 3a

Citizenship:

KS3: 1f, 1h, 2a, 2b, 2c, 3a, 3c

KS4: 1f, 2a, 2c, 3b, 3c

PSHE:

KS3: 1a, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 3d, 3k, 4a, 4b, 4, 4e, 4f

Essential Resources

Sufficient practical and research resources should be available to enable learners to achieve this unit. Learners will need to be given the opportunity to preserve and present artefacts

using a variety of display and communication methods incorporating teamwork/team-building activities.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Website:

- www.fire.gov.uk
- www.fsyta.org
- www.communities.gov.uk
- www.museums.co.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 3 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing how artefacts may be preserved or displayed Giving a presentation on how an artefact is preserved Researching the methods used to preserve and display artefacts 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p>

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Setting targets to achieve assignments on time Discussing their progress with their tutor 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working in groups to achieve a set task they may identify problems which need to be resolved Identify how to solve the problem identified Evaluating their outcomes 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Working on tasks as a group throughout the teaching of the unit • Working together to achieve end goals • Reviewing their own performance during and after the completion of different tasks 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 19: Navigation Skills used in the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Fast response times are critical for the Fire and Rescue Service when attending incidents. In order to achieve this it is essential to be able to select and use the most appropriate navigational aids.

Through completion of this unit learners will develop and good knowledge and understanding of a variety of navigational aids used by the Fire and Rescue Service and they will learn how to use these. This will include how to use maps and how to plan the most appropriate route from one point to another.

The accurate use of road atlases is an important element of this unit as it relates closely to the work of the Fire and Rescue Services. Learners will be given the opportunity to practice their navigation skills in a variety of situations.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand how navigation aids and techniques are used within the Fire and Rescue Service
- 2 Be able to extract information from different types of maps
- 3 Be able to navigate as a group or an individual from one point to another

Unit content

1 Understand how navigation aids and techniques are used within the Fire and Rescue Service

Navigational Aids: navigational aids e.g. compass, Global Positioning Position (GPS), maps including road, street, public transport and Ordnance Survey maps; method of using various navigational aids; identifying most appropriate navigational aid to use in a given situation

Navigational Techniques: method of identifying current location; method of identifying proposed location; method of identifying most appropriate route to a given location

2 Be able to extract information from various maps

Map Legends: map legends, scale and its uses; common map symbols

Topographical Information: extract topographical information from a map; barriers and features; contours; grid references; orienting map to ground; relating ground to map; calculations and distance from map

3 Be able to navigate as a group or individual from one point to another

Route planning skills: use of map to plan a route; estimation of journey times; consideration of the effects of gradient; route checks to ensure accurate navigation; identification of terrain types

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	describe how two different navigational aids are used in the Fire and Rescue Service
P2	describe how a map legend is used and identify five common map symbols
P3	plan and navigate a route from one point to another using appropriate resources

Essential guidance for tutors

Delivery

Through the teaching of this unit the learner will gain an understanding of the different navigational aids that may be used by the Fire and Rescue Services. Learners should be given the opportunity to use both electronic aids e.g. GPS and manual aids e.g. different types of maps including street and OS maps. In order to help the learner understand the value of maps, they should be encouraged to study maps of their own local area.

Prior to using the map learners will need to know the purpose of the map legend. The three types of symbols should be introduced i.e. dots or circles used to indicate villages and cities, line symbols to indicate elements or objects that have a line shape i.e. roads and rivers, and plane symbols using different colours to show soil types, land use. Simple exercises could also be provided to help the learner understand the meaning of key symbols e.g. providing illustrations of the symbols for different types of churches, schools, gradients on hills, airports etc and asking them to guess the meaning of the symbol. They could then check their answers against the appropriate map legend. Quizzes could also be used to help the learner find out the common map symbols and their uses.

A number of different teaching styles may be used to help the learner understand how to use a compass e.g. they could be given a worksheet which asks them to identify the key features however the most appropriate method would be to have 'hands on' experience using actual situations e.g. using a compass to navigate between given points.

To reinforce the importance of understanding how to read maps, scenario based simulations could be provided which ask the learner to take on the role of the firefighter being called to an incident. They would then be required to identify key features en route to the incident.

This unit also provides several opportunities for the learner to be involved in a range of practical activities e.g. using a compass to get from one point to another, games to help the learner understand the difference between north, south, east and west. Scenario based simulations may be used to encourage the learner e.g. identifying the most direct routes from the fire station to an imaginary incident. A range of software is available which learners could use to find the length of the route e.g. www.london-marathon.co.uk/routeplanner/

The learner should be given as many practical examples as possible of planning and navigating routes either by themselves or in a group.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructive feedback on performance and development needs.

All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

- P1** In order to achieve this criterion the learner should choose two navigational aids e.g. GPS system and OS map and describe how both are used within the Fire and Rescue Service. They should be able to describe when the Fire and Rescue Service would use the different aids.
- P2** This criterion could be assessed in a number of different ways e.g. the learner could be given a map and asked to identify five common symbols on the map or a series of symbols could be provided on a worksheet and the learner could be asked to identify the symbol. A learner should be able to demonstrate an understanding of how a map legend is used to provide information on distance, key features and direction. They should make reference to scale, symbols and compass points.
- P3** This outcome could be evidenced using different methods e.g. the learner could be given a scenario based simulation; which includes a starting point and a finishing point. They would then be asked to plan the route using the shortest distance. They should then navigate the route successfully. This will demonstrate their ability to read the map. Alternatively the learner could choose their own starting and finishing point and navigate the route.

