BTEC

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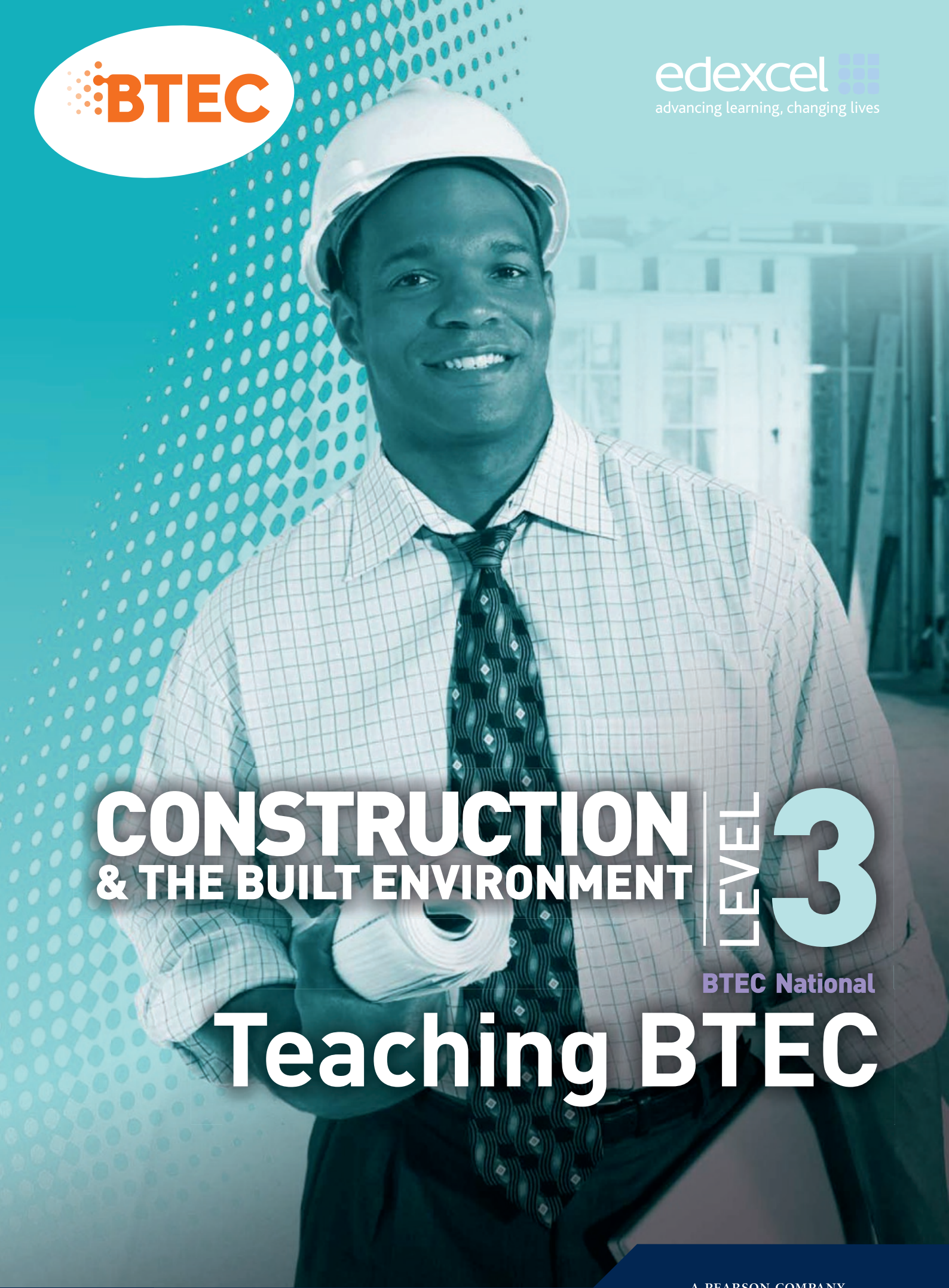

CONSTRUCTION & THE BUILT ENVIRONMENT

LEVEL 3

BTEC National

Teaching BTEC

A PEARSON COMPANY

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Copies of official specifications for all Edexcel qualifications may be found on the Edexcel website: www.edexcel.com

Contents

Introduction

This publication supports your delivery of BTEC Level 3 National qualifications in Construction and the Built Environment, and should be read in conjunction with the published specification. It provides an overview of how the qualification has changed, how the BTEC unit specifications should be used, and how best to deliver the course and assess your learners' progress.

These materials are not prescriptive. You may feel that the course can be delivered and assessed more effectively in a different way. This may be because of the way the qualification is organised within your centre or because a different approach better suits your learners, after taking into consideration their learning styles and prior learning. BTEC qualifications are designed to enable you to plan and deliver programmes that are dynamic and relevant to local needs.

Further information and support

For a complete guide to all support offered by Edexcel at every stage of your BTEC delivery, please refer to *BTEC Support*. This booklet is available in your Specification Pack.

What's new for BTEC

Edexcel has redeveloped its suite of BTEC Level 2 First and BTEC Level 3 National qualifications to ensure that they are aligned with the new Qualifications and Credit Framework (QCF). Wherever possible the changes have been minimal and in all cases BTEC units have retained their key characteristics.

What is the Qualifications and Credit Framework?

The Qualifications and Credit Framework (QCF) is a system whereby credit is awarded for qualifications and units (small steps of learning). It enables learners to work towards qualifications at their own pace and along flexible routes.

All QCF units are published on the Register of Regulated Qualifications (RRQ). Every unit and qualification has a credit value showing how much time it takes to complete and a level showing how difficult it is (ranging from Entry Level to Level 8). Learners are given a unique learner number (ULN) where their individual record of credit accumulation is logged. For more information see www.accreditedqualifications.org.uk.

How does this affect the BTEC Level 3 National qualifications?

The new family of BTEC Nationals – which are all at Level 3 – is made up of four sizes of qualification: Certificates, Subsidiary Diplomas, Diplomas and Extended Diplomas. (These qualification names have changed during the revision of BTEC Nationals to meet the QCF structure – please see the table below to compare the new names to the old if you have taught BTEC before.)

The Certificate has been introduced as a new BTEC Level 3 National qualification, to be broadly equivalent to one AS Level. This increases flexibility and improves opportunities for co-teaching with A Levels and other qualification types. The BTEC National Certificate will be nested wherever possible in the corresponding BTEC National Subsidiary Diploma, and the BTEC National Diploma in the corresponding BTEC National Extended Diploma.

All BTEC Level 3 National qualifications (whether Certificates, Subsidiary Diplomas, Diplomas and Extended Diplomas) may comprise a mix of units at different levels but the majority of units must be at the main level of the qualification: Level 3.

Rules of unit combination have been determined to show how learners can select and combine unit choices to achieve new BTEC Level 3 National qualifications (please see the specification for the list of available units). In some cases there will be mandatory units which all learners must take to achieve their qualification.

The overall grade for any BTEC qualification will be based on a table in the specification that converts pass, merit or distinction unit grades to points and then totals those points.

> For full information about these qualification types, rules of unit combination and grading please see the specification.

New features for BTEC units

There are some new features common to all new BTEC units:

- credit level and guided learning hours (GLH)* are stated
- expanded guidance is given on delivery and assessment
- BTEC units now contain guidance and mapping to functional skills and personal learning and thinking skills (PLTS) – so you can embed learning for these skills
- outline learning plans give suggestions for unit delivery and assessment
- a suggested programme of assignments gives ideas for assignments that will cover the unit's assessment and grading criteria†
- each unit suggests how you can link with employers.

This additional delivery information is not meant to be prescriptive. A key feature of BTEC is that you can match your delivery of the qualifications to local needs and circumstances, and to the opportunities that present in your area to give a real vocational focus. For more information about BTEC units see page 22.

	BTEC Level 3 National Qualifications			
	Certificate	**Subsidiary Diploma**	**Diploma**	**Extended Diploma**
Previous name	this is new	Award	Certificate	Diploma
Credits (minimum)	30	60	120	180
Guided learning hours (GLH)	180	360	720	1080
Broad equivalence	1 AS Level	1 A Level	2 A Levels	3 A Levels

***Guided learning hours (GLH)**: all the times when a member of staff (eg tutor, trainer or facilitator) is present to give guidance ('contact time'). This includes lessons, lectures, tutorials and supervised study in, for example, learning resource centres and workshops. It also includes time spent with learners observing and assessing their achievements as they work towards their assignments.

Functional skills

Functional skills have replaced key skills. These are a set of standards that establish a benchmark in English, mathematics and ICT. Functional skills are available from Entry Level to Level 2.

BTEC specifications now offer guidance on how these functional skills can be embedded in your delivery of each unit. Please note: functional skills can be tested while delivering a BTEC course but they are not an integral part of the qualification. They are designed to be assessed by externally set and marked tests.

Personal, learning and thinking skills (PLTS)

BTEC Level 3 National units offer guidance and signposting to help you develop learners' personal, learning and thinking skills. Along with functional skills, these are seen as key elements for success in learning, life and work. Please note that PLTS are not a compulsory or integral component of the BTEC Level 3 National, but should you wish to integrate your PLTS delivery with this qualification we provide this guidance for you to do so.

The PLTS framework consists of six groups of skills:

- independent enquiry (IE)
- creative thinking (CT)
- reflective learning (RL)
- team working (TW)
- self-management (SM)
- effective participation (EP).

These have connected outcome statements (to view these visit **www.qcda.gov.uk**).

Although each skill set is distinctive they may be interconnected and any assignment or learning experience may explore one or more PLTS. BTEC Level 3 National qualifications offer the opportunity to cover PLTS, but in order for learners to recognise this coverage the PLTS would need to be made explicit at delivery. An effective way to record competence in PLTS is by using a tracking system that is linked to the PLTS references in the unit specifications.

WorkSkills

Edexcel has developed a range of WorkSkills qualifications at Entry 3, Level 1 and Level 2 that may also be studied alongside BTEC Level 3 Nationals. WorkSkills comprise a range of units that focus on personal development, work, social and domestic skills.

For more information on WorkSkills see **www.edexcel.com/workskills**

So, why choose BTEC?

BTECs are an established and highly successful alternative to general qualifications, suitable for a wide range of learners. As work-related qualifications, they are designed to accommodate the needs of employers as well as allowing progression to university.

By nature BTECs provide a more practical, real-world approach to learning alongside a theoretical background, giving learners the knowledge, understanding and skills that they need to prepare for employment. BTECs also provide career development opportunities for those already in work. They can be taken as well as, or instead of, GCSEs and A levels in schools and colleges.

Comprising individual units, which can be built to form a qualification at a size that is suited to the learner, BTECs can be delivered as a full-time or part-time course. Each unit is assessed through the completion of assignments that are designed by you as tutor and call on a range of evidence types. Such flexibility enables you to deliver a qualification that is just right for your learners and your centre.

†Every BTEC unit contains an Assessment and Grading Criteria grid. For the purpose of brevity, this will be referred to as the 'grading grid'/'grading criteria' throughout this booklet. In official terms assessment criteria are pass criteria; grading criteria are merit and distinction criteria.

What's new for BTEC Level 3 Nationals in Construction and the Built Environment

Units have been revised and updated so that they can be mapped to the Qualifications and Credit Framework. This table summarises the specification changes unit by unit. For a complete list of new units, including rules of combination and mandatory/optional unit status, please see the specification.

New units		Old units			Mapping/comments
Number	**Name**	**Number**	**Name**		
Unit 1	Health, Safety and Welfare in Construction and the Built Environment	Unit 1	Health, Safety and Welfare in Construction and the Built Environment		
Unit 2	Sustainable Construction	Unit 2	Construction and the Environment		
Unit 3	Mathematics in Construction and the Built Environment	Unit 3	Mathematics in Construction and the Built Environment		
Unit 4	Science and Materials in Construction and the Built Environment	Unit 4	Science and Materials in Construction and the Built Environment		
Unit 5	Construction Technology and Design in Construction and Civil Engineering	Unit 5	Construction Technology and Design in Construction and Civil Engineering		
Unit 6	Building Technology in Construction	Unit 6	Building Technology in Construction		
Unit 7	Project Management in Construction and the Built Environment	Unit 7	Planning, Organisation and Control of Resources in Construction and the Built Environment		
Unit 8	Graphical Detailing in Construction and the Built Environment	Unit 8	Graphical Detailing in Construction and the Built Environment		
Unit 9	Measuring, Estimating and Tendering Processes in Construction and the Built Environment	Unit 9	Measuring, Estimating and Tendering Processes in Construction and the Built Environment		
Unit 10	Surveying in Construction and Civil Engineering	Unit 10	Surveying in Construction and Civil Engineering		
Unit 11	Economics and Finance in Construction and Civil Engineering	Unit 11	Economics and Finance in Construction and Civil Engineering		
Unit 12	Setting Out Processes in Construction and Civil Engineering	Unit 12	Setting out Processes in Construction and Civil Engineering		
Unit 13	The Underpinning Science for the Provision of Human Comfort in Buildings	Unit 13	Environmental Science in Construction		
Unit 14	Structural Mechanics in Construction and Civil Engineering	Unit 14	Structural Mechanics in Construction and Civil Engineering		
Unit 15	Building Surveying in Construction	Unit 15	Building Surveying in Construction		
Unit 16	Mechanical and Electrical Services in Construction	Unit 16	Mechanical and Electrical Services in Construction		
Unit 17	Building Regulations and Control in Construction	Unit 17	Building Regulations and Control for Construction		
Unit 18	Computer Aided Drafting and Design for Construction	Unit 18	ICT and CAD in Construction and the Built Environment		Unit 18 has been split into two units – Units 18 and 54
Unit 19	Further Mathematics in Construction and the Built Environment	Unit 19	Further Mathematics in Construction, Civil Engineering and Building Services Engineering		
Unit 20	Property Valuation in Construction	Unit 20	Property Valuation in Construction		
Unit 21	Project in Construction and the Built Environment	Unit 21	Employer-Related Project in Construction and the Built Environment		
Unit 22	Design Procedures in Construction	Unit 22	Design Procedures in Construction		
Unit 23	Spatial Data Techniques in Construction and Civil Engineering	Unit 23	Spatial Data Techniques in Construction and Civil Engineering		
Unit 24	Planning Procedures in Construction	Unit 24	Planning Procedures in Construction		
Unit 25	Property Law in Construction	Unit 25	Property Law in Construction		

New units		Old units			Mapping/comments
Number	Name	Number	Name		
Unit 26	Geographical Information Systems in Construction	Unit 26	Land Information in Construction		
Unit 27	Surveying Technology in Construction and Civil Engineering	Unit 27	Surveying Technology in Construction and Civil Engineering		
Unit 28	Topographic Surveying in Construction and Civil Engineering	Unit 28	Topographic Surveying in Construction and Civil Engineering		
Unit 29	Construction in Civil Engineering	Unit 29	Construction in Civil Engineering		
Unit 30	Public Health Engineering in Civil Engineering	Unit 30	Public Health Engineering in Civil Engineering		
Unit 31	Highway Construction and Maintenance in Civil Engineering	Unit 31	Highway Construction and Maintenance in Civil Engineering		
Unit 32	Building Services Control Systems	Unit 32	Building Services Control Systems		
Unit 33	Building Services Science	Unit 33	Building Services Science		
Unit 34	Low Temperature Hot Water Heating in Building Services Engineering	Unit 34	Heating in Building Services Engineering		
Unit 35	Ventilation and Air Conditioning Design in Building Services Engineering	Unit 35	Ventilation and Air Conditioning in Building Services Engineering		
Unit 36	Fluids - Static and Dynamic in Building Services Engineering	Unit 36	Fluids Static and Dynamic in Building Services Engineering		
Unit 37	Refrigeration Technology in Building Services Engineering	Unit 37	Refrigeration Technology in Building Services Engineering		
Unit 38	Plumbing Technology in Building Services Engineering	Unit 38	Plumbing Technology in Building Services Engineering		
Unit 39	Electrical Principles in Building Services Engineering	Unit 39	Electrical Principles in Building Services Engineering		
Unit 40	Electrical Installation Standards and Components in Building Services Engineering	Unit 40	Electrical Installation Standards and Components in Building Services Engineering		
Unit 41	Electrical Installation Design in Building Services Engineering	Unit 41	Electrical Installation Design in Building Services Engineering		
Unit 42	Commissioning Electrical Installations in Building Services Engineering	Unit 42	Commissioning Electrical Installations in Building Services Engineering		
Unit 43	Employment Framework in the Built Environment				
Unit 44	Conversion and Adaptation of Buildings				
Unit 45	Principals and Applications of Management Techniques in the Construction Industry				
Unit 46	Tendering and Estimating in Construction				
Unit 47	Measurement Techniques in Construction				
Unit 48	Structural Behaviour and Detailing for Construction				
Unit 49	Construction Design Procedures				
Unit 50	Construction Design Technology				
Unit 51	Civil Engineering Construction				
Unit 52	Structural Analysis and Design in Construction				
Unit 53	Personal and Professional Development in the Built Environment				
Unit 54	Information and Communication Technology in Construction and the Built Environment	Unit 18	ICT and CAD in Construction and the Built Environment		Unit 18 has been split into two units – Units 18 and 54

BTEC success stories

Doncaster College, The Hub

Doncaster College delivers further and higher education right the way through, from 14-year-old learners who are still in school and engaged on initiatives like the step projects, on to our Higher National learners who are becoming professionals. BTEC courses have been successful here for a great number of years at all levels.