The grading criteria for this unit could be assessed holistically e.g. the learner could be asked to plan a route. They would be given the starting and finishing point. They could choose two different navigational aids and describe how the Fire and Rescue Service would use both aids. They could then identify five different common symbols from the map that they are using as part of the task. They could show how they are using the map legend to help in their planning and then navigate the route to find out how successful they have been. Evidence of successful achievement must be provided.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 3 to 6, 11, 12 and 20 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Service National Occupational Standards.
- This Unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

Geography:

KS3: 2c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b, 11a, 11b, 11c, 11d

KS4: 1a, 1b, 3b, 3c, 3d, 11a, 11b, 11c, 11d

Essential Resources

Sufficient resources of maps and one compass per person should be available to enable learners to achieve this unit. It would be helpful to learners if sufficient identical maps are available for group work. Laminated maps are always useful during practical work. Access to the internet is highly recommended for research. Finally, the practical aspects of the unit require that there is sufficient access to suitable outdoor facilities where map reading exercises can be undertaken.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Website:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk
- www.googleearth.co.uk
- www.ordnance-survey.co.uk
- www.countrysideaccess.gov.uk
- www.bbc.co.uk/weather

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skills evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Application of number level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working with compasses. They will develop an understanding of angles and degrees. 	N2.1 Interpret information from a suitable source.
<ul style="list-style-type: none"> Using compasses. They could calculate the difference between compass points by degrees. 	N2.2 Use your information to carry out calculations to do with: <ul style="list-style-type: none"> a amounts or sizes b scales or proportion c handling statistics d using formulae.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working with compasses and maps, they will discuss the most appropriate routes to get to their final destination 	C2.1a Take part in a group discussion
<ul style="list-style-type: none"> Giving a presentation of how the Fire and Rescue Service use navigation aids in their work 	C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> Finding out how to use GPS systems e.g. an instruction manual and details from the internet. 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning for their assessment. They will set themselves target dates and what they hope to achieve by those dates. • Choosing which routes to consider. • Discussing their progress with their personal tutor. 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by:</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • Planning a route from one point to another. They will have to decide on the most appropriate route. • Navigating the route that they have planned. • Reviewing the success of their route planning and navigation skills. 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Unit 20: Planning, participating in and reviewing Residential Experiences

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

The purpose of this unit is to give learners the opportunity to plan, participate in and review the success of a residential experience away from home.

This unit will give learners the opportunity to develop a range of team and personal skills, knowledge and understanding that are an important aspect of a residential experience. For some learners it may be the first experience away from home. The learner will also develop many transferable skills such as communication, leadership, discipline and trust that would be of use in many areas of their lives.

This learning will be achieved through participation in a variety of different activities; which will culminate in learners having the ability to prepare for and participate in an over night stay and the requirements to ensure a safe and healthy trip.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the importance of personal well being during a residential experience away from home.
- 2 Understand how to care for residential accommodation
- 3 Be able to plan, prepare and take part in an overnight stay

Unit content

1 Understand the importance of personal well being during a residential experience away from home

Personal safety: responsibility for own and others health, safety and welfare

Personal hygiene: hygiene issues e.g. personal, food and environmental; preventing spread of infection resulting from poor hygiene

Nutritional requirements for activities: the requirement for maintaining a balanced diet; *before, during and after activities; during rest periods; hydration; energy intake*

2 Understand how to care for residential accommodation

Residential accommodation: types of residential accommodation e.g. tents, caravans, youth hostels, waterborne vessels, hotels; appropriateness of accommodation for residential experience

Responsibilities: health & safety, risk assessment, maintenance e.g. camp, equipment, housekeeping, respect for others and their property

3 Be able to plan, prepare and take part in an overnight stay

Planning and preparation: purpose of residential experience away from home e.g. hiking, camping, team building, skills development, fund raising; appropriate locations; planning process; visit local attractions; clothing and equipment; transport; wet weather alternatives; emergency procedures

Evaluating the residential experience: successes; personal learning; improvements for future events

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criterion for a pass grade describes the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	as a group member, plan an overnight residential experience away from home
P2	take a part in a residential experience away from home and make a positive contribution
P3	review the residential experience

Essential guidance for tutors

Delivery

Tutors must be aware of the Young Persons (Outdoor Centres) Act 1995 when delivering this unit to learners under 18 years. The regulations are stringent and must be taken seriously.

The ultimate goal of this unit is for the learner to plan and participate in a residential experience away from home. It would be more valuable to engage the learners in the planning and preparation stages as well as enabling them to attend and experience the complete activity. Working as a group, the purpose of the residential activity could be agreed and a suitable location chosen. The learners could then begin the planning process which would include decisions on transportation, appropriate clothing and equipment, itinerary including wet weather activities, leaders, primary carer permission etc. Health and safety could also be discussed including the need for a first aider.

Following discussions on how to care for the accommodation and their own responsibilities regarding health and safety, this should then be demonstrated during the residential experience away from home. The learner could also discuss the different aspects of personal well being including hygiene and nutrition for forthcoming activities.

Particular consideration should be given to relating communication, teamwork, problem-solving and self-management skills within all activities throughout the unit. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

A number of different approaches can be considered when developing the learners' understanding of organising and participating in a residential experience away from home. The methods used should reflect the learning strategy and the development needs of the learner. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answer activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all tasks required in the grading grid.

In order to achieve this unit, the learner will be required to work as a member of a group. Evidence of performance must be available for assessment purposes for individual learners.