Why did you choose to run this BTEC course?

We have successfully run BTEC courses for many years. We are currently running the BTEC Level 3 National Diploma in Construction and the Built Environment, both on a part-time and full-time basis. This allows learners to progress to our BTEC Higher National Diploma programmes, which are the 'big gun' qualifications for the employers we serve in the Doncaster area.

What have you enjoyed most about the course as a tutor?

The fact that we in the Construction department have designed flexible learning programmes at both National and Higher National levels that suit learner specialisms and open up greater choice. The BTEC qualifications, at all levels, allow tutors to design their own assignments and assessment instruments, encouraging creativity, while still ensuring that essential learning outcomes and assessment criteria are met.

How has your teaching changed since you started to deliver it?

Teaching and learning have become far more enjoyable for both the tutor and the learner.

What changes have you observed in learners as they have progressed through the course?

The learners have to do a significant amount of research, and I find that by the end of the programme they are accomplished at this. This skill will serve them well on higher level programmes and when they enter the world of work. In the process of their learning they also become more confident and their self-esteem improves.

Can you give any examples of how your learners have progressed since embarking on a BTEC course?

Last year saw learners complete their Higher National Certificate (HNC) in Construction. These particular learners had entered the college on BTEC First Diploma courses in Construction and progressed right through to succeed at higher education level. This year we see our full-time BTEC National learners completing their course of study and progressing either to our HNC courses or to universities to pursue their various specialist routes. This is a success story by anyone's standards.

Grimsby Institute of Further and Higher Education

The Grimsby Institute offers a wide range of BTEC courses for many different sectors. The Institute has a worldwide reputation, operating in several different countries and with a large cohort of international learners.

Why did you choose to run this BTEC course?

We have successfully run BTEC Nationals for over ten years. BTEC programmes are appealing because learners can achieve through written assessments rather than examinations.

What have you enjoyed most about the course as a tutor?

I have enjoyed developing assignments for the units that challenge the more able learners. Contextualising grading criteria into realistic construction scenarios has also been a challenge. We try to base these on the local built environment.

How has your teaching changed since you started to deliver it?

The use of our Virtual Learning Environment has opened up a whole new digital world for learners, enabling them to access lesson slides and to download assignments. We offer a chat room facility to supplement learning. We also now look for ways to combine assessment criteria across several units, and map this accordingly, which helps to lighten the workload for learners. Where there are overlaps in specifications, we have discovered opportunities for very effective assessments.

What changes have you observed in learners as they have progressed through the course?

During their initial induction, learners bond with others in their small groups and develop both verbally and in their written work as their knowledge of construction expands. Towards the end of the second year, their life skills and work ethic develop as they realise that greater effort is required if they are to attain the higher grades. Learners have to do a significant amount of research in the course of the programme and I find that by the end they are quite accomplished in this. They develop into independent learners by the time they have achieved their BTEC qualification. Developing research skills takes an investment of time but rewards learners with a very useful skill for higher education.

Can you give any examples of how your learners have progressed since embarking on a BTEC course?

We have had quiet and shy learners who have obtained part-time work and driving skills. We have seen others – often the same type of learner – make real progress in giving presentations and speaking in front of peers. These individuals have gone on to progress to higher education and degree-level education, obtaining employment and opening up the prospect of future career progression. We had a National Diploma learner who sold a fish processing business and took up a partnership in a construction company. He passed the National Diploma and went on to complete the HNC in Construction. His business turnover doubled during this period and he found the knowledge and understanding gained during his four years of study an essential factor in attaining this.

Getting started: planning course delivery

Good planning is the first step to successful BTEC delivery and assessment. It is the best way of making sure everything is in place and that your unit coverage is robust and achievable. This guide should help you get started.

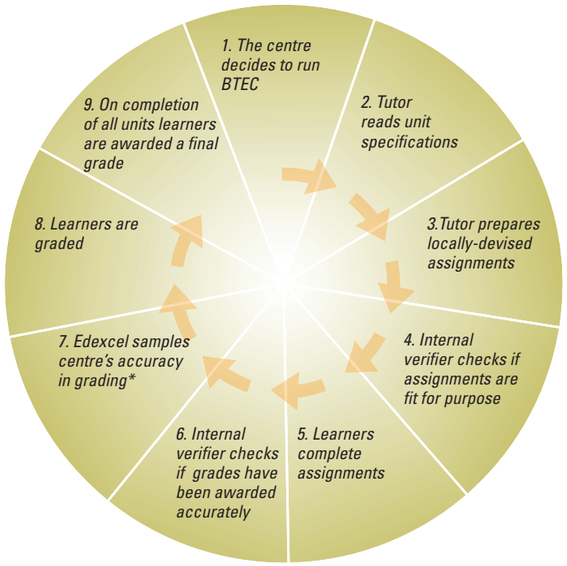
First things first

- Understand the structure of a BTEC unit (see page 22).
- Read and understand the specification.
- Decide whether you will teach unit by unit or if it is best to integrate unit delivery (for further guidance on this see page 18).
- Plan your programme of assignments (see page 38).

Key areas to consider

- resource planning, such as when you might need to call on the expertise of specialist staff or have need of specialist equipment
- Timetabling, guest speakers, construction site visits
- interim and major assessment points
- planning for internal verification

The BTEC assessment and delivery process



*Lead internal verifiers who have passed the OSCA2 test can seek certification of learner work for the programme(s) they manage without annual external sampling. (Some centres may be randomly sampled.)

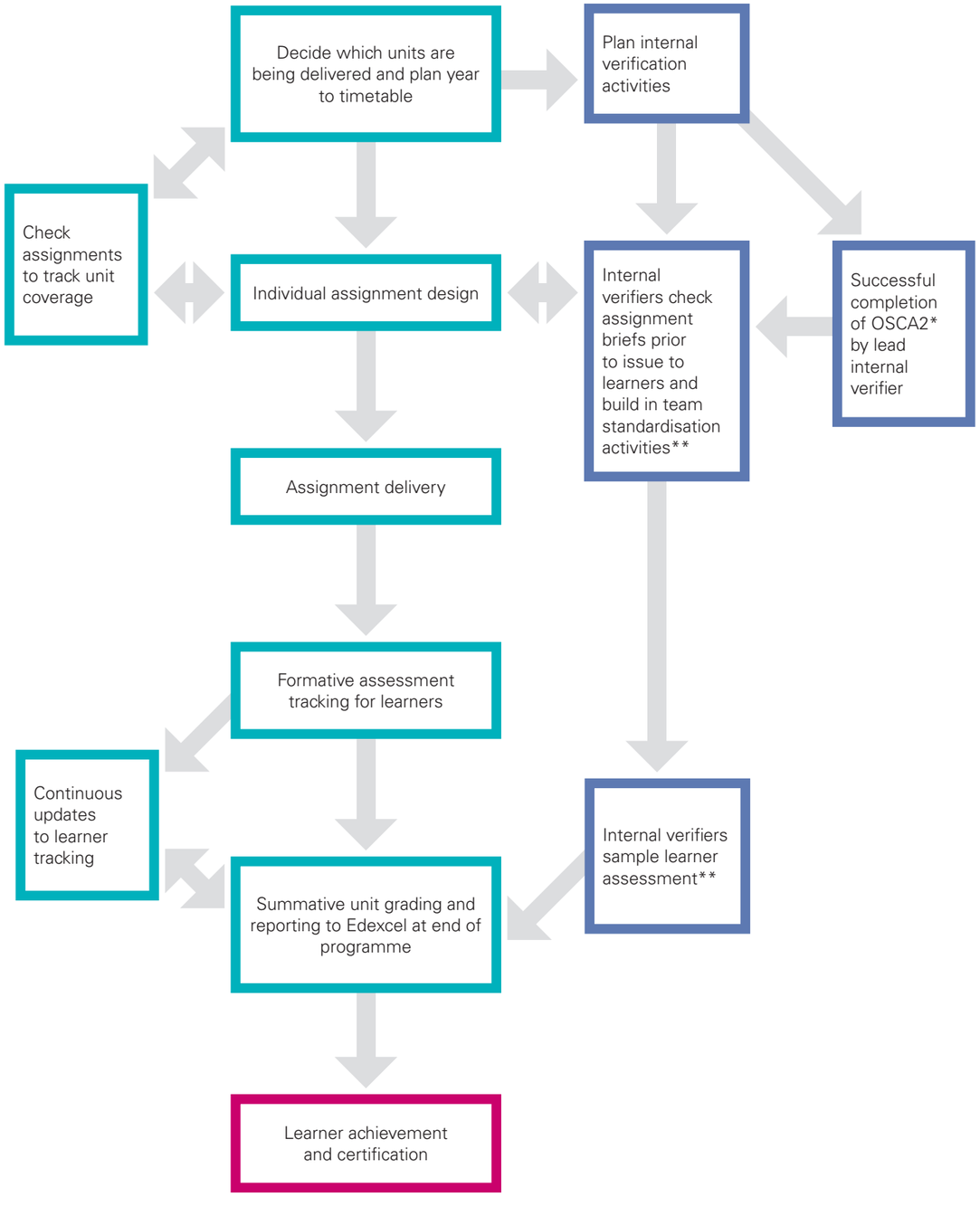
Overview of roles and responsibilities

	Tutors/assessors		Learners	Internal verifiers†	Programme managers/ heads of department
Planning	Read the specification Work with colleagues in their department, planning the course as a team Design assignments which are suited to local and learner needs and matched to unit grading criteria Action the internal verifier's advice on planning		Manage and organise their own time to prepare evidence for assignments	Support programme planning Arrange standardisation meetings across teams and multi-sites Ensure an effective system for recording learner achievement is in place Advise programme team on any training needs	Manage the team to devise assessment programme in collaboration with tutors (assessors) and internal verifier(s) Prepare resources plan to match assignment programme Manage timetable and room allocation Organise a tracking mechanism for learner achievement
Implementing	Deliver unit content and assignments Guide learners towards approaches in gathering assessment evidence Complete observation and witness statements to support demonstration of practical skills Observe, scrutinise and record evidence of individual work within group activities Review progress of learners to give opportunities for achieving grading criteria Award unit grades when the unit has been completed and internally verified		Participate fully in learning Produce work for assessment	Provide advice and support to assessors on regular basis Advise on opportunities for evidence generation and collection Advise on the appropriateness of assessment evidence with regard to level, sufficiency, authenticity, validity and consistency Advise on the interpretation of national standards and undertake standardisation exercise Keep records of the verification process Liaise with Edexcel Assessment Associate where appropriate	Take part in the programme Monitor delivery Organise regular team meetings Coordinate tutor/assessor activity Liaise with the internal verifier(s) and lead internal verifier(s) Deal with learner issues Oversee maintenance of learner record
Internal Verifying	Action internal verifier's advice on assignment design Check authenticity and sufficiency of assessment evidence produced against grading criteria/unit content Record assessment decisions and put these forward for internal verification Action internal verifier's advice on grading decisions		Check the validity and sufficiency of the evidence with the assessor Review opportunities for achieving grading criteria Participate in self and peer assessment activities where appropriate	Check if assignments are fit for purpose Use their subject specialism to sample assignments to check the quality of assessment and to ensure that it is consistent, fair and reliable Ensure own assessment decisions are sampled when teaching on the programme	Collaborate with internal verifier(s) and lead internal verifier(s) to maintain the programme Check the validity of overall verification programme Coordinate awarding body requirements Update internal verifier team on current practice Respond to any awarding body action
Feedback	Give constructive feedback to learners and record learners' formative achievements Provide guidance for learners to enhance achievement Plan next steps with learners Record learners' summative achievements		Receive assessment recommendations and feedback from the assessor Plan next steps with the assessor	Give decisions and feedback on the sampling Ensure appropriate corrective action is taken where necessary Provide feedback on aspects of the assessment system to the programme team, senior management and Edexcel Take part in the formal stages of any appeal	Coordinate and contribute to final internal awarding meetings Oversee recording and transmission of accurate results Review the course for the year with an end of year report including resource and teaching evaluation Plan for the next academic year

This is you

†Some of these functions may be undertaken by the lead internal verifier (see page 44).

Overview of year



*OSCA2 is the online standardisation test that would give a lead internal verifier, and consequently the programme(s) they manage, accredited status. With this status a lead internal verifier can seek certification of learners' work during the period of that accreditation without annual external sampling. (Some centres may be randomly sampled.)

**Where the centre has a lead internal verifier who has passed the OSCA2 test, this process is coordinated by them.

Learner induction

It is crucial that you familiarise your learners with how BTEC delivery and assessment work. Consider developing learners' understanding of:

- the specification (structure, content, grading grids, level of programme and equivalency)
- the purpose of the assignment briefs
- the relationship between the tasks given in an assignment and the grading criteria
- the way that the BTEC grading grids work in relation to their prior experience of other assessment models
- internal assessment procedures and centre policies
- the concept of deadlines and hand-in dates
- the concept of vocational and work-related learning
- learner responsibility.

Setting expectations

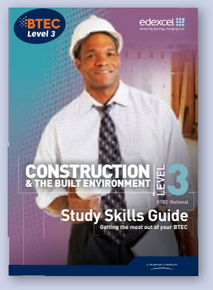
It is common practice to provide induction books for learners to sign at the start of the programme. These could set out your centre's expected rules and recommendations, for example adherence to health and safety legislation, and your centre's plagiarism policy. These could also contain rules and procedures about the facilities learners will use.