P1 In order to achieve this criterion the learner must participate in the planning of a residential experience. Evidence could include planning sheets, records of notes taking during the planning process, agenda of activities planned for the event, letters written to book accommodation etc.

P2 In order to achieve this criterion the learner must a positive contribution throughout a residential experience lasting at least one night. Evidence could include a diary of the event or a witness testimony. The learner's attitude and behaviour to the event and other participants should be included as part of the assessment criteria.

P3 In order to achieve this criterion the learner should participate in a debrief and could provide a presentation on their experiences and what they learned during the event. Alternatively they could provide a written description of what they learned about themselves including their strengths and weaknesses. If they are sufficiently confident in themselves the learner may also seek opinions from their peer group on their contribution to the event.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 10 to 12, 16 and 19 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Service National Occupational Standards.
- This Unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1c, 1g, 2b, 2f, 3b, 4c, 4f

KS4: 1a, 1c, 1e, 3d, 4c, 4f

Physical Education:

KS3: 1a,1b, 2a, 3a, 3b, 11a, 11b, 11c, 11d

KS4: 1a, 1b, 3b, 3c, 3d, 11a, 11b, 11c, 11d

Essential Resources

Depending on the type of residential activity to be undertaken during overnight stay, sufficient equipment is required to adequately support learners. In addition, for learners to experience the different types of designs and materials used, it is recommended that a wide and varied range of the types of equipment that could be used be encountered during the residential experience. This unit should primarily be practical based, encouraging learners to

observe and participate in outdoor activities, individually and in teams as well as in different youth and community groups. Access to an outdoor environment is essential for the acquisition of skills and unit delivery. Trainers should have reasonable experience of outdoor activities.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932

Additional Resources

Website:

- www.fire.gov.uk
- www.fsyta.org
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 3 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication Level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Discussing the planning of the event 	C2.1a Take part in a group discussion
<ul style="list-style-type: none"> Giving a review of their participation in the event 	C2.1b Give a talk of at least four minutes
<ul style="list-style-type: none"> Researching possible venues and writing letters to find out availability 	C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.

Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Setting targets for the event 	LP2.1 Help set targets with an appropriate person and plan how these will be met.
<ul style="list-style-type: none"> Reviewing what was learned as a result of the residential experience 	LP2.3 Review progress with an appropriate person and provide evidence of achievements.

Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Identifying possible activities during the residential experience including what happens if there is poor weather 	PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.
<ul style="list-style-type: none"> Finding appropriate solutions 	PS2.2 Plan and try out at least one way of solving the problem.
<ul style="list-style-type: none"> Reviewing the success of the alternative programme if it was used 	PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> Working as a team and planning tasks together Working as a team towards the goals they have set Evaluating their contribution during the residential experience 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 21: Operational Response Simulations and Procedures within the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Learners will gain an insight into the Fire and Rescue Services operational response to incidents and will take part in a variety of simulations in accordance with procedures and standard practices.

The unit will allow the learners to develop their skills, knowledge and understanding of the various procedures and standard practices applied during operational response simulations and their importance in achieving a desired outcome.

Learners will also be able to demonstrate and apply the principles of operational response simulation risk assessment and control measures, they will identify and use the correct method for forming into crews and performing tasks; how to conduct tasks on the drill ground as instructed using safe systems of work. They will identify and use the correct level of Personal Protective equipment required to conduct simulations safely.

This will be achieved through participating in a variety of different activities which will culminate in learners having the ability to demonstrate a broad knowledge and understanding of Fire and Rescue Service operational response simulation procedures.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand a variety of operational response simulation procedures.
- 2 Understand and have applied risk assessment and safe systems of work.
- 3 Be able to participate effectively in an operational response simulation including the relevant brief and debrief

Unit content

1 Understand a variety of operational response simulation procedures

Operational Response Simulation Procedures: How to form into crews in the mounted and dismounted positions. The tasks expected of each crew member in the assigned exercise. The appropriate control measures to be implemented for the exercise.

2 Understand and have applied risk assessment and safe systems of work.

Risk assessments: Be able to identify common significant hazards, risks and control measures, how to identify and use the correct level of Personal Protective Equipment, Be able to identify and use safe systems of work including words of command.

3 Be able to participate effectively in an operational response simulation including the relevant brief and debrief

Brief and Debrief: Understand the need for a pre-simulation brief and debrief, evaluate personal and team performance to identify outcomes and further development needs where required.

Participate in a variety of roles at operational response simulations to achieve a task within Fire and Rescue Service objectives.

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1.	Following a briefing perform a variety of tasks whilst demonstrating correct simulation procedures
P2	Demonstrate the ability to assess risk and implement control measures whilst using safe systems of work during operational response simulations.
P3	Be able to participate effectively in an a operational response simulation including relevant brief and debrief

Essential guidance for tutors

Delivery

This unit should be practical and theoretically based with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate knowledge of operational response simulations, procedures and standard practices. To achieve this, learners will need to be given the opportunity to participate in a range of simulations. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to experience the range of simulations, procedures and standard practices reflective of those operating within the Fire and Rescue Service.

A number of different approaches can be considered when developing the learners' understanding of operational response simulations and procedures. These approaches could be practical and theoretically based scenarios, personal research or delivery based both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. Learners must be given the appropriate underpinning knowledge and understanding of operational response simulation, procedures and associated equipment prior to involvement in any practical activity. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all assignment tasks required in the grading grid.

P1 In order to achieve this criterion the learner should demonstrate a minimum of 2 operational response simulation procedures e.g. ladder drills, hose drills etc. This may be assessed through an observed scenario based simulation with subsequent discussion or presentation.