You might decide to show your new learners some work from previous years. This will give them a realistic idea of what is required and how assessment is carried out for a unit. This will take away some of the fear of assessment.

Progression

It is your duty to provide learners with clear guidance on possible progression routes that are relevant to their abilities. Some Level 3 learners will need to spend time researching and visiting potential Higher Education centres to confirm their progression choices.

Edexcel's Study Skills Guides



Edexcel publishes free Study Skills Guides for BTEC Level 3 National learners. These provide guidance on:

- self-assessment of strengths so learners can identify the best way for them to learn
- time management
- getting the most from work experience and special events
- working with others
- finding and using resources
- organising, interpreting and presenting information
- making presentations
- tackling assignments (including a worked assignment from a learner perspective).

External links

All work-related programmes benefit from external links with the vocational sector. These links could be developed in many ways:

- provision of 'live' case study material that is company or organisation based
- learner visits to vocational settings
- professional input from practitioners, especially where vocational expertise is clearly identified in the delivery section of the units
- work placements that are specifically related to the qualification
- tutor placements to enhance vocational expertise
- regular use of vocational language and skills in class, in assignments and in work placements
- setting assignments within a strong vocational context, such as a local construction scenario.

Forging links with local businesses

Level 3 provides an opportunity for learners to engage with employers at a career level. Learners often apply for training positions while on the National Extended Diploma. This may result in their transfer to a National Diploma so that they can attend one day per week while learning within a working environment.

Many construction employers use training organisations to filter out good candidates for potential training positions. This is an excellent opportunity to motivate learners. They should be encouraged to develop a detailed CV, ready for any potential employer who is recruiting.

The opportunities that work experience provides can be motivating for learners, both in terms of their vocational learning and their behaviour. They also give both employer and learner the opportunity of a trial.

Local employers are often very willing to assist in the delivery of BTEC courses. Discuss the unit specification with the employer to see where they can assist most effectively, whether with a site visit, learner interviews with company personnel, or as a guest speaker.

Another method of approaching prospective employers is through the learners' parents, one, or perhaps several, of which may already work within the construction industry.

Keeping up to date

Learners should be encouraged to read articles in *Construction News* and *Building* magazine (which often include visual case studies that are useful for assignments), and any other relevant construction trade journals.

Online resources

You will need to guide your learners as they seek to access technical information online. There are a number of online National Learning Network materials available for some of the units (see www.nln.ac.uk). Access to Barbour indexes will give a variety of trade information (see www.barbour-index.co.uk).

Career opportunities

It is important that learners are informed of the full range of career opportunities within the construction industry, from design to the variety of roles within the supply chain.

Invite a number of suitable professionals into the classroom to explain aspects of their roles on an informal basis. Encourage learner membership of the professional associations.

Work experience

Work experience is not a mandatory requirement for this level, but learners should be encouraged to seek this as part of their personal development and to be able to apply the theoretical knowledge gained. The evidence required for many of the assignments can be generated from good work experience. Evidence can also be usefully generated from learners' part-time work.

Good teaching practice and resources

Staffing

All staff should be appropriately qualified to teach this course. Many tutors delivering the BTEC Nationals in Construction and the Built Environment are qualified in the subject area and have relevant vocational experience. A tutor should have subject-specific knowledge for the unit(s) that they deliver.

For those tutors teaching BTEC vocational subjects, it is advisable that as part of your continuous professional development, you spend some time in a work placement to ensure you keep up to date with developments in the construction sector. This is especially important if your specialism is not directly related to construction.

BTEC Level 3 National qualifications should be as exciting and engaging as possible, and learners will benefit from tutors who are able to draw upon up-to-date practical experience of modern construction technology.

Co-taught programmes, coordinating the efforts of multiple tutors and practitioners, can be a very effective approach to delivery.

Familiarity with current professional practice

It is important to have knowledge of current professional practice in order to set standards within each specialist area. It is a feature of the design of BTEC qualifications that they have the flexibility to respond to National Occupational Standards in each area as current practice changes. They also offer the opportunity for innovative approaches to teaching and learning.

Additional specialist practitioners

You may employ specialist practitioners, taking care that legal requirements are met. Where external tutors are delivering units, the internal verifier should carry out close monitoring to help ensure the quality of the assignment process.

Awareness of learners requiring reasonable adjustment

Be aware of individual requirements and ensure that learners can achieve the unit grading criteria in all of the units that the planned programme contains. You are free to make adjustments to programme delivery to ensure that learners can be guaranteed gaining the qualification if they comply with all unit grading demands (see more information about reasonable adjustment in the panel below).

What is a reasonable adjustment?

Reasonable adjustments are arrangements which give a learner access to a qualification. Reasonable adjustments must be agreed at the pre-assessment planning stage and comprise any action that helps to reduce the effect of a disability or difficulty, which places the learner at a substantial disadvantage in the assessment situation. For example, these actions might involve changing or adapting the assessment method, adapting assessment materials or using assistive technology. Reasonable adjustments must not affect the reliability or validity of assessment outcomes and they must not give the learner an assessment advantage over other learners undertaking the same or similar assessments.

How do I apply for a reasonable adjustment for internally assessed BTEC qualifications?

For BTEC qualifications that are internally assessed centres do not need to apply to Edexcel to implement a reasonable adjustment. However, centres must only make reasonable adjustments in line with Edexcel policy and keep a record on Form RA1, which can be found on the Edexcel website.

Learning resources

A range of current resource material to support the programme – visits, textbooks, videos, magazines, journals, other publications and access to websites – is essential.

Sufficient resources to meet the number of learners

Your centre signs a commitment to ensure adequate provision as part of the approval process. This must be adhered to in all cases so that learners are guaranteed the very best provision a centre can provide. Ongoing Edexcel quality assurance processes will check that the centre has sufficient resources to support the delivery of the programme and that the centre has made provision to meet any specialist resource requirements at the approval stage.

Where resources are shared, carefully assess, plan and determine the access demands of all programmes within your subject area.

A construction resource base room is desirable

Try to ensure that the learners have a base room where their work can be displayed, along with other relevant construction-related posters and suppliers' information. Centres that have this provision find that their learners respect their work and are more likely to engage with the programme. Make sure a wide range of current suppliers' literature is displayed on the walls and notice boards and encourage learner ownership of this space.

Design of teaching space appropriate to activities

For construction programmes, only a teaching class room and access to computing and DVD facilities are required.

Access to specialist facilities, for example for demonstration and practice of brickwork

Optional unit choices should be made with care. Check the unit content for every unit to ensure that you have adequate physical equipment and appropriate technology and that you have access to well-trained staff to deliver the more specialist units. You may have a virtual learning environment developed on site to support and develop learners' studies.

Timetabling ICT to develop research skills

Careful timetabling should always be undertaken to maximise learners opportunities with IT equipment in order to facilitate the development of independent research skills.

Tutorials, individual learning plans and individual study time

There are many reasons why some learners cannot work in their own time at home. If you are able to offer additional access or time allocated for independent learning, this can enhance learner development and allow achievement at merit and distinction levels.

Learners benefit from individual learning plans that clearly explain what they need to do to achieve the grading criteria. This should be completed with the learner so that action points are agreed and achievable. Consider setting a series of shorter tasks with achievable deadlines that take account of the learner's other commitments, but also state clearly when and in what context the learner will be carrying out the work.

Health, safety and environmental issues in classrooms, IT laboratories and off-site visits

Consider health, safety and environmental issues in relation to work spaces. Take personal responsibility for health and safety, and conduct risk assessments for all activities and classrooms. Report any concerns.

Many centres use induction booklets, which learners are required to sign at the start of the programme. These explain the centre's rules, such as adherence to health and safety legislation, and set expectations for behaviour accordingly. They also detail procedures for the use of centre facilities that are available to learners.

Awareness of legislation within vocational practice

Make learners aware of any relevant legislation for vocational practice. Learners can endanger themselves or others if they do not know and understand what is required. Be sure that you are aware of any new or pending legislation that could impact on practice.

There is a health and safety unit for this course with clear focus on the legislation that is relevant to the construction industry, for example working at height.

Planning unit delivery

BTEC qualifications are designed to be flexible in their delivery and assessment, giving you the opportunity to construct and deliver programmes to suit your resources and learners. There are two main methods of approaching BTEC delivery: single unit delivery or integrated delivery.

Single unit delivery

BTEC qualifications comprise individual units that represent clusters of learning outcomes. For many sectors, a unit-by-unit approach to delivery is a valid and appropriate method for meeting the learning outcomes and delivering the unit content within the specification. Vocational applications of knowledge gained through unit-by-unit assignments allow learners reflect on their practice, resulting in focused and in-depth evaluations.

Integration of units

For some sectors, however, it is essential that learners know how the content covered by several units interrelates, as it would in the world of work. In these sectors unit delivery is best integrated, with assignment evidence mapped across two or more units. Integrated delivery is one of the distinct strengths of BTEC qualifications and can lead to a deeper practical and vocational understanding of the content.

Delivering the BTEC Level 3 National in Construction and the Built Environment

Integrated unit delivery can be a very effective approach to the delivery of BTEC programmes in Construction and the Built Environment. For example, for the Diploma and Extended Diploma, on the Civil Engineering pathway, Unit 1 (Health, Safety and Welfare in Construction and the Built Environment) and Unit 5 (Construction Technology and Design in Construction and Civil Engineering) could be integrated to link the legislation to the risks associated with the use of different construction technologies.

As another example from the same pathway, Unit 10 (Surveying in Construction and Civil Engineering) and Unit 12 (Setting Out Processes in Construction and Civil Engineering) could be cleverly integrated and mapped into one assignment that meets all required grading criteria.

As far as possible, try to create links with other units, as some learners may find it difficult to grasp how each unit relates to the whole. Many, for example, struggle to link roles and responsibilities to other functional activities such as the CDM Regulations 2007. A project-based assignment provides a range of opportunities to assess several grading criteria.

For information on how to design assignments that cover one or more units please see page 40. Information on tracking delivery – suitable for both a single unit and an integrated approach – can be found on pages 20 and 21.

Referencing

Encourage learners to adopt formal referencing in their work. It is always valuable for learners to be able to return to useful sources, so good records or notes should be encouraged. By the end of the programme, try to make referencing a matter of course, which will prepare learners for progression to higher programmes where referencing may be mandatory.

Making presentations

At an early stage in the programme, encourage learners to make presentations to other members of the class and make sure that they work in groups as frequently as possible. These are very important skills that the BTEC programmes have been successful in developing, which will certainly be beneficial in the world of work and in higher education.

Standing up and delivering a presentation can be daunting for a learner. You will need to handle this situation carefully. Try placing weaker individuals into teams to assist with building confidence.

Linking theory and practice in assessment

By encouraging your learners to refer to the work of others, you will help them to integrate the theoretical research into their practical assignments. At Level 3 they should be able to conduct research using local construction-related contractors, designers and suppliers. Where no alternative construction research opportunities exist, aspects of your centre's estates department may be researched. Providing locally focused case studies is an ideal way of structuring several assignments around one study, which learners may use to great effect in producing evidence for criteria outcomes.

Selecting the right units

- Look to the specification for information on which units are mandatory and which are optional, and the specific rules of unit combination for each qualification (Certificate, Subsidiary Diploma, Diploma, Extended Diploma).
- Consider which units your centre is best equipped to deliver (consider staffing, expertise, resources).
- Give learners a choice of units so they might follow a course that is appropriate to their needs, abilities and interests.

A suggested course structure

The tables below provide suggestions as to how you might choose to structure a BTEC Level 3 National in Construction and the Built Environment course. Refer to the published specification to check other optional units available and to view all rules of unit combination. It is key that you make unit choices that are relevant and appropriate for your own learners and centre resources.

When it comes to the **Diploma** and the **Extended Diploma**, it is possible for learners to take units for a Construction and the Built Environment qualification. Alternatively, they can opt to specialise by combining units for more of a focus on either:

- Civil Engineering
- Building Services Engineering

Look to the specification for full information on the mandatory and optional units that could be combined for a qualification along one of these two more specialist pathways.

BTEC Level 3 National Certificate in Construction and the Built Environment:

*This qualification has no mandatory units. Learners are required to complete one unit from the 'Optional units A' list and one unit from 'Optional units B' **plus** one further unit from either list, for a combined total of 30 credits.*

Year 1		
Term 1	**Term 2**	**Term 3**
Unit 1: Health, Safety and Welfare in Construction and the Built Environment (10 credits, Optional units A)	Unit 2: Sustainable Construction (10 credits, Optional units A)	Unit 5: Construction Technology and Design in Construction and Civil Engineering (10 credits, Optional units B)

BTEC Level 3 National Subsidiary Diploma in Construction and the Built Environment

*This qualification has no mandatory units. Learners are required to complete two units from the 'Optional units A' list and two units from 'Optional units B' **plus** two further units from either list, for a combined total of 60 credits.*

Year 1		
Term 1	**Term 2**	**Term 3**
Unit 1: Health, Safety and Welfare in Construction and the Built Environment (10 credits, Optional units A	Unit 2: Sustainable Construction (10 credits, Optional units A)	Unit 4: Science and Materials in Construction and the Built Environment (10 credits, Optional units A)
Year 2		
Term 4	**Term 5**	**Term 6**
Unit 5: Construction Technology and Design in Construction and Civil Engineering (10 credits, Optional units B)	Unit 32: Building Services Control Systems (10 credits, Optional units B)	Unit 33: Building Services Science (10 credits, Optional units B)

BTEC Level 3 National Diploma in Construction and the Built Environment:

*This qualification comprises six mandatory units **plus** six optional units that provide for a combined total of 120 credits, with no more than 30 credits to be obtained from 'Optional units B'.*

Year 1		
Term 1	**Term 2**	**Term 3**
Unit 1: Health, Safety and Welfare in Construction and the Built Environment (10 credits, Mandatory) Unit 2: Sustainable Construction (10 credits, Mandatory)	Unit 3: Mathematics in Construction and the Built Environment (10 credits, Mandatory) Unit 4: Science and Materials in Construction and the Built Environment (10 credits, Mandatory)	Unit 5: Construction Technology and Design in Construction and Civil Engineering (10 credits, Mandatory) Unit 6: Building Technology in Construction (10 credits, Mandatory)
Year 2		
Term 4	**Term 5**	**Term 6**
Unit 7: Project Management in Construction and the Built Environment (10 credits, Optional units A) Unit 17: Building Regulations and Control in Construction (10 credits, Optional units A)	Unit 8: Graphical Detailing in Construction and the Built Environment (10 credits, Optional units A) Unit 9: Measuring, Estimating and Tendering Processes in Construction and the Built Environment (10 credits, Optional units A)	Unit 15: Building Surveying in Construction (10 credits, Optional units A) Unit 10: Surveying in Construction and Civil Engineering (10 credits, Optional units A)

BTEC Level 3 National Extended Diploma in Construction and the Built Environment (Building Services Engineering)

*This qualification comprises six mandatory units **plus** twelve optional units that provide for a combined total of 180 credits.*

Year 1		
Term 1	**Term 2**	**Term 3**
Unit 1: Health, Safety and Welfare in Construction and the Built Environment (10 credits, Mandatory) Unit 4: Science and Materials in Construction and the Built Environment (10 credits, Mandatory) Unit 2: Sustainable Construction (10 credits, Mandatory)	Unit 3: Mathematics in Construction and the Built Environment (10 credits, Mandatory) Unit 10: Surveying in Construction and Civil Engineering (10 credits, Optional) Unit 8: Graphical Detailing in Construction and the Built Environment (10 credits, Optional)	Unit 5: Construction Technology and Design in Construction and Civil Engineering (10 credits, Optional) Unit 32: Building Services Control Systems (10 credits, Mandatory) Unit 33: Building Services Science (10 credits, Mandatory)
Year 2		
Term 4	**Term 5**	**Term 6**
Unit 7: Project Management in Construction and the Built Environment (10 credits, Optional) Unit 42: Commissioning Electrical Installations in Building Services Engineering (10 credits, Optional) Unit 40: Electrical Installation Standards and Components in Building Services Engineering (10 credits, Optional)	Unit 34: Low Temperature Hot Water Heating in Building Services Engineering (10 credits, Optional) Unit 35: Ventilation and Air Conditioning Design in Building Services Engineering (10 credits, Optional) Unit 36: Fluids – Static and Dynamic in Building Services Engineering (10 credits, Optional)	Unit 37: Refrigeration Technology in Building Services Engineering (10 credits, Optional) Unit 38: Plumbing Technology in Building Services Engineering (10 credits, Optional) Unit 54: Information and Communication Technology in Construction and the Built Environment (10 credits, Optional)

Note: It is possible to integrate optional units with mandatory units from the start of the programme, but this should be carefully planned so that essential content in the mandatory units is covered before corresponding content in the optional units.