P2 In order to achieve this criterion the learner should be able to complete a dynamic risk assessment of an operational response simulation, identifying any appropriate control measures.

P3 In order to achieve this criterion the learner should be able to explain lessons learned during an operational response simulation, highlighting what worked well and any training needs identified. This assessment could be through discussion or presentation.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 2, 4 to 9, 11, 12 and 24 and may link to additional units of this BTEC.
- This Unit links to the Fire and Rescue Service National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety.
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, a variety of their equipment will need to be available e.g. Personal Protective equipment. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 2 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Application of number level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>N2.1 Interpret information from a suitable source.</p> <p>N2.2 Use your information to carry out calculations to do with:</p> <ul style="list-style-type: none"> a amounts or sizes b scales or proportion c handling statistics d using formulae. <p>N2.3 Interpret the results of your calculations and present your findings.</p>
Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • • 	<p>C2.1a Take part in a group discussion</p> <p>C2.1b Give a talk of at least four minutes</p> <p>C2.2 Read and summarise information from at least two documents about the same subject. Each document must be a minimum of 500 words long.</p> <p>C2.3 Write two different types of documents each one giving different information. One document must be at least 500 words long.</p>

Information communication technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>IT2.1 Search for and select information to meet your needs. Use different information sources for each task and multiple search criteria in at least one case.</p> <p>IT2.2 Enter and develop the information to suit the task and derive new information.</p> <p>IT2.3 Present combined information such as text with image, text with number, image with number.</p>
Improving own learning and performance level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>LP2.1 Help set targets with an appropriate person and plan how these will be met.</p> <p>LP2.2 Take responsibility for some decisions about your learning, using your plan to help meet targets and improve your performance by: Xxx</p> <p>LP2.3 Review progress with an appropriate person and provide evidence of achievements.</p>
Problem solving level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>PS2.1 Identify a problem, with help from an appropriate person, and identify different ways of tackling it.</p> <p>PS2.2 Plan and try out at least one way of solving the problem.</p> <p>PS2.3 Check if the problem has been solved and identify ways to improve problem solving skills.</p>

Working with others level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>WO2.1 Plan work with others.</p> <p>WO2.2 Work co-operatively towards achieving identified objectives.</p> <p>WO2.3 Review your contribution and agree ways to improve work with others.</p>

Unit 22: The Science of Fire and Extinction

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

This unit will provide learners with an introduction to the science of fire and methods of extinction by examining the fundamentals of fire, its behaviour and development (ignition, growth and spread). It also covers the varied extinguishing media and the correct identification and application of those media for given types of fire.

Knowledge gained through completion of this unit will enable learners to understand how to recognise the potential for fire to occur, how to respond to a fire when it does occur, the resulting products from fire and which extinguishing media are best suited to a variety of fire situations.

This will be achieved through participation in a variety of different activities; which will culminate in learners having the ability to demonstrate a broad range of knowledge and understanding of the science of fire and its extinction.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the science of fire

2 Be able to describe methods of fire extinction and appropriate extinguishing media

Unit content

Understand the science of fire

Fire and combustion: Chemical processes of ignition, combustion and development of fire, the triangle of fire; Products of fire, light, heat and smoke; controlled burning e.g. a campfire, stove, uncontrolled burning e.g. in buildings or in the open; oxygen, heat and fuel, ignition sources

Fire Behaviour and fire development: conduction, convection and radiation; rate of fire spread, flashover, backdraught

Types of fires: Classification of fires i.e.; Class A - fires involving carbonaceous materials e.g. wood, paper; Class B - fires involving liquids or liquefiable solids; Class C - fires involving gases; Class D - fires involving metals and Class F - liquid fires.

Be able to describe methods of fire extinction and applicable extinguishing media

Removal of heat (Cooling): Limiting temperature e.g. application of a jet or spray of water, steam

Removal of fuel (Starvation - limiting fuel); Removing potential fuel from the neighbourhood of a fire, creating fire breaks, cutting off gas supply, *Removing the fire from the mass of combustible material* e.g. pulling apart a haystack or thatched roof, beating out of fires

Removal or limitation of oxygen (smothering or blanketing): Limiting oxygen e.g. fire blanket, closing doors and windows, snuffing out a candle, placing a lid on a hot fat pan, turning off ventilation

Extinguishing media: Water; 'inert gases'; foam; vaporising liquids; carbon dioxide and; dry chemical powders

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria
To achieve a pass grade the evidence must show that the learner is able to:
P1 Be able to explain the three components and provide examples of the three components in relation to the triangle of fire, providing one example of each component
P2 Know the different methods of extinguishing a fire providing one example for each side of the triangle of fire.
P3 Identify two fire extinguishing media and provide an example for each of where they should and should not be used to extinguish fire

Essential guidance for tutors

Delivery

This unit should be practical and theoretically based with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate knowledge and understanding. Where 'hands on' activity is limited research could be undertaken on the internet or illustrations could be provided to reinforce learning.

Helping the learner to understand the science of fire and extinction could also be achieved through the use of video clips or examples of real life situations to illustrate the correct use of equipment. Learners will need to be able to name and describe different types of fire extinguishing media.

A number of delivery activities can be used to contribute to evidence collected for the learning outcomes in this unit. These approaches could be discussion based, personal research or delivery based, both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Assessment

A number of assessment activities can be used employed to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all assignment tasks required in the grading grid.

P1 In order to achieve this criterion the learner should be able to identify and describe the three components of the triangle of fire and provide examples of these components.