Although the delivery in the suggested structure for the Extended Diploma is weighted towards delivery of three units per term per year, it may be possible to run these throughout Year 1, across the three terms, in order to ease the burden on learners.

Build assessment days into the programme, without formal teaching, so that the whole day can be devoted to your supporting learners on their assessment assignments.

Many centres choose to use the Nationals structure to give their learners the opportunity to ramp qualifications, that is, for example, entering them in the first year for the Certificate, and then in the second year the Subsidiary Diploma. This builds on learners' sense of achievement in the second year after they have received the Certificate.

Keeping track

Whatever decisions you make about your programme delivery, it is important that you carefully map the assessment of criteria across units and keep accurate records to track learner achievement. Tracker sheets like those shown opposite can be constructed easily in Word or Excel. The ones opposite are available on the CD-ROM that is provided with your specification.

Systematically track all of your assignments at grading criterion level so that you build a full and complete achievement record for every learner. This is especially important in differentiated learning or in special circumstances such as illness where all assignments may not be carried out. In these cases, full unit coverage can sometimes be achieved through cross-reference with other related units, however evidence provided by learners must fully cover the criteria.

Many centres are making use of virtual learning environments (VLEs) such as Blackboard or Moodle that allow tutors to maintain individual learner sites and keep work electronically. You may decide to give parents access so that they too can check learner progress and achievement. This kind of service will help parents to understand how BTECs are assessed.

Can I co-teach BTEC with GCE A Levels?

- There may be opportunities to co-teach BTEC Nationals with GCEs however it is important that there is clear differentiation between BTEC assignments and work, and GCE coursework.
- You must ensure that the work produced meets the BTEC unit content requirements and that sufficient coverage is not compromised.
- Remember: assessment for BTEC should be undertaken within a vocational context and must fulfil the unit grading criteria.
- Where there are a number of assessors working on a BTEC programme, they should be involved in standardisation exercises to ensure consistency of assessment decision making.
- There must be a robust and effective internal verification process in place.

For more information about BTEC assessment and internal verification, please see pages 38–47.

Suggested learner tracking sheet

Learner name	Unit name												Unit name											
	P1	P2	P3	P4	M1	M2	M3	M4	D1	D2	D3	D4	P1	P2	P3	P4	M1	M2	M3	M4	D1	D2	D3	D4

Suggested assignment tracking sheet (for integrated unit delivery with different tutors delivering each unit)

Assignment name	Unit name												Unit name											
	Tutor name												Tutor name											
	P1	P2	P3	P4	M1	M2	M3	M4	D1	D2	D3	D4	P1	P2	P3	P4	M1	M2	M3	M4	D1	D2	D3	D4

BTEC units: a quick overview

Every BTEC unit is structured in exactly the same way, and this structure has been developed to facilitate your delivery of the course. The notes here give a quick overview. For full details of this structure please see the specification.

Title page

The first page of the specification gives the unit title, QCF level, the credit value and the guided learning hours (GLH)*. It also sets out the unit aim and purpose, the unit introduction and the learning outcomes.

Unit 1: Health, Safety and Welfare in Construction and the Built Environment

Unit code: L/600/0211
QCF Level 3: BTEC Nationals
Credit value: 10
Guided learning hours: 60

Aim and purpose

This unit enables learners to understand the responsibilities of employers and employees and the control measures used to reduce risk and meet legal requirements. They will gain knowledge of how to undertake risk assessments and accident recording and reporting procedures.

Unit introduction

The construction industry is complex, dynamic and diverse. It is essential that high standards of health, safety and welfare are maintained during all stages of a construction project. This should be a major priority and dedicated resources must be made available to ensure consistently high standards of safety. This unit encourages learners to explore the health, safety and welfare procedures used to mitigate and control risks on site. The unit will provide learners with a knowledge and understanding of the legal framework relating to the responsibilities of employers, employees, site visitors and the general public.

Learners will investigate common accidents and dangerous occurrences and how to report an accident. They will explore the importance of planning for health and safety and the consequences of technical, engineering and human failures for themselves and others. Learners will become familiar with enforcement routes for breaches of health and safety including prosecution costs and fines.

Learners will explore risk assessment methods and the legislation used to identify and report workplace hazards, risks and control measures in construction. Hazards covered will include physical, environmental, psychosocial, chemical and biological. Control strategies and risk control hierarchies will be explored. Learners will produce risk assessments in a format that can be understood by everyone who needs to read or review the risk assessment, or comply with its contents.

Learners will become familiar with the legal requirements for and required content of a health and safety policy including organisational sections and safe systems of work. They must be able to identify and implement adequate monitoring and review arrangements for all identified control measures. Learners will become familiar with components of health and safety management systems and understand the importance of training, information, instruction and supervision, along with techniques which can be used to aid understanding and adherence on site.

Learning outcomes

On completion of this unit a learner should:

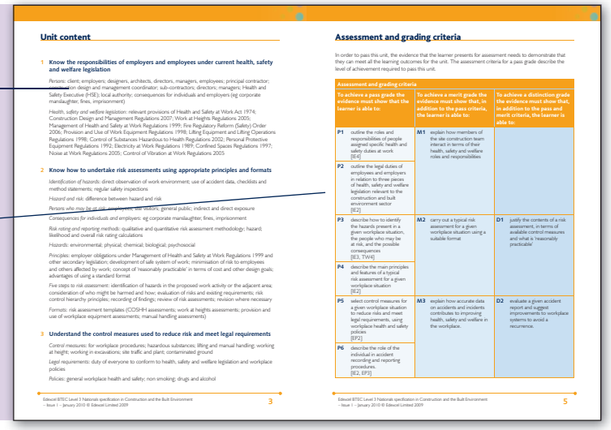
1 Know the responsibilities of employers and employees under current health, safety and welfare legislation
2 Know how to undertake risk assessments using appropriate principles and formats
3 Understand the control measures used to reduce risk and meet legal requirements
4 Know their own role in accident recording and reporting procedures.

Unit content

Lists the breadth of knowledge, skills and understanding needed to achieve each of the learning outcomes. This outlines what you should cover in your delivery and what your learners need to know.

Assessment and grading criteria grid

The evidence that each learner must produce to achieve pass, merit or distinction. **This is the most important section of each unit** – units must be taught and assessed by these criteria (not the learning outcomes).



Unit content

1 Know the responsibilities of employers and employees under current health, safety and welfare legislation

Reasons: clients; employers; designers, architects, directors, managers, employees; principal contractor; construction design and management coordinator; sub-contractors; directors; managers; Health and Safety Executive (HSE); local authority; consequences for individuals and employers (eg corporate manslaughter, fines, imprisonment)

Health, safety and welfare legislation: relevant provisions of Health and Safety at Work Act 1974; Construction Design and Management Regulations 2007; Work at Heights Regulations 2005; Management of Health and Safety at Work Regulations 1999; Fire Regulatory Reform (Safety) Order 2006; Provision and Use of Work Equipment Regulations 1998; Lifting Equipment and Lifting Operations Regulations 1998; Control of Substances Hazardous to Health Regulations 2002; Personal Protective Equipment Regulations 1992; Electricity at Work Regulations 1989; Confined Spaces Regulations 1997; Noise at Work Regulations 2005; Control of Vibration at Work Regulations 2005

2 Know how to undertake risk assessments using appropriate principles and formats

Identification of hazards: direct observation of work environment; use of accident data, checklists and method statements; regular safety inspections

Hazard and risk: difference between hazard and risk

Persons who may be at risk: employees, site visitors, general public; indirect and direct exposure

Consequences for individuals and employers: eg corporate manslaughter, fines, imprisonment

Risk rating and reporting methods: qualitative and quantitative risk assessment methodology; hazard, likelihood and overall risk rating calculations

Hazards: environmental; physical; chemical; biological; psychosocial

Principles: employer obligations under Management of Health and Safety at Work Regulations 1999 and other secondary legislation; development of safe system of work; minimisation of risk to employees and others affected by work; concept of 'reasonably practicable' in terms of cost and other design goals; advantages of using a standard format

Five steps to risk assessment: identification of hazards in the proposed work activity or the adjacent area; consideration of who might be harmed and how; evaluation of risks and existing requirements; risk control hierarchy principles; recording of findings; review of risk assessments; revision where necessary

Formats: risk assessment templates (COSHH assessments; work at heights assessments; provision and use of workplace equipment assessments; manual handling assessments)

3 Understand the control measures used to reduce risk and meet legal requirements

Control measures: for workplace procedures; hazardous substances; lifting and manual handling; working at height; working in excavations; site traffic and plant; contaminated ground

Legal requirements: duty of everyone to conform to health, safety and welfare legislation and workplace policies

Policies: general workplace health and safety; non-smoking; drugs and alcohol

Assessment and grading criteria

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

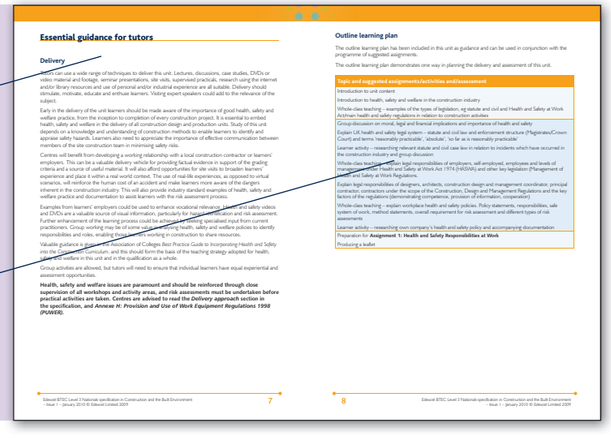
Assessment and grading criteria			
To achieve a pass grade the evidence must show that the learner is able to:		To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1	outline the roles and responsibilities of people involved in current health and safety duties at work [IE4]	M1	explain how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities
P2	outline the legal duties of employers and employees in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector [IE2]		
P3	describe how to identify the hazards present in a given workplace situation, the people who may be at risk, and the possible consequences [IE1, TW4]	M2	carry out a typical risk assessment for a given workplace situation using a suitable format	D1	justify the contents of a risk assessment, in terms of available control measures and what a 'reasonably practicable'
P4	describe the main principles and features of a typical risk assessment for a given workplace situation [IE2]		
P5	select control measures for a given workplace situation to reduce risks and meet legal requirements, using information on health and safety policies [EP2]	M3	explain how accurate data on accidents and incidents contributes to improving health, safety and welfare in the workplace.	D2	evaluate a given accident report and suggest improvements that could be made to workplace systems to avoid a recurrence.
P6	describe the role of the individual in accident recording and reporting procedures [E2, EP3]		

Essential guidance for tutors

Unit-specific guidance on delivery and assessment.

Outline learning plan

This suggests **one way** you could deliver the unit. Design your own learning plan to mirror your preferred delivery and assessment methods for unit coverage. (This will be crucial where a more integrated delivery profile is adopted.)



Essential guidance for tutors

Delivery

Tutors can use a wide range of techniques to deliver this unit. Lectures, discussions, case studies, DVDs or video material and footage, seminar presentations, site visits, supervised practicals, research using the internet and/or library resources and use of personal and/or industrial experience are all suitable. Delivery should stimulate, motivate, educate and enthuse learners. Visiting expert speakers could add to the relevance of the subject.

Early in the delivery of the unit learners should be made aware of the importance of good health, safety and welfare practice, from the inception to completion of every construction project. It is essential to embed health, safety and welfare in the delivery of all construction design and production units. Study of this unit depends on a knowledge and understanding of construction methods to enable learners to identify and appraise safety hazards. Learners also need to appreciate the importance of effective communication between members of the site construction team in minimising safety risks.

Centres will benefit from developing a working relationship with a local construction contractor or learners' employers. This can be a valuable delivery vehicle for providing factual evidence in support of the grading criteria and a source of useful material. It will also afford opportunities for site visits to broaden learners' experience and place it within a real world context. The use of real-life experiences, as opposed to virtual scenarios, will reinforce the human cost of an accident and make learners more aware of the dangers inherent in the construction industry. This will also provide industry standard examples of health, safety and welfare practice and documentation to assist learners with the risk assessment process.

Examples from learners' employers could be used to enhance vocational relevance. Health and safety videos and DVDs are a valuable source of visual information, particularly for risk assessment and risk assessment. Further enhancement of the learning process could be achieved by inviting specialised input from current practitioners. Group working may be of some use in exploring health, safety and welfare policies to identify responsibilities and roles, enabling those learners working in construction to share resources.

Valuable guidance is given in the Association of Colleges *Best Practice Guide to Incorporating Health and Safety into the Construction Curriculum*, and this should form the basis of the teaching strategy adopted for health, safety and welfare in this unit and in the qualification as a whole.

Group activities are allowed, but tutors will need to ensure that individual learners have equal experiential and assessment opportunities.

Health, safety and welfare issues are paramount and should be reinforced through close supervision of all workshops and activity areas, and risk assessments must be undertaken before practical activities are taken. Centres are advised to read the *Delivery* approach section in the specification, and *Annexe H: Provision and Use of Work Equipment Regulations 1998 (PUWER)*.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

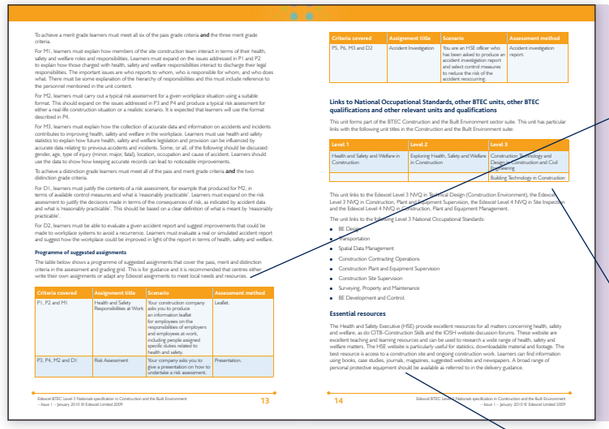
Topic and suggested assignments/activities and assessment
Introduction to unit content Introduction to health, safety and welfare in the construction industry
Whole-class teaching – examples of the types of legislation, eg statute and civil and Health and Safety at Work Act/man health and safety regulations in relation to construction activities
Group discussion on moral, legal and financial implications and importance of health and safety
Explain UK health and safety legal system – statute and civil law and enforcement structure (Magistrates/Crown Court) and terms 'reasonably practicable', 'absolute', 'so far as is reasonably practicable'
Learner activity – researching relevant statute and civil case law in relation to incidents which have occurred in the construction industry and group discussion
Whole-class teaching – explain legal responsibilities of employers, self-employed, employees and levels of enforcement (Health and Safety Executive, Health and Safety at Work Act 1974 [HASAW] and other key legislation [Management of Health and Safety at Work Regulations]
Explain legal responsibilities of designers, architects, construction design and management coordinator, principal contractor, contractors under the scope of the Construction, Design and Management Regulations and the key factors of the regulations (demonstrating competence, provision of information, cooperation)
Whole-class teaching – explain workplace health and safety policies. Policy statements, responsibilities, safe system of work, method statements, overall requirement for risk assessment and different types of risk assessment
Learner activity – researching own company's health and safety policy and accompanying documentation
Preparation for **Assignment 1: Health and Safety Responsibilities at Work**
Producing a leaflet

Programme of suggested assignments

For guidance only, this table lists ideas for assignments that would cover the grading criteria. It is recommended that you write your own assignments or adapt Edexcel's to meet local needs and resources. Remember: all assignments must be internally verified by your centre before issue to learners to ensure they are fit for purpose.

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

Shows opportunities for integrated delivery of units.



To achieve a merit grade learners must meet all six of the pass grade criteria **and** the three merit grade criteria.

For M1, learners must explain how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities. Learners must expand on the issues addressed in P1 and P2 to explain how those charged with health, safety and welfare responsibilities interact to discharge their legal responsibilities. The important issues are who reports to whom, who is responsible for whom, and who does what. There must be some explanation of the hierarchy of responsibilities and this must include reference to the personnel mentioned in the unit content.

For M2, learners must carry out a typical risk assessment for a given workplace situation using a suitable format. This should expand on the issues addressed in P3 and P4 and produce a typical risk assessment for either a real-life construction situation or a realistic scenario. It is expected that learners will use the format described in P4.

For M3, learners must explain how the collection of accurate data and information on accidents and incidents contributes to improving health, safety and welfare in the workplace. Learners must use health and safety statistics to explain how future health, safety and welfare legislation and provision can be influenced by accurate data relating to previous accidents and incidents. Some, or all, of the following should be discussed: gender, age, type of injury (minor, major, fatal), location, occupation and cause of accident. Learners should use the data to show how keeping accurate records can lead to noticeable improvements.

To achieve a distinction grade learners must meet all of the pass and merit grade criteria **and** the two distinction grade criteria.

For D1, learners must justify the contents of a risk assessment, for example that produced for M2, in terms of available control measures and what is 'reasonably practicable'. Learners must expand on the risk assessment to justify the decisions made in terms of the consequences of risk, as indicated by accident data and what is 'reasonably practicable'. This should be based on a clear definition of what is meant by 'reasonably practicable'.

For D2, learners must be able to evaluate a given accident report and suggest improvements that could be made to workplace systems to avoid a recurrence. Learners must evaluate a real or simulated accident report and suggest how the workplace could be improved in light of the report in terms of health, safety and welfare.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2 and M1	Health and Safety Responsibilities at Work	Your construction company asks you to produce an information leaflet for employees on the responsibilities of employers and employees at work, including people assigned specific duties related to health and safety.	Leaflet.
P3, P4, M2 and D1	Risk Assessment	Your company asks you to give a presentation on how to undertake a risk assessment.	Presentation.
P5, P6, M3 and D2	Accident Investigation	You are an HSE officer who has been asked to produce an accident investigation report and select control measures to reduce the risk of the accident reoccurring.	Accident investigation report.

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

This unit forms part of the BTEC Construction and the Built Environment sector suite. This unit has particular links with the following unit titles in the Construction and the Built Environment suite:

Level 1	Level 2	Level 3
Health and Safety and Welfare in Construction	Exploring Health, Safety and Welfare in Construction	Construction Technology and Design Construction and Civil Engineering
		Building Technology in Construction

This unit links to the Edexcel Level 3 NVQ in Technical Design (Construction Environment), the Edexcel Level 3 NVQ in Construction, Plant and Equipment Supervision, the Edexcel Level 4 NVQ in Site Inspection and the Edexcel Level 4 NVQ in Construction, Plant and Equipment Management.

The unit links to the following Level 3 National Occupational Standards:

- BE Design
- Transportation
- Spatial Data Management
- Construction Contracting Operations
- Construction Plant and Equipment Supervision
- Construction Site Supervision
- Surveying, Property and Maintenance
- BE Development and Control.

Essential resources

The Health and Safety Executive (HSE) provide excellent resources for all matters concerning health, safety and welfare, as do CITB–Construction Skills and the RoSPA website discussion forums. These websites are excellent teaching and learning resources and can be used to research a wide range of health, safety and welfare matters. The HSE website is particularly useful for statistics, downloadable material and footage. The best resource is access to a construction site and ongoing construction work. Learners can find information using books, case studies, journals, magazines, suggested websites and newspapers. A broad range of personal protective equipment should be available as referred to in the delivery guidance.

Essential resources

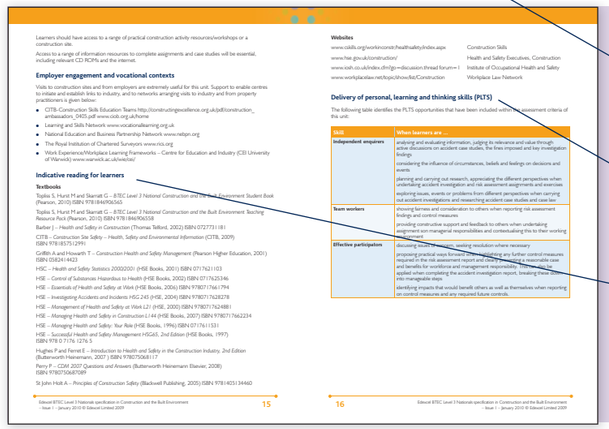
Specialist resources needed to allow learners to generate evidence for the unit.

PLTS signposting

Opportunities to develop personal learning and thinking skills within the unit.

Indicative reading, resources packs and websites

Suggested learner resource material.



Learners should have access to a range of practical construction activity resources/workshops or a construction site.

Access to a range of information resources to complete assignments and case studies will be essential, including relevant CD ROMs and the internet.

Employer engagement and vocational contexts

Visits to construction sites and from employers are extremely useful for this unit. Support to enable centres to initiate and establish links to industry, and to networks arranging visits to industry and from property practitioners is given below:

- CITB–Construction Skills Education Teams http://constructingexcellence.org.uk/pdf/construction_ambassadors_0405.pdf www.ciob.org.uk/home
- Learning and Skills Network www.vocationallearning.org.uk
- National Education and Business Partnership Network www.nebpn.org
- The Royal Institution of Chartered Surveyors www.rics.org
- Work Experience/Workplace Learning Frameworks – Centre for Education and Industry (CEI) University of Warwick) www.warwick.ac.uk/wie/cei/

Indicative reading for learners

Textbooks

Topliss S, Hurst M and Skarratt G – *BTEC Level 3 National Construction and the Built Environment Student Book* (Pearson, 2010) ISBN 9781846906565

Topliss S, Hurst M and Skarratt G – *BTEC Level 3 National Construction and the Built Environment Teaching Resource Pack* (Pearson, 2010) ISBN 9781846906558

Barber J – *Health and Safety in Construction* (Thomas Telford, 2002) ISBN 0727731181

CITB – *Construction Site Safety – Health, Safety and Environmental Information* (CITB, 2009) ISBN 9781857512991

Griffith A and Howarth T – *Construction Health and Safety Management* (Pearson Higher Education, 2001) ISBN 0582414422

HSC – *Health and Safety Statistics 2000/2001* (HSE Books, 2001) ISBN 0717621103

HSE – *Control of Substances Hazardous to Health* (HSE Books, 2002) ISBN 0717625346

HSE – *Essentials of Health and Safety at Work* (HSE Books, 2006) ISBN 9780717661794

HSE – *Investigating Accidents and Incidents* HSG 245 (HSE, 2004) ISBN 9780717628278

HSE – *Management of Health and Safety at Work* (L21) (HSE, 2000) ISBN 9780717624881

HSE – *Managing Health and Safety in Construction* L-144 (HSE Books, 2007) ISBN 9780717662334

HSE – *Managing Health and Safety: Your Role* (HSE Books, 1996) ISBN 0717611531

HSE – *Successful Health and Safety Management* HSG65, *2nd Edition* (HSE Books, 1997) ISBN 978 0 7176 1276 5

Hughes P and Ferret E – *Introduction to Health and Safety in the Construction Industry, 2nd Edition* (Butterworth Heinemann, 2007.) ISBN 9780750681117

Parry P – *CDM 2007 Questions and Answers* (Butterworth Heinemann Elsevier, 2008) ISBN 9780750687089

St John Holt A – *Principles of Construction Safety* (Blackwell Publishing, 2005) ISBN 9781405134460

Websites

www.ciblds.org/workinconstr/healthsafety/index.aspx
www.hse.gov.uk/construction/
www.ciob.co.uk/index.cfm?fp=discussion.thread forum=1
www.workplacelaw.net/topic/show/list/Construction
Construction Skills
Health and Safety Executives, Construction
Institute of Occupational Health and Safety
Workplace Law Network

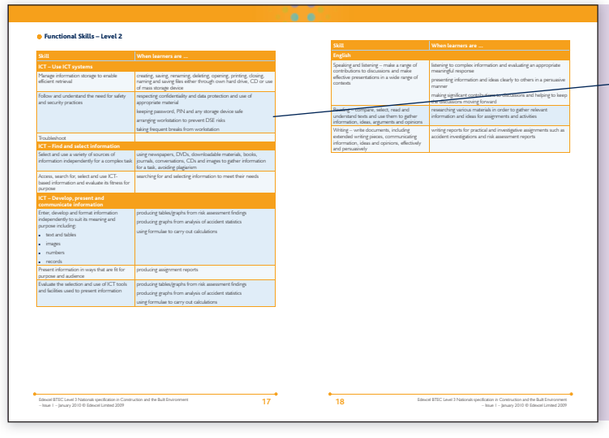
Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit.

Skill	When learners are ...
Independent enquirers	analysing and evaluating information, judging its relevance and value through active discussions on accident case studies, the key impacts and key investigation findings considering the influence of circumstances, beliefs and feelings on decisions and events planning and carrying out research, appreciating the different perspectives when undertaking accident investigation and risk assessment assignments and exercises exploring issues, events or problems from different perspectives when carrying out accident investigations and researching accident case studies and case law
Team workers	showing fairness and consideration to others when reporting risk assessment findings and control measures providing constructive support and feedback to others when undertaking assignment-set managerial responsibilities and contextualising this to their working environment
Effective participators	discussing issues of concern, seeking resolution where necessary proposing practical ways forward for improvements to any further control measures required in the risk assessment report and clearly justifying a reasonable case and benefits for workforce and management responsibility. This needs to be done when completing the accident investigation report, breaking them into manageable tasks identifying impacts that would benefit others as well as themselves when reporting on control measures and any required future controls.

Functional skills signposting

Opportunities to generate evidence to meet the requirements of functional skills tests.



Functional Skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Manage information storage to enable efficient retrieval	creating, saving, renaming, deleting, opening, printing, closing, naming and saving files either through cloud hard drive, CD or use of mass storage device
Follow and understand the need for safety and security practices	respecting confidentiality and data protection and use of appropriate material keeping password, PIN and any storage device safe arranging workstation to prevent DSE risks taking frequent breaks from workstation
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	using newspapers, DVDs, downloadable materials, books, journals, conversations, CDs and images to gather information for a task, avoiding plagiarism
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	searching for and selecting information to meet their needs
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: • text and tables • images • numbers • records	producing tables/graphs from risk assessment findings producing graphs from analysis of accident statistics using formulae to carry out calculations
Present information in ways that are fit for purpose and audience	producing assignment reports
Evaluate the selection and use of ICT tools and facilities used to present information	producing tables/graphs from risk assessment findings producing graphs from analysis of accident statistics using formulae to carry out calculations

Skill	When learners are ...
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	listening to complex information and evaluating an appropriate meaningful response presenting information and ideas clearly to others in a persuasive manner making significant contributions to discussions and helping to keep the discussions moving forward
Reading – locate, select, read and understand texts and use them to gather information, ideas, arguments and opinions	researching various materials in order to gather relevant information and ideas for assignments and activities
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	writing reports for practical and investigative assignments such as accident investigations and risk assessment reports

*Guided learning hours (GLH): all the times when a member of staff (eg tutor, trainer or facilitator) is present to give guidance.

Developing a scheme of work

All BTEC Level 3 National units are structured in a way that should facilitate your delivery of the course. Each unit includes an **outline learning plan**. This is provided as an **example only** to illustrate just one way you might deliver that unit. This plan includes suggested assignments that will cover the unit's grading criteria.

From this outline learning plan you might then develop a more detailed scheme of work. To show how this might be done, refer to the outline learning plan on pages 26–27 taken from Unit 1: Health, Safety and Welfare in Construction and the Built Environment, and the example of a scheme of work that has been developed from this, on pages 28–37.

Design your own scheme of work to factor in the needs of your learners and local resources, and to reflect the assignments that you have designed for the unit. (Always ensure that assignments – whether designed by yourself, Edexcel or by others – are internally verified **in your centre** before use; see page 44.)

Delivery notes

The **introductory session** could be delivered using practical activities. For example, when explaining what constitutes appropriate evidence for an assignment, learners could work in groups to identify the various methods for themselves. (For more information on assignment evidence, see page 40.)

Always try to **make your teaching as learner-centred as possible and apply it to the construction industry** in a real context. Applied learning will stimulate questions from learners. Formal reviews of assignments with learners will see that they are given clear directions to follow both for furthering their understanding and improving their grades.

Visiting speakers – for example, architects or site managers – are able to give the topics covered a touch of realism. Your programme team should endeavour to forge links with local construction companies, not only for the valuable input they provide via guest speakers, but also as a possible source of work experience opportunities. They can also make a significant contribution to all aspects of the programme by attending course team meetings.

When learners are working on their assignments, advise them to **remain focused on providing evidence that is relevant and fulfils the criteria**. It is helpful to demonstrate a model answer to an assignment. Many learners will include unnecessary information that strays from the point of the exercise.

Achieving the correct balance between **formal teaching, self-directed study, practical activities and industrial visits** is very important and will depend on the unit being taught. Guidance is given in the unit specifications. Adopting a kinaesthetic learning approach will benefit many of the learners.

Group work

Group work is vitally important on BTEC programmes, and you need to create frequent opportunities for it throughout the course. Remember, however, that if any group work contributes towards an assignment, the individual learners must be able to provide evidence that they have individually met the criteria.

Take great care here to reinforce that it is the individual's work that will be assessed.

Looking out for plagiarism

Be careful with the use of the Internet, as unfortunately the copying and pasting of text into assignments is happening with alarming regularity. A plagiarism policy, even at this level may be needed to ensure that learners as far as possible are referencing the works of others. Please see www.jcq.org for an example of a plagiarism policy that you could adopt for your school or college.

How do I cover the content?