P2 In order to achieve this criterion the learner should provide an example of each of the different methods of extinguishing a fire. Learners should give a brief explanation of how each example relates to the triangle of fire.

P3 In order to achieve this criterion the learner must be able to recognise two examples of fire extinguishing media and demonstrate and explain their appropriate use. This can be assessed through a verbal, visual, written presentation or practical demonstration.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 4 to 8, 11, 12, 14, 21 and 23 and may link to additional units of this BTEC qualification.
- This Unit links to the Fire and Rescue Service National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety and Level 3 NVQ in Emergency Fire Service - Operations in the Community.
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Science:

KS3: Sc3: 2g, 2h

KS4: 6b

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4c, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 4a, 4c, 4e, 4f

Essential Resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, access to fire extinction equipment or adequate information of equipment used will need to be available e.g. presentations, video/DVD etc. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org

- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk
- www.howstuffworks.com/Fire.htm
- www.smokeybear.com
- www.straightdope.com/columns/021122.html

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 3 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Writers should complete the following key skills where appropriate.

Application of number Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>N3.1 Plan an activity and get relevant information from relevant sources.</p> <p>N3.2 Use this information to carry out multi-stage calculations to do with:</p> <ul style="list-style-type: none"> a amounts or sizes b scales or proportion c handling statistics d using formulae. <p>N3.3 Interpret the results of your calculations, present your findings and justify your methods.</p>
Communication Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • • 	<p>C3.1a Take part in a group discussion.</p> <p>C3.1b Make a formal presentation of at least eight minutes using an image or other support material.</p> <p>C3.2 Read and synthesise information from at least two documents about the same subject.</p> <p>Each document must be a minimum of 1000 words long.</p> <p>C3.3 Write two different types of documents, each one giving different information about complex subjects.</p> <p>One document must be at least 1000 words long.</p>

Information and communication technology Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>ICT3.1 Search for information, using different sources, and multiple search criteria in at least one case.</p> <p>ICT3.2 Enter and develop the information and derive new information.</p> <p>ICT3.3 Present combined information such as text with image, text with number, image with number.</p>
Improving own learning and performance Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>LP3.1 Set targets using information from appropriate people and plan how these will be met.</p> <p>LP3.2 Take responsibility for your learning, using your plan to help meet targets and improve your performance.</p> <p>LP3.3 Review progress and establish evidence of your achievements.</p>
Problem solving Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>PS3.1 Explore a problem and identify different ways of tackling it.</p> <p>PS3.2 Plan and implement at least one way of solving the problem.</p> <p>PS3.3 Check if the problem has been solved and review your approach to problem solving.</p>

Working with others Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>WO3.1 Plan work with others.</p> <p>WO3.2 Seek to develop co-operation and check progress towards your agreed objectives.</p> <p>WO3.3 Review work with others and agree ways of improving collaborative work in future.</p>

Unit 23: Fire Investigation within the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

This unit will help learners to understand the principles of Fire Investigation and its importance within the Fire and Rescue Service and to partner agencies.

Learners will understand how to identify the location and causes of fire; including ignition sources, location and propagation of fires.

Identifying how fires start and develop enables preventative measures to be taken to reduce the numbers of fires and provides information to other agencies to minimise the number and affects of fires in the community. Knowledge of what this information is used for will help learners understand the importance of fire investigation to the Fire and Rescue Services and the wider community.

Learning outcomes

On completion of this unit a learner should:

- 1 Understand the principles of Fire Investigation.
- 2 Understand the role of Fire Investigation.
- 3 Understand the Fire Investigation methods, techniques and equipment that may be used at a fire scene.

Unit content

1 Understand the principles of Fire Investigation

Principles: Identifying location and causes of fire; ignition sources; location and propagation of fires.

2 Understand the role of Fire Investigation

Role: to identify the causes of fires; to provide information to relevant bodies; to support the reduction of accidental fires; detection of deliberate fire-setting for example to prevent death and injury and damage to property.

3 Understand the fire investigation methods, techniques and equipment that may be used at a fire scene

Methods: direct observation; witness testimony; scene examination

Techniques: Initial observations e.g. location, severity, spread, direction of fire travel; scientific analysis; smoke pattern analysis; scene excavation; hydrocarbon detection

Equipment: e.g. manual tools, hydrocarbon detection equipment; electronic, dogs, sample bags, chemical analysis equipment

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Describe the principles of Fire Investigation.
P2	Describe two roles of Fire Investigation.
P3	Identify the origin of fire through a simulated scene examination.

Essential guidance for tutors

Delivery

Learners will need to be given the opportunity to develop knowledge and understanding of the range of fire investigation skills within the Fire and Rescue Service.

To achieve this, learners will need to be given the opportunity to gain knowledge and understanding through various methods e.g. presentations, video/DVD, simulation, fire investigation reports.

Learners will also need to be given appropriate underpinning knowledge and understanding to help them identify these investigation techniques.

This unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate their knowledge and understanding of the factors, which aid fire investigation.

A number of different approaches can be considered when developing the learners' knowledge and understanding of fire investigation, this may include local and national support / initiatives appropriate within their community. These approaches could be scenario, personal research or delivery based both inside and outside their immediate learning environment, or any combination of the above.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. Learners will need to be given an explanation and demonstration prior to their involvement in any practical activity to include correct level of personal protective equipment .

The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be direct observations and oral or written question and answers activities related to performance. Other forms of assessment can include direct observation of practical activities.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructive feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all assignment tasks required in the grading grid.