- Work closely with the specification document to ensure that you fully understand the coverage for each learning outcome within each unit.
- Check your content coverage against the grading criteria.
- Make sure that you understand the distinction between content that must be covered and content that is optional, such as topics listed after the words "eg" in the specification – here tutors may use these examples or replace them with relevant alternatives of their own choice.
- Rather than following the assignment ideas in the specification, it may be possible for you to consider smaller assignments over shorter periods of time which will keep your learners engaged. Remember that your assignments must always be designed for **your** learners.
- Use a matrix tracker to plan your assignments and cross check to see if all content is covered. See page 21 for examples of tracker sheets.

Keep all work on file

Learners could keep their work in a lever arch file, which should be organised to allow both learners and tutors to find pieces of work easily. It is well worth spending time in the introductory session showing learners how to file their work effectively.

Ideally, learners' work should be kept securely at the centre to ensure it does not get lost and as an additional safeguard against plagiarism.

Learners should understand how **continuous assessment** works in terms of interim and formative assessment. All learners should submit interim work or show you where they are with their assignments so that you can feed back on how well they are meeting the tasks against the criteria that they are working towards. If a learner has already met the pass criteria, you should indicate how the learner can achieve merit and distinction grades. If the pass criteria are not yet met, indicate what the learner has to do to get to the appropriate standard.

Outline learning plan for Unit 1: Health, Safety and Welfare in Construction and the Built Environment

Topic and suggested assignments, activities and assessment
Introduction to unit content Introduction to health, safety and welfare in the construction industry Whole-class teaching – examples of the types of legislation, eg statute and civil and Health and Safety at Work Act/main health and safety regulations in relation to construction activities.
Group discussion on moral, legal and financial implications and importance of health and safety Explain UK health and safety legal system – statute and civil law and enforcement structure (Magistrates/Crown Court) and terms 'reasonably practicable', 'absolute', 'so far as is reasonably practicable' Learner activity – researching relevant statute and civil case law in relation to incidents which have occurred in the construction industry and group discussion. Whole-class teaching – explain legal responsibilities of employers, self-employed, employees and levels of management under Health and Safety at Work Act 1974 (HASWA) and other key legislation (Management of Health and Safety at Work Regulations). Explain legal responsibilities of designers, architects, construction design and management coordinator, principal contractor, contractors under the scope of the Construction, Design and Management Regulations and the key factors of the regulations (demonstrating competence, provision of information, cooperation) Whole-class teaching – explain workplace health and safety policies. Policy statements, responsibilities, safe system of work, method statements, overall requirement for risk assessment and different types of risk assessments Learner activity – researching own company's health and safety policy and accompanying documentation
Preparation for **Assignment 1: Health and Safety Responsibilities at Work** Producing a leaflet
Explain attributes of an accident: define 'accident', 'near miss', 'dangerous occurrence', 'occupational disease'; 'major injury'; 'minor injury', 'property damage'. Explain accident reporting requirements and in-house reporting procedures. Explain applicable legislation – First Aid at Work Regulations, Reporting of Injuries, Diseases and Dangerous Occurrence Regulations Show DVDs/videos on major accidents/incidents. Set learner activities and promote group discussion and review after watching Group work activity and feedback on accident case studies including research Whole-class teaching – give overview of accident trends in UK and causes of accidents in the construction industry: causation factors, frequency and severity of accidents over last five years as reported by Health and Safety Executive (HSE) Explain costs and consequences of accidents including human costs and financial costs in general terms (to individuals, companies and society) Whole-class teaching – explain accident investigation – elements of a typical accident, Domino theory, Hale and Hale model, chain of events leading up to an accident Explain key factors to include in an accident investigation – gathering of facts to include review/obtaining key documentation, training records, communication methods, environmental factors, levels of supervision, competency, machinery/equipment/materials being used at time of accidents, purpose of accident interviews Group work to investigate accident scenario and feed back Group work to carry out calculations for incident frequency rate and severity rate
Whole-class teaching – risk assessment – purpose, definitions of 'hazards', 'risks' and 'risk controls' Explain hazard groups – environmental, physical, biological, chemical and psychosocial Whole-class teaching – explain in greater detail the governing legislative requirements which pertain to both general and specific risks (Management of Health and Safety at Work Regulations, Noise at Work Regulations, Vibration at Work Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Confined Spaces at Work Regulations) Explain quantitative and qualitative risk assessment techniques Explain quantitative risk ratings and risk reduction measures Explain purpose of risk control hierarchy, describe workplace precautions and risk control systems Group activity to identify various workplace precautions and risk control systems Learner activity to carry out risk assessment of a workshop on site Explain specific types of risk assessments and formats that can be used
Whole-class teaching – explain working at height and risk control measures – use DVD footage, site visits and hazard spotting exercise Explain Work at Height Regulations Whole-class teaching – overview of plant and key equipment (mobile and hand tools) used in the construction industry and hazards arising from using these Explain requirements for operator competence and safe systems of work, inspection and testing regimes and references to Provision and Use of Work Equipment Regulations, Electricity at Work Regulations and Lifting Equipment and Lifting Operations Regulations Explain hazardous chemical substances – main types in the construction industry (solvents, thinners, epoxies, resins, mortar, dusts generated from mixing, cutting, demolition), routes of exposure, respiratory, skin and toxicological health effects, risk and safety phrases, classification of chemical hazard warning labels, personal protective equipment grades and types, respiratory protective equipment grades and types, overview of Workplace Exposure Limits and health surveillance Explain biological hazards – leptospirosis, legionellosis, pigeon droppings, mould and spores, hepatitis A, B and C, importance of good personal hygiene and other control measures if working with dry rot, wet rot and moulds Explain electricity hazards, including buried and overhead services, use of 110 volt on site, detection of cables, colour coding, selection of voltages 110, 240V, 415V, safe working practices when excavating (hand digging) and when working near overhead cables Explain confined spaces (definition of), overview of confined space risk assessments, safe systems of work and permit to work systems, competence, control measures and emergency arrangements for confined space working – show pictures Explain working below ground – show standard trench support systems and excavation techniques, consideration of protection of persons working in excavations and barriering off, detection of underground services and isolation, monitoring and controls for inclement weather conditions and inspection regimes Explain fire precautions – give overview of theory of fire triangle, fire prevention on site, classes of fires, types of fire extinguishers, hot work consideration and examples of PTW forms and fire watch
Preparation for **Assignment 2: Risk Assessment** Produce and deliver a presentation on risk assessment
Group activity to identify various workplace precautions and risk control systems Learner activity to carry out risk assessment of a workshop on site Whole-class teaching Explain principles of the publication *Successful health and safety management HS(G)65* and other management systems, eg BS8800 & ISO 18001 Provide greater detail for each section of HS(G) 65 and include group and learner activities while covering the following: Explain, with examples, health and safety policies and variations of safe systems of work. Learner activity to obtain own policy and responsibilities Explain importance of organisational responsibilities, emphasising importance of assigning responsibilities to people; ensuring adequate training; communication; monitoring; review mechanisms to ensure responsibilities are discharged effectively Explain the planning and implementation stage: processes for identifying required risk assessments, carrying out risk assessments, planning for safety at design stage; implementing preventative and protective measures; importance of training, instruction, supervision; provision of information; use of permit to work and method statements; effective site management procedures and control measures for workplace procedures; hazardous substances; lifting and manual handling; working at height; working in excavations; site traffic and plant; contaminated ground Arrangements for measuring performance: accident statistics; audit results; safety inspections; insurance audit renewals; HSE prosecutions database Whole-class teaching Review and audit mechanisms used to determine whether objectives and aims have been met, how this feeds into management reviews and re-determining policy and future goals, emphasis on legal driver (eg new or amended legislation) and overall moral duty of care for everyone to conform to health, safety and welfare legislation and workplace policies; consequences for individuals and employers (eg corporate manslaughter, fines, imprisonment)
Preparation for **Assignment 3: Accident investigation** Produce a report on an accident investigation
Visit to local, regional or national construction company Practical work on risk assessment and reporting of risk assessment
Review of unit delivery and assessment

Scheme of work for Unit 1: Health, Safety and Welfare in Construction and the Built Environment

Session	Teaching topic	Approx time allocated	Linked assessment	Resource checklist		Core content and delivery methods
1	Introduction to BTEC National in Construction and the Built Environment Unit 1: Health, Safety and Welfare in Construction and the Built Environment	120 mins	P1	Slide show presentation introducing the BTEC National in Construction Handout: unit specification Handout: copies of past assignments Slide show presentation introducing health, safety and welfare in construction		Tutor presentation using a handout showing the unit specification and with reference to Edexcel's website Group work on evidence required, using past assignments as examples Explanation of pass, merit and distinction criteria Explanation of points scoring in relation to grading Tutor presentation introducing health, safety and welfare in construction
2	The moral, legal and financial implications of accidents and the importance of health and safety	120 mins	P1	VCR or DVD player Whiteboard or flipchart for discussion Slide show presentation on legal and financial implications Handout: costs and consequences of accidents Handout: The Health and Safety at Work Act 1974		Short documentary film: 'What cost an accident?' Tutor-led discussion of film Tutor presentation on the legal and financial implications of accidents (fines and penalties) and the importance of health and safety
3	The UK legal system: types of legislation, key health and safety legislation, and court enforcement structure	120 mins	P2, D1	Handouts: examples of main statutory and civil laws relating to construction activities Handout: the Health and Safety at Work Act 1974 Worksheet: 'Reasonably practicable?' Whiteboard or flipchart for discussion		Guest speaker presentation on the different types of legislation: statute and civil, the different courts Tutor- or guest-speaker-led question and answer session Individual learner work looking at case studies and assessing whether obligations have been met 'so far as is reasonably practicable' Whole group discussion
4	Health and Safety at Work Act 1974	60 mins	P2	Handout: The Health and Safety at Work Act 1974 Handout: other key legislation		Individual learner research on the contents of the Act Tutor overview of most important sections: employees' and employers' duties
5	The Construction, Design and Management Regulations, 2007	60 mins	P2, M1	Slide show presentation on the Construction, Design and Management Regulations, 2007 Worksheet: questions on how the legislation impacts designers, architects, construction design and management coordinators, principal contractors, etc.		Tutor presentation on the Construction, Design and Management Regulations, 2007 Individual learner work outlining responsibilities of principal parties affected by this legislation
6	Workplace health and safety policies	120 mins	P2	Slide show presentation on workplace health and safety policies Handouts: examples of health and safety policies Whiteboard or flipchart for discussion		Tutor presentation on workplace health and safety policies: content of a typical policy, risk assessment, safe systems of work, policy statements Individual learner work researching health and safety policy and accompanying documents for a company of their choice Whole-class discussion of similarities and differences, identifying mandatory and optional elements
7	Workplace risk assessment	60 mins	P3, M2	Slide show presentation on risk assessment Handout: risk assessment form Handout: description of a workplace scenario for small group risk assessment activity		Tutor presentation on risk assessment: overall requirements, different types and procedures Small group activity doing a brief risk assessment on a tutor-devised scenario
8	Assignment 1	120 mins	P1, P2, M1	Assignment 1 brief Handout: unit specification PCs with appropriate software for producing learner work (Word)		Assignment 1 brief on health and safety responsibilities at work Tutor explanation of pass, merit and distinction criteria Individual research and completion of tasks
9	Accidents	120 mins	P3, M1	Slide show presentation defining an accident VCR or DVD player Whiteboard or flipchart for discussion Handout: definition and explanation of terms used in classification		Tutor presentation: 'What is an accident?' Short documentary film with case studies of major accidents/incidents Group discussion of the causes of accidents Tutor explanation of the classification of accidents: major/minor injury, etc

*The timings in this scheme of work reflect the time the learner is engaged in learning for the unit, both with the tutor (Guided Learning Hours, GLH) and in their own private study time.

Guided learning hours (GLH): all the times when a member of staff (e.g. tutor, trainer or facilitator) is present to give guidance ('contact time'). This includes lessons, lectures, tutorials and supervised study in, for example, learning resource centres and workshops. It also includes time spent with learners observing and assessing their achievements as they work towards their assignments.

Session	Teaching topic	Approx time allocated	Linked assessment	Resource checklist		Core content and delivery methods
10	Accident reporting	60 mins	P3, M1	Slide show presentation on accident reporting Handout: summary of Reporting of Injuries, Diseases and Dangerous Occurrence Regulations 1995 Handout: summary of *The Health and Safety (First Aid) Regulations* 1981 Handout: sample in-house reporting procedures Internet for demonstration of online reporting procedure		Tutor presentation explaining accident reporting requirements in law and in-house reporting procedures: including how to report, who to report to, and demonstration of internet reporting procedure Individual learner work exploring the online reporting procedure
11	Accident case study	60 mins	P3, M1	Whiteboard or flipchart for presentation of accident scenario and discussion		Tutor presentation of accident scenario Small group assessment of accident scenario and reporting requirements and reporting
12	Accident trends	120 mins	P3, M3	Slide show presentation on accident trends with Health and Safety Executive (HSE) statistics Worksheet: research questions on trends		Tutor presentation on accident trends: causes, frequency and severity Individual learner internet research on HSE website using tutor-provided worksheet Individual learner work towards M3 criteria: how accurate data contributes to improving health, safety and welfare in the workplace
13	Costs and consequences of an accident	120 mins	P3	Slide show presentation on cost and consequences Internet and other reference sources Whiteboard or flipchart for discussion		Tutor presentation on human and financial costs, insured and 'below-the-water' uninsured (the iceberg effect) costs Individual learner research into 'below-the-water', uninsured costs Tutor-led group discussion of findings
14	Theory of accident investigation: why accidents happen	120 mins	M3, D2	Slide show presentation on accident theory Internet and other reference sources Whiteboard or flipchart for discussion		Tutor presentation of accident theory: elements of a typical accident, why accidents happen, etc Pair work internet research on the impact of social issues on type, frequency and severity of accidents Tutor-led group discussion of findings
15	Accident reporting	120 mins	M3, D2	Slide show presentation on accident reporting Handout: description of a case study accident scenario Handout: how to carry out calculations for incident frequency and severity Worksheets with practice calculations		Tutor presentation on accident reporting: gathering the facts and key documentation, the purpose of interviews, the right questions to ask to determine key contributing factors, etc (the requirements of the Reporting of Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR) Tutor presentation of accident scenario Small group assessment of accident scenario and compilation of an outline report Pair work on tutor-prepared worksheets with practice calculations
16	Risk assessment	60 mins	P4, M2, D1	Slide show presentation on hazards, risks, and risk control Handout: definitions of key terms Handout: different types of hazard (hazard groups): environmental, physical, biological, chemical, and psychosocial Whiteboard or flipchart for discussion		Tutor presentation on hazards, risks, and risk control Individual learner internet research into different types of hazard, looking for examples from each of the five groups Whole group feedback and discussion
17	Specific hazard legislation	60 mins	P4, M2, D1	Slide show presentation summarising specific hazard legislation Handouts: summaries and examples of relevant legislation, eg Management of Health and Safety at Work Regulations, Noise at Work Regulations, Vibration at Work Regulations, Control of Substances Hazardous to Health Regulations, etc Handout with a number of case studies: 'Which legislation applies?' Whiteboard or flipchart for discussion		Tutor presentation summarising specific hazard legislation Small group discussion of case studies to assess which legislation applies and how Whole class discussion of findings

*The timings in this scheme of work reflect the time the learner is engaged in learning for the unit, both with the tutor (Guided Learning Hours, GLH) and in their own private study time.

Guided learning hours (GLH): all the times when a member of staff (e.g. tutor, trainer or facilitator) is present to give guidance ('contact time'). This includes lessons, lectures, tutorials and supervised study in, for example, learning resource centres and workshops. It also includes time spent with learners observing and assessing their achievements as they work towards their assignments.

Session	Teaching topic	Approx time allocated	Linked assessment	Resource checklist		Core content and delivery methods
18	Risk Assessment techniques	60 mins	P4, M2, D1	Slide show presentation on risk assessment techniques Internet and list of websites for research Whiteboard or flipchart for discussion		Tutor presentation on qualitative and quantitative risk assessment techniques Pair work internet research to find examples of each type Whole class discussion of findings
19	Quantitative risk ratings and risk control measures	60 mins	P4, M2, D1	Slide show presentation on quantitative risk ratings and risk control measures Internet and list of websites for research		Tutor presentation on quantitative risk ratings and risk control measures Pair work internet research on risk control measures Tutor advising and clarifying issues
20	Risk control hierarchy: its purpose, workplace precautions and risk control systems	60 mins	P4, M2, D1	Slide show presentation on risk control Handout: case study scenario and risk assessment Whiteboard or flipchart for discussion		Tutor presentation on risk control, its purpose, workplace precautions Tutor-led discussion of case study with learners directing what precautions should be taken in the workplace Tutor explanation of risk control systems
21	Conducting a risk assessment (workshop visit)	120 mins	P4, P5, M2, D1	*Off-site visit* Health and safety consent forms Learner-devised risk assessment forms Whiteboard or flipchart for discussion		Site visit for a live case study Tutor briefing explanation of different types of risk assessment and forms that can be used (prior to visit) Pair work devising risk assessment form to be used (prior to visit) Whole group hazard spotting activity (on site) Pair work on actual risk assessment (on site) Presentation of findings and control measures in pairs to whole class upon return (back in the classroom)
22	Working at height	120 mins	P5	VCR or DVD player Slide show presentation on working at height and the regulations Handout summarising the key points Handout with case study scenarios: 'How can design changes accommodate risks?' Whiteboard or flipchart for discussion		Short film clips with footage of men and women working at height Tutor presentation of Work at Heights Regulations, 2005 Group discussion of case study examples with learners addressing the question of how design changes can accommodate risks
23	Plant and equipment	120 mins	P5	Slide show presentation on plant and machinery Handouts summarising the Provision and Use of Work Equipment Regulations, the Electricity at Work Regulations, and Lifting Equipment and Lifting Operations Regulations Handout with a number of case studies: 'Which legislation applies?' Whiteboard or flipchart for discussion		Tutor presentation giving overview of key plant and machinery and associated risks of use, requirements for safe operation, inspection and testing regimes, with reference to relevant legislation Small group discussion of case studies to assess which legislation applies and how Whole class discussion of findings
24	Chemical hazards	120 mins	P5	Slide show presentation on chemical hazards Handout: types of chemical substances used in the construction industry Handout summarising key points of the Control of Substances Hazardous to Health (COSHH) Regulations, 2002 Handout: chemical hazard warning labels Handout: case study scenario for COSHH assessment		Tutor presentation on chemical hazards, including types of substances, hazard warning labels, health impacts, protective clothing and equipment, exposure limits and monitoring Pair work with learners conducting a COSHH assessment Tutor explanation of suppliers' data sheets Individual learner research to find and interpret a supplier's data sheet

*The timings in this scheme of work reflect the time the learner is engaged in learning for the unit, both with the tutor (Guided Learning Hours, GLH) and in their own private study time.

Guided learning hours (GLH): all the times when a member of staff (e.g. tutor, trainer or facilitator) is present to give guidance ('contact time'). This includes lessons, lectures, tutorials and supervised study in, for example, learning resource centres and workshops. It also includes time spent with learners observing and assessing their achievements as they work towards their assignments.

Session	Teaching topic	Approx time allocated	Linked assessment	Resource checklist		Core content and delivery methods
25	Biological hazards	120 mins	P5	Slide show presentation on biological hazards Handout: identification and classification of biological hazards Worksheet with different hazards and questions about prevention and control Whiteboard or flipchart for discussion		Tutor presentation on identifying different hazards and how they are classified, prevention and control, with reference to relevant legislation Individual learner work on worksheet about prevention and control Whole group discussion of prevention and control
26	Electricity hazards	120 mins	P5	Worksheet quiz on colour coding of wires, volts and amps Slide show presentation explaining electricity hazards, identification and safe working practices Example site drawings for learners to mark-up showing hazard points		Individual learner work on worksheets to start Tutor presentation explaining electricity hazards, identification and safe working practices, with reference to relevant legislation Small group examination and mark-up of hazard points on sample site drawings
27	Confined spaces	60 mins	P5	Worksheet: 'What is a confined space?' Slide show presentation showing photos of confined spaces		Individual learner internet research into the definition of a confined space Tutor definition and illustration with examples, and explanation of control measures required
28	Excavations	60 mins	P5	Slide show presentation on excavations Handout: case study scenario Whiteboard or flipchart for discussion		Tutor presentation on excavation: safe excavation techniques, protection of persons working below ground, barriering off, etc Tutor introduction of case study scenario Whole group discussion to identify control measures
29	Fire precautions (commercial site visit)	120 mins	P5	*Off-site visit* Health and safety consent forms Digital cameras		Site visit to a large commercial site for a live case study Tutor briefing explanation of legislation on fire safety (prior to visit) Whole group hazard spotting activity (on site) Pair work identifying precautions in place (on site)
30	On-site workshop risk assessment	120 mins	P5, M2	Whiteboard or flipchart for discussion of commercial site visit (fire precautions in place) and on-site risk assessment activity		Tutor-led, whole group discussion of findings and fire prevention and control measures Pair work conducting an on-site workshop risk assessment Whole group questions and clarifications from the tutor Individual learner production of written report
31	Assignment 2	120 mins	P3, P4, M2, D1	Assignment 2 brief Handout: unit specification PCs with appropriate software for producing learner work (PowerPoint™)		Assignment 2 brief on risk assessment Tutor explanation of pass, merit and distinction criteria Individual research and completion of tasks
32	Health and safety management systems (1)	60 mins	M3, D2	Guest speaker Slide show presentation from guest speaker, with tutor input during preparation Whiteboard or flipchart for discussion		Presentation from a Health and Safety Officer on health and safety management systems Whole class discussion, with question and answer time
33	Health and safety management systems (2): Overview	60 mins	M3, D2	Slide show presentation giving overview of *Successful health and safety management HS(G)65* Reference copies of *Successful health and safety management HS(G)65*, BS8800, and ISO 18001		Tutor presentation of the principles of *Successful health and safety management HS(G)65*
34	Health and safety management systems (3): Organisational responsibilities	60 mins	M3, D2	Slide show presentation of *Successful health and safety management HS(G)65,* giving further detail on organisational responsibilities Handout: example case study of a large organisation Whiteboard or flipchart for discussion		Tutor-led presentation on organisational responsibilities, importance of assigning, ensuring adequate training, communication and monitoring Whole class discussion asking these questions of the case study organisation: Who is responsible for what? Who needs training? How will systems be monitored? etc

*The timings in this scheme of work reflect the time the learner is engaged in learning for the unit, both with the tutor (Guided Learning Hours, GLH) and in their own private study time.

Guided learning hours (GLH): all the times when a member of staff (e.g. tutor, trainer or facilitator) is present to give guidance ('contact time'). This includes lessons, lectures, tutorials and supervised study in, for example, learning resource centres and workshops. It also includes time spent with learners observing and assessing their achievements as they work towards their assignments.

Session	Teaching topic	Approx time allocated	Linked assessment	Resource checklist		Core content and delivery methods
35	Health and safety management systems (4): Planning and implementation	60 mins	M3, D2	Slide show presentation of *Successful health and safety management HS(G)65,* giving further detail on planning and implementation Handout: example case study Whiteboard or flipchart for discussion		Tutor-led presentation on planning and implementation, identifying proper risk assessments needed, prevention and protection, training, instruction, supervision, provision of information, site management procedures, identifying hazards and control measures Whole class discussion asking these questions of the case study organisation: What risk assessments need doing? What measures are needed for prevention and protection? How will they be monitored? etc
36	Health and safety management systems (5): Measuring performance	60 mins	M3, D2	Slide show presentation of *Successful health and safety management HS(G)65,* giving further detail on measuring performance Handout: example case study Whiteboard or flipchart for discussion		Tutor-led presentation on measuring performance, including accident statistics, audit results, safety inspections, insurance audit renewals, HSE prosecutions database Whole class discussion asking these questions of the case study organisation: • What measures for monitoring performance do we need? • What information from the HSE database would be useful? etc
37	Health and safety management systems (6): Review and audit mechanisms	60 mins	M3, D2	Slide show presentation of *Successful health and safety management HS(G)65,* giving further detail on review and audit mechanisms Whiteboard or flipchart for discussion		Tutor-led presentation on Small group discussion on review and audit mechanisms: 'How can we ensure that employees implement the health and safety rules and recommendations provided in the policy documents?'
38	Assignment 3	120 mins	P5, P6, M3, D2	Assignment 3 brief Handout: unit specification PCs with appropriate software for producing learner work (Word)		Assignment 3 brief on accident investigation Tutor explanation of pass, merit and distinction criteria Individual research and completion of tasks
39	Unit review	120 mins		End-of-unit questionnaires		Review and evaluation of unit Final awarding of marks Learner feedback End-of-unit questionnaires Feedback
	Total time (hours)	**60 hours**				

*The timings in this scheme of work reflect the time the learner is engaged in learning for the unit, both with the tutor (Guided Learning Hours, GLH) and in their own private study time.

Guided learning hours (GLH): all the times when a member of staff (e.g. tutor, trainer or facilitator) is present to give guidance ('contact time'). This includes lessons, lectures, tutorials and supervised study in, for example, learning resource centres and workshops. It also includes time spent with learners observing and assessing their achievements as they work towards their assignments.

Assessment and grading

Learners work through BTEC units by participating in the learning programme and tackling the assignments you set for them. The ultimate aims in the setting of assignments are to cover the grading criteria for each unit and to set learning within a vocational context. (Full guidance on assignment design can be found on page 40.)

Tell me more about assignments

The number of assignments for each unit will vary. It is up to you how you decide to cover the grading criteria for each unit. Take into account the ability of your cohort of learners, the requirements of the unit itself, local resources and not least your imagination as tutor.

There are drawbacks in setting both too few and too many assignments. If you set too few assignments (by, say, adopting the one-off project approach), you can place too much reliance on large pieces of evidence that may only be available late in the programme. These large assignments can be hard to assess and difficult to put right if things go wrong.

Too many assignments can put a burden on both you and the learners. This can lead to fragmentation of the unit. The unit content, outcomes and grading criteria have generally been produced to provide a coherent package. As such, the assignments should, wherever possible, maintain the coherence and links between the outcomes and grading criteria of the unit.

Your delivery can be through differently paced assignments, with learners having a shorter time to complete some assignments and a half or whole term to complete others. You are free to change the pace of your delivery to surprise learners by breaking an assignment that has gone stale with an assignment that is short and sharp. For example, the recommended assignments for Unit 1: Health, Safety and Welfare in Construction and the Built Environment (see the unit's **Programme of Suggested Assignments**) are three long, linked assignments. The second of these covers grading criteria P3, P4, M2 and D1. If some learners are getting bored with this long assignment, then select one of the P criteria and cover this in a mini-assignment. This should increase their motivation for continuing with the longer assignment.

It is good practice to provide learners with a list of assignment deadlines over the period of study. This will help learners to manage their workload. The table below shows part of an example assignment plan (the table could be extended to cover two years).

	September	October	November	December	January
Unit 1	Assignment 1	Assignment 2			Assignment 7
Unit 2			Assignment 4		
Unit 3		Assignment 3		Assignment 6	
Unit 4			Assignment 5		

Kick-starting an assignment

The most successful assignments are those where the learners can visit construction sites and use real observations as assignment evidence. If possible, providing digital cameras can be especially useful. Even better is where the learner can use their work experience or part-time employment to generate evidence for their assignments, though it may prove difficult to obtain part-time, construction-related employment. (Remember: your teaching programme should lead learners into each assignment.)

Engage your learners

If your learners are disengaged and reluctant, design initial assignments relating to construction activities that they may be interested in, such as architectural design, site management or civil engineering.

Collaborative assignment writing

Networking with other institutions who are delivering the same qualifications is a great idea. This will enable collaborative assignment writing and can sometimes reduce your workload. Remember, though, that all assignments must be internally verified by your centre to ensure they are fit for your learners.

What about grading?

Learners need to provide evidence to meet the grading criteria shown in the unit specification.

- To **pass** a unit, every pass criterion needs to be achieved.
- To gain a **merit**, all the pass and merit criteria need to be achieved.
- To gain a **distinction**, all the pass, merit and distinction criteria need to be achieved.

See the specification for further information on how unit grades are converted to points to calculate a learner's overall grade for the course. Learners who complete the unit but who do not meet all the pass criteria are graded 'unclassified'.

Each criterion generally begins with an operative verb, for example:

Pass = describe (what)
Merit = explain (how)
Distinction = justify/evaluate (why)

It is crucial that these same operative verbs are used in the wording of assignment tasks to yield correct evidence from the learner to meet each criterion.

Each assignment must cover part or all of the grading criteria in the unit's assessment and grading grid. This will be dependent on the nature and size of the individual assignment, and how it relates to the content of the unit (or units, if you are integrating unit delivery through assignments).

The grading grid in Unit 1: Health, Safety and Welfare in Construction and the Built Environment has a total of 11 grading criteria for pass, merit and distinction. Its programme of suggested assignments proposes three separate assignments grouping the grading criteria as follows: P1, P2, and M1; P3, P4, M2, and D1; and P5, P6, M3, and D2. If this unit is delivered first, then it may be advisable to break assignment 1 down into smaller assignments consisting of just P criteria. It is at your discretion to include the merit and distinction criteria in these early stages or to introduce them into later assignments once you are happy that the building blocks of understanding and application have been achieved.

When the criteria include the assessment of skills or knowledge and understanding that cannot always be evidenced in writing, the use of observation sheets or witness statements is advised – preferably with the unit criteria printed out so that accurate judgements can be made against these criteria. All documents of this nature should be signed and dated to form an authentic audit trail within the learner's assessment profile. For more information about the use of observation and witness statements see page 41.

For full information on grading, please see the specification.

Tracking learner achievement

There is an example of a learner tracking grid on page 21. These types of grid enable you to keep record of learners' progress during the course. If your unit delivery is integrated with other units, the grids facilitate your tracking of which assignments have covered which grading criteria.

It is important to ensure that assessors, internal verifiers and external verifiers have easy access to learner evidence for each of the unit grading criteria. The evidence must be clearly referenced and annotated in each learner's portfolio.

Assignment design

Assignments must be designed to motivate learners, to allow learners to achieve specified unit grading criteria in vocational contexts, and must call on learners to produce varied forms of evidence.

When designing assignments it is possible to:
- have one assignment brief to assess all the grading criteria of a unit
- have two or more smaller assignment briefs for a unit
- allow assessment of criteria from one unit to be integrated with assessment of criteria from another unit.

The assignment brief must include:

- the title and level of the qualification
- the title and number of unit(s) under assessment
- the title of the assignment
- the date the assignment is set (start date)
- submission/assessment date(s)
- the name of the assessor(s)
- the name of the learner
- space for the learner to sign to confirm the work is their own.

In addition to this the use of interim/milestone assessment dates is recommended – especially where assignments cover a number of criteria. It is essential that assignments have a suitable timescale.