- P1** In order to achieve this criterion the learner must be able to describe the principles of Fire Investigation. A brief explanation of each of the principles should be given.
- P2** In order to achieve this criterion the learner must be able to describe two separate roles of Fire Investigation. A brief explanation of each role should be given.

P3 In order to achieve this criterion the learner must be able to identify the origin of fire through a scene examination. A multi media presentation could be prepared and delivered to the group. Alternatively a written description or practical demonstration could be provided.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with units 1, 2, 4, 11, 12, 14, 17 and 22 and may link to additional units of this BTEC qualification.
- This Unit links to the Fire and Rescue Service National Occupational Standards
- This unit links to Level 2 NVQ in Fire Safety and Level 3 NVQ in Emergency Fire Service - Operations in the Community.
- This unit links to the National Curriculum

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Science:

KS3: Sc1: 2d, 2e, 2f, 2h, 2k, 2m Sc3: 2g, 2h

KS4: 6b

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 3b, 3c, 3d, 3k, 4a, 4c, 4f

KS4: 1a, 1b, 1c, 1d, 3d, 3f, 4a, 4c, 4e, 4f

Essential Resources

It is recommended that Unit 23 - The Science of Fire Extinction is delivered to learners prior to Unit 24 due to the related subject matter.

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit, e.g. presentations, video/DVD, fire investigation reports etc. Personnel must be qualified to the relevant level to deliver this unit.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.fire.org.uk
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk
- www.forensic.gov.uk/forensic_t/inside/career/opp_1.htm
- www.communities.gov.uk/publications/fire/ukfireinvestigation

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 3 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Writers should complete the following key skills where appropriate.

Application of number Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>N3.1 Plan an activity and get relevant information from relevant sources.</p> <p>N3.2 Use this information to carry out multi-stage calculations to do with:</p> <ul style="list-style-type: none"> a amounts or sizes b scales or proportion c handling statistics d using formulae. <p>N3.3 Interpret the results of your calculations, present your findings and justify your methods.</p>
Communication Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • • 	<p>C3.1a Take part in a group discussion.</p> <p>C3.1b Make a formal presentation of at least eight minutes using an image or other support material.</p> <p>C3.2 Read and synthesise information from at least two documents about the same subject.</p> <p>Each document must be a minimum of 1000 words long.</p> <p>C3.3 Write two different types of documents, each one giving different information about complex subjects.</p> <p>One document must be at least 1000 words long.</p>

Information and communication technology Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>ICT3.1 Search for information, using different sources, and multiple search criteria in at least one case.</p> <p>ICT3.2 Enter and develop the information and derive new information.</p> <p>ICT3.3 Present combined information such as text with image, text with number, image with number.</p>
Improving own learning and performance Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>LP3.1 Set targets using information from appropriate people and plan how these will be met.</p> <p>LP3.2 Take responsibility for your learning, using your plan to help meet targets and improve your performance.</p> <p>LP3.3 Review progress and establish evidence of your achievements.</p>
Problem solving Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>PS3.1 Explore a problem and identify different ways of tackling it.</p> <p>PS3.2 Plan and implement at least one way of solving the problem.</p> <p>PS3.3 Check if the problem has been solved and review your approach to problem solving.</p>

Working with others Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>WO3.1 Plan work with others.</p> <p>WO3.2 Seek to develop co-operation and check progress towards your agreed objectives.</p> <p>WO3.3 Review work with others and agree ways of improving collaborative work in future.</p>

Unit 24: Water Safety and Water Rescue Techniques used by the Fire and Rescue Service

NQF Level 2: BTEC Short Course

Guided learning hours: 10

Unit abstract

Learners will gain an insight into water safety and preventative measures that can be undertaken to avoid water related hazards and risks and the ways Fire and Rescue Service respond to water related incidents and the various operational techniques and water safety initiatives it can provide.

This unit allows learners to develop and use a range of personal skills, knowledge and understanding that underpin the Fire and Rescue Service response to emergencies in and around water sources.

Completion of this unit will be achieved through participation in a variety of different activities; which will culminate in learners having the ability to demonstrate a knowledge and understanding of the ways the Fire and Rescue Service responds to emergencies involving or near to water sources.

Learning outcomes

On completion of this unit a learner should:

- 1 Be able to identify a range of water sources and the hazards to health and safety when moving in and around open water.
- 2 Explain what emergency action could be employed and the different techniques used by the Fire and Rescue Service when dealing with emergencies in or near to water sources.

Unit content

1. Identify a range of water sources and the hazards to health and safety when moving in and around open water.

Water Sources: sea, rivers, canals, lakes, ponds, sewers etc

Hazards: in water e.g. diseases, fast flowing water, floating and sub-surface debris, ice; around water e.g. uneven and unstable terrain; weather: the effects of weather and yearly temperature on open water, appropriate clothing and personal protective equipment; physiology, electricity

Risks: The effects of hot and cold water on the body when immersed in water, trapped, tidal effect and currents; slips, trips and falls; entanglement, illness from contact with contaminants; electric shock

- 2 Explain what emergency action could be employed and the different procedures applied by the Fire and Rescue Service when dealing with emergencies in or near to water sources.

Emergency action: assess appropriate action required; contacting emergency services; passing information to emergency services; deploying on site emergency life saving equipment

Appliances and Equipment: e.g. pumping appliance, rescue appliances, boats, throw line, life vest, dry suit, rescue path, breathing apparatus

Procedures: risk assessment; safety of personnel; safety of public; initiate rescue in or out of water

Grading grid

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criterion for a pass grade describe the level of achievement required to pass this unit.