The scenario

The assignment should be based within an **interesting vocational scenario** so that learning can be applied to the real world of work.

The tasks

Each assignment is divided into tasks: detailed descriptions of the activities learners will undertake in order to produce evidence to meet the unit's grading criteria and complete the assignment. Each task must:
- specify the extent and nature of evidence that learners should present
- be clear, specific, time-bound, stepped, relevant and realistic
- address the grading criteria they target, paying careful attention to the operative verb of each criterion ('describe', 'explain', 'evaluate', etc)
- reference the grading criteria they address
- be presented in learner friendly, engaging and inspirational language, they should not simply repeat the grading criteria
- address the grading criteria in full, and not split a criterion across more than one assignment.

Evidence

Clearly state what learners are expected to provide as evidence for each task. Forms of evidence can include:
- recorded discussions
- log books/diaries
- artefacts
- presentations
- performance
- brochures/leaflets/posters
- case studies
- web-based material (websites, blogs, VLE, podcasts, etc)
- role plays
- reports/written investigations
- annotated photographs
- promotional material
- work-based evidence.

For evidence that is not written, observation records or witness statements can be completed. See opposite (page 41).

Assessment and grading criteria

- The assignment must state exactly which assessment criteria are being addressed.
- Centres **must not** rewrite any aspect of the unit's assessment and grading criteria nor add their own centre-devised criteria.
- Centres may provide additional guidance, explaining assessment criteria requirements in learner friendly language, but the exact wording of the published criteria must appear on the assignment.

Integrating unit assessment

An assignment can have one unit as the main focus, but learners may also be producing evidence towards other units as well.

Local needs

Assignment briefs should always be developed and adapted to meet the needs of learners at your centre and to take account of your centre's resources. They must also be checked by someone in your centre (internally verified) to ensure they are fit for purpose **before** they are given to learners (for more information on this see page 44). Many centres have construction work undertaken on site. Make sure that you gain access to this, as it is a valuable resource.

The assignment brief will often need to be supplemented with further information, for example:
- a demonstration
- handouts
- videos or DVDs
- references to books
- references to websites
- visits to source primary research materials within the locality of your centre
- visits to local construction sites
- visits from guest speakers from local construction companies and the public sector estates management.

An example of an assignment brief can be found on page 52.

Learner responsibility

Learners need to take responsibility for completing their assignments. Many centres have instigated learner agreements or contracts, which learners sign to commit themselves to meeting all deadlines and the other demands of completing their programme. Learners need to produce assessment evidence that is all their own work – plagiarism can be an issue. It is important that learners are instructed on the correct use of referencing. For more information, see Edexcel's *Centre Guide to Managing Quality: Policies, Procedures and Practice.*

Engage your learners

The most successful assignments will engage and excite learners to take responsibility for the progress of their own learning.

Observation records

An observation record is used to provide a formal record of an assessor's judgement of learner performance (for example, during presentations, practical activity, performance, role play) against the targeted grading criteria. The record:
- will relate directly to the grading criteria in the unit specification
- may confirm achievement or provide specific feedback of performance
- will provide primary evidence of performance
- will be sufficiently detailed to enable others to make a judgement as to quality and whether there is sufficient evidence of performance.

Observation records should be accompanied by supporting additional evidence. This may take the form of visual aids, video or audio tapes, CDs, photographs, handouts, preparation notes, cue cards, diary records, log books and/or peer assessment records. Observation records should also:
- note how effectively these were used to meet the assessment criteria
- record the assessor's comments
- be evidenced in a learner's portfolio when assessment is carried out through observation, together with relevant supporting evidence
- be completed by the assessor who must have direct knowledge of the specification to enable an assessment decision to be made
- be signed and dated by the assessor and the learner
- also include the learner's comments.

An observation record can have greater validity than a witness statement since it is capable of directly recording an assessment decision without reference to others.

Witness statements

A witness statement is used to provide a written record of learner performance (process evidence) against grading criteria. Someone other than the assessor of the qualification/unit may complete it. This may be an assessor of a different qualification or unit, a work placement supervisor, a technician, a learning resources manager or anyone else who has witnessed the performance of the learner against given assessment criteria. It can be someone who does not have direct knowledge of the qualification, unit or assessment criteria as a whole but who is able to make a professional judgement about the performance of the learner in the given situation.

The quality of a witness statement is greatly improved and enables the assessor to judge the standard and validity of performance against the assessment criteria if:
- the witness is provided with clear guidance on the desirable characteristics required for successful performance by including a checklist
- the grading criteria are present on the witness testimony (this may need further amplification for a non-assessor)
- the learner or witness also provides a statement of the context within which the evidence is set.

The witness statement does not confer an assessment decision. The assessor must:
- consider all the information in the witness statement
- note the relevant professional skills of the witness to make a judgement of performance
- review supporting evidence when making an assessment decision
- review the statement with the learner to enable a greater degree of confidence in the evidence
- be convinced that the evidence presented by the witness statement is valid, sufficient and authentic.

When a number of witnesses are providing testimonies:
- every witness testimony should be signed and dated by the witness
- information of their job role/relationship with the learner should also be available.

These details add to the validity and authenticity of the testimony and the statements made in it. Centres should note that witness testimonies can form a vital part of the evidence for a unit(s) but they should not form the main or majority assessment of the unit(s).

Example forms for observation records and witness statements are given on pages 42 and 43 and can be modified to show a centre's own logo.

Observation record (by tutor)

Learner name	
Programme	
Unit number and title	

Description of activity undertaken (please be as specific as possible)

Assessment and grading criteria

How the activity meets the requirements of the assessment and grading criteria

Learner signature		**Date**	
Assessor signature		**Date**	
Assessor name			

Witness statement (by external observer)

Learner name	
Programme	
Unit number and title	

Description of activity undertaken (please be as specific as possible)

Assessment and grading criteria

How the activity meets the requirements of the assessment and grading criteria, including how and where the activity took place

Witness name		**Job role**	
Witness signature		**Date**	
Learner signature		**Date**	
Assessor name			
Assessor signature		**Date**	

Internal verification of assignment briefs

Internal verification is a quality assurance system you must use to monitor assessment practice and decisions. It is there to ensure that:

- assessment and grading is consistent across the programme
- assignments are fit for purpose
- assessment decisions accurately match learner work (evidence) to the unit grading criteria
- standardisation is a feature of centre assessment practice.

Every assignment must be internally verified **before they are issued** to learners. The internal verification should be done by a tutor who is vocationally competent and understands the BTEC Level 3 National Construction and the Built Environment units. This is to ensure that:

- the tasks and evidence will allow the learner to address the targeted criteria
- the assignment is designed using clear and accessible language
- learners' roles and tasks are vocationally relevant and appropriate to the level of the qualification
- equal opportunities are incorporated.

The system used to do this is a matter for individual centres. Edexcel fully supports the use of the centre's own quality assurance systems where they ensure robust internal standardisation.

Internal verification of assignment briefs should always be reported and recorded. If action is required, the assessor should complete this and return it to the internal verifier for sign off. Once the assignment is verified as fit for purpose, it may be issued to the learners.

Internal verifiers are advised to use the paperwork that is available both from the Edexcel website and on the CD-ROM that accompanies the specification (see the example on page 54) as this meets all Edexcel requirements.

Internal verification is to be seen as a supportive process. If an assignment brief is not fit for purpose, the internal verifier should return the assignment with appropriate comments. There should be a deadline set for the amendments to be made and, when all is approved, the documents should be signed and dated to give the team an auditable document. Tutors can engage in professional discussions where there is disagreement so that all standards and decisions are shared and understood.

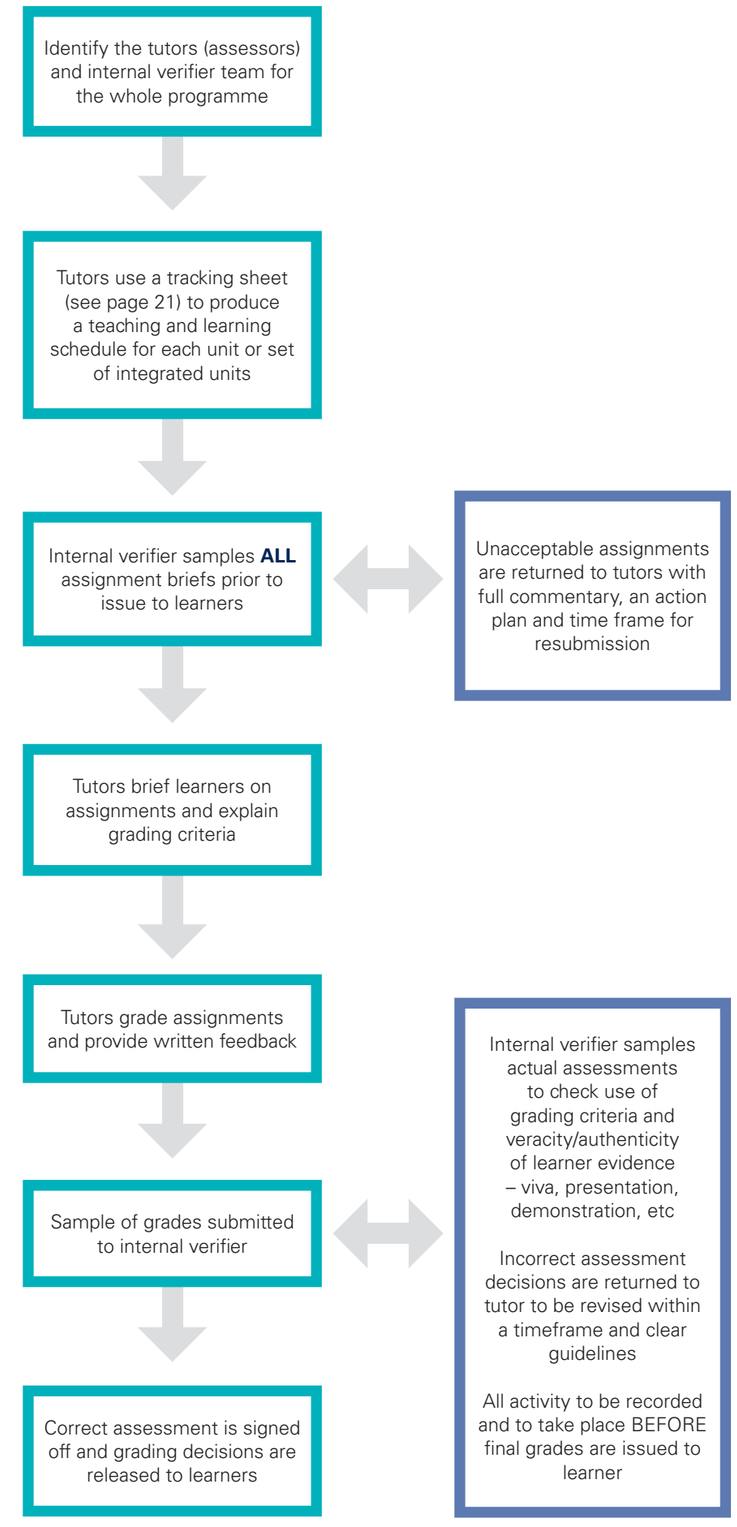
Lead internal verifiers

Each group of programmes has a lead internal verifier who coordinates the work of other internal verifiers and offers leadership on issues of internal standardisation and related training. The lead internal verifier will be expected to gain accreditation via the Edexcel online OSCA2 test. The achievement of this test will permit release and certification of learner attainment. For more information on becoming a lead internal verifier, see **www.btec.co.uk**.

(Some programmes may be subject to annual sampling prior to release and certification of learner attainment.)

For an example of an internal verification form for assignment brief, see page 54.

Procedure for internal verification



Grading an assignment

When designing an assignment it is key that you set the level of expectation for learners and provide guidance related to the kinds of evidence that they should be producing. Assignments will not, ideally, require a uniform response otherwise you will have difficulty in assessing across the range of grading criteria – differentiated learning would be constrained. Learners should have the freedom to develop their own responses within the demands of the learning outcomes and grading criteria.

When grading an assignment it is good practice to use a form such as that shown on page 60 (this is available on the CD-ROM that accompanies your specification). Alternatively, you can devise your own assessment record sheets but these should always allow feedback to learners on their performance against the criteria. It is also good practice to have space for learners to comment on their own work. It is important to give learners positive feedback that tracks and records their learning journey and achievement but also identifies areas for improvement. This is very valuable for learners who have missed criteria and need further encouragement and direction to achieve these criteria.

Learners normally receive feedback after each assignment has been assessed and internally verified.

Maximising learner achievement

Unit grades need not be submitted to Edexcel until the centre wishes to claim certification. Learners should have every opportunity to obtain the best unit grades they are able to achieve.

Learners could be encouraged to tackle criteria that they have missed or are weaker in understanding and achieving via newly designed assignments. Mini assignments or a second opportunity to meet the criteria in a fresh way is good educational practice. Newly designed assignment briefs must be internally verified before issue to learners.

Key points

- **Always use the specification document** and cross reference learner evidence to the learning outcomes, unit content and the unit's assessment and grading grid to ensure that the criteria specified in the assignment are fully met. For merit and distinction grades, the decisions should not to be based on quantity of evidence presented but on its quality (in meeting the criteria).
- **The guidance section of each unit specification will assist you** in reaching a decision. Delivery teams will find that standardisation prior to major unit assessment will be very useful in setting the standard of individual assessor's decisions. Use of a sample of learner work across the grade boundaries, especially if there are 'cusp' decisions, is the best way to setting the team standard. This activity builds confidence among the assessor team. A post-standardisation session can be very useful for further discussions on the quality and standard of the work that has been assessed and it provides an opportunity for internal verification to take place before grading decisions are confirmed to learners.
- **Good feedback can identify the way that learners can achieve a higher grade** and positive feedback will assist learners who may be diffident about gaining more than a pass grade, which is a common problem with learners who are only prepared to do the bare minimum to pass. Assessors can encourage learner self-esteem and confidence by setting clear expectations. The feedback section can also provide learners with an individual learning plan, giving clear targets for completion, dates and deadlines.

Improving grades

In general, BTEC units expect a gradual improvement in grades over the progress of the course as learners become more familiar with the degree of independence and self-responsibility that is required to meet the higher grading criteria.

For an example of a graded assignment, see page 60.

Internal verification of assessor's comments

Once assignments have been graded, the internal verifier should sample these to ensure that the assessor is:

- conducting assessment in a fair and equable way
- using the specification document
- using grading criteria
- checking the veracity and authenticity of learner evidence through vivas, presentations, demonstrations, etc.

Internal verifiers can give their feedback using a form like the one shown on page 61.

Centre teams can hold standardisation sessions to establish the veracity and accuracy of the team's assessment decisions.

Any incorrect assessment decisions will be returned to assessors to be revised within a timeframe. Where the internal verifier deems the assessment decisions to be invalid, there must be dialogue between assessor and internal verifier to discuss the issues raised. This dialogue should be documented on the internal verification form together with the action to be taken and the resulting grading outcome. There must be a clear audit trail of the closing of the 'quality loop'.

All activity should be recorded and take place before final grades are issued to learners.

For an example of an internal verification form for assessor's decisions, see page 61.

Frequently asked questions

How many assignments should there be?

As many as is necessary to assess the unit. Determine the most appropriate assessment strategy for the unit, taking into account the ability of your cohort of learners, the requirements of the unit, local resources and your imagination as tutor