Grading criteria	
To achieve a pass grade the evidence must show that the learner is able to:	
P1	Describe five hazards associated with moving in and around a range of water sources
P2	Explain three main safety control measures when working on or near water sources within the Fire and Rescue Service role
P3	Identify and explain the operation and use of three items of Fire and Rescue Service equipment used in water rescues

Essential guidance for tutors

Delivery

This unit should be mainly practical with consideration of suitable and sufficient risk assessment of activities, allowing learners the opportunity to demonstrate teamwork and interpersonal skills. To achieve this, learners will need to be given the opportunity to participate in a range of teamwork/team-building activities. Learners will also need to be given appropriate underpinning knowledge to help them identify and develop these skills.

Learners will need to be given the opportunity to develop a range of personal skills reflective of those operating within the Fire and Rescue Service. Particular consideration should be given to relating communication, teamwork, problem-solving and self-management skills within all activities throughout the unit.

A number of different approaches can be considered when developing the learners' understanding of water safety and rescue techniques used by the Fire and Rescue Service. This may include local and national safety initiatives appropriate to their community. These approaches could be scenario, personal research or delivery based both inside and outside their immediate learning environment, or any combination of the above. The methods used should reflect the learning strategy and the development needs of the learner.

Learners will need to be given the opportunity to participate in a range of Fire and Rescue Service operational activities. The health and safety of all participants should be paramount.

Assessment

A number of assessment activities can be used to measure the achievement of learning outcomes in this unit. Most of the primary assessment should be practical using direct observations of performance. Other forms of assessment can include oral or written question and answers activities and simulation.

Assessment evidence may be in the form of witness testimony, portfolio, research projects, presentations and multimedia sources.

Learners should be made aware that their performance is being assessed and should be provided with supportive and constructed feedback on performance and development needs. All evidence, especially multimedia should have written feedback attached and be suitably referenced for each learner and activity.

Learners should be awarded a pass grade for the successful completion of all assignment tasks required in the grading grid.

Assessment guidance note

P1 To achieve this criteria the learner should be able to demonstrate their knowledge and understanding of the hazards and risks associated with a variety of water sources. This could be through verbal, visual, written presentation.

P2 To achieve this criteria the learner should be able to demonstrate their knowledge and understanding of the hazards, risks and safety control measures to minimise risk within the

Fire and Rescue Service when working on or near water sources. This could be through verbal, visual, written presentation or demonstration.

P3 The learner must identify and explain the usage of three items of equipment used in water rescues i.e. Throw lines, life vests, Dry suits, flotation devices etc. They must describe how each piece of equipment is used. (Illustrations of different types of equipment could be provided for learners to identify items.) Opportunity must be provided for the learner to complete this task using real equipment.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

- This Unit links with 1, 2, 4 to 7, 9 to 12 and 21 and may link to additional units of this BTEC qualification
- This unit links to the Fire and Rescue Service National Occupational Standards
- This Unit links to Level 2 NVQ in Fire Safety and Level 3 NVQ in Emergency Fire Service - Operations in the Community.
- This unit links to the National Curriculum:

English:

KS3 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

KS4 EN1 - Most of these objectives will be covered, however this will depend on the style of delivery of the module

Geography:

TBC

Citizenship:

KS3 - 3c

KS4 - 3c

PSHE:

KS3: 1a, 1b, 1c, 2h, 3b, 3c, 3d, 3k, 4a, 4b, 4c, 4e, 4f

KS4: 1a, 1b, 1c, 1d, 2h, 3d, 3f, 3k, 4a, 4b, 4c, 4e, 4f

Physical Education:

KS3: 1a, 1b, 2a, 3a, 3b

KS4: 1a, 1b, 3b, 3c, 3d

Essential resources

Sufficient learning resources should be available from Fire and Rescue Services to support learners through this unit. It would be beneficial; where possible that tasks are completed using real equipment therefore a variety of Fire and Rescue appliances and equipment used during water rescues will need to be made available. Access to sufficient outdoor facilities is essential for the acquisition of skills and unit delivery. Personnel must be qualified to the relevant level to lead practical sessions.

Fire Service Manuals/Circulars:

- Fire Services Youth Training Association-Fire and Rescue Service Manual Youth Training and Development (Stationary Office, 31st August 2004) ISBN10- 0113412932
- Related Fire Services Circulars and where these have been superseded consideration should be given to these documents within your organisation.

Additional Resources

Websites:

- www.fire.gov.uk
- www.fsyta.org
- www.firekills.gov.uk
- www.staywise.co.uk
- www.communities.gov.uk

Key skills

Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of Level 3 key skill evidence are given here. Tutors should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Writers should complete the following key skills where appropriate.

Application of number Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>N3.1 Plan an activity and get relevant information from relevant sources.</p> <p>N3.2 Use this information to carry out multi-stage calculations to do with:</p> <ul style="list-style-type: none"> a amounts or sizes b scales or proportion c handling statistics d using formulae. <p>N3.3 Interpret the results of your calculations, present your findings and justify your methods.</p>
Communication Level 3	
When learners are:	They should be able to develop the following

	key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • • 	<p>C3.1a Take part in a group discussion.</p> <p>C3.1b Make a formal presentation of at least eight minutes using an image or other support material.</p> <p>C3.2 Read and synthesise information from at least two documents about the same subject.</p> <p>Each document must be a minimum of 1000 words long.</p> <p>C3.3 Write two different types of documents, each one giving different information about complex subjects.</p> <p>One document must be at least 1000 words long.</p>

Information and communication technology Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>ICT3.1 Search for information, using different sources, and multiple search criteria in at least one case.</p> <p>ICT3.2 Enter and develop the information and derive new information.</p> <p>ICT3.3 Present combined information such as text with image, text with number, image with number.</p>
Improving own learning and performance Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>LP3.1 Set targets using information from appropriate people and plan how these will be met.</p> <p>LP3.2 Take responsibility for your learning, using your plan to help meet targets and improve your performance.</p> <p>LP3.3 Review progress and establish evidence of your achievements.</p>
Problem solving Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>PS3.1 Explore a problem and identify different ways of tackling it.</p> <p>PS3.2 Plan and implement at least one way of solving the problem.</p> <p>PS3.3 Check if the problem has been solved and review your approach to problem solving.</p>

Working with others Level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> • xxx xxx • • 	<p>WO3.1 Plan work with others.</p> <p>WO3.2 Seek to develop co-operation and check progress towards your agreed objectives.</p> <p>WO3.3 Review work with others and agree ways of improving collaborative work in future.</p>

Annexe A

QCA codes

The QCA National Qualifications Framework (NQF) code is known as a Qualification Accreditation Number (QAN). This is the code that features in the DfES Funding Schedules, Section 96 and Section 97, and is to be used for all qualification funding purposes. Each unit within a qualification will also have a QCA NQF unit code.

The QCA qualification and unit codes will appear on the learner's final certification documentation.

The QANs for qualifications/the qualification in this publication are/is:

Insert QAN code(s) Insert qualification title(s)

Annexe B

Mapping with NVOs

The grid below maps the knowledge covered in the Edexcel Level 2 BTEC Award and Certificate in Fire and Rescue Services in the Community against the underpinning knowledge of the Levels 2 NVQ in Fire Safety and Level 3 NVQ in Emergency Fire Services - Operations in the Community.

KEY

√ indicates that the Edexcel Level 2 BTEC Award and Certificate in Fire and Rescue Services in the Community covers parts of the underpinning knowledge of relevant NVQ units

Edexcel unit	Level 2 NVQ in Fire Safety Unit					Level 3 NVQ in Emergency Fire Services - Operations in the Community								
	1	2	3	4	5	1	2	3	4	5	6	7	8	9
Unit 1 The role of the Fire and Rescue Service in the community	√	√	√	√	√									
Unit 2 The Emergency Services Community	√	√	√	√	√									
Unit 3 The History and Changing Roles of the Fire and Rescue Service	√	√	√	√	√									
Unit 4 Hose, Lines, Equipment and Fittings used within the Fire and Rescue Service														
Unit 5 Pumping Appliances with the Fire and Rescue Services														
Unit 6 Special Appliances used within the Fire and Rescue Service														
Unit 7 The Operation and Use of Ladders in the Fire and Rescue Service														
Unit 8 Breathing Apparatus Equipment and Procedures														

Edexcel unit	Level 2 NVQ in Fire Safety Unit					Level 3 NVQ in Emergency Fire Services - Operations in the Community								
	1	2	3	4	5	1	2	3	4	5	6	7	8	9
Unit 9 Casualty Extrication by the Fire and Rescue Service														
Unit 10 Resource Management within the Fire and Rescue Service														
Unit 11 Team and Leadership Skills used in the Fire and Rescue Service	√	√	√	√	√									
Unit 12 Effective communication in the Fire and Rescue Service	√	√	√	√	√									
Unit 13 Citizenship and Personal Responsibility within the Fire and Rescue Service														
Unit 14 Community Safety	√	√	√	√	√									
Unit 15 Improving Our Community with the Fire and Rescue Service														
Unit 16 Healthy Living for Working in the Fire and Rescue Service	√	√	√	√	√									
Unit 17 Careers Related to the Fire and Rescue Service														
Unit 18 The Preservation of Artefacts within the Fire and Rescue Service														
Unit 19 Navigation Skills used in the Fire and Rescue Service														
Unit 20 Planning, Participating In and Reviewing Residential Experiences														
Unit 21 Operational Response Simulations and														

Edexcel unit	Level 2 NVQ in Fire Safety Unit					Level 3 NVQ in Emergency Fire Services - Operations in the Community								
	1	2	3	4	5	1	2	3	4	5	6	7	8	9
Procedures within the Fire and Rescue Service														
Unit 22 The Science of fire and extinction														
Unit 23 Fire Investigation within the Fire and Rescue Service														
Unit 24 Water Safety and Water Rescue Techniques used by the Fire and Rescue Service														

Annexe C

Key skills mapping

Key skills	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20
N2.1			3																√	
N2.2			3																√	
N2.3																				
C2.1a	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
C2.1b	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
C2.2	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
C2.3		√				√		√				√	√	√				3		
ICT2.1					√			√				√		√			√			
ICT2.2								√						√			√			
ICT2.3					√			√						√			√			
LP2.1	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
LP2.2		√	√		√	√		√				√	√	√		√	√		√	
LP2.3	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
PS2.1	√	√	√	√	√	√	√		√	√	√	√		√	√	√		√	√	√

UNIT 17: FIRE INVESTIGATION

PS2.2	√	√	√	√	√	√	√		√	√	√	√		√	√	√		√	√	√
PS2.3	√	√	√	√		√	√		√	√	√	√		√	√	√		√	√	√
WO2.1	√	√		√	√		√		√	√	√				√			√		√
WO2.2	√			√			√		√	√	√				√			√		√
WO2.3	√			√			√		√	√	√				√			√		√

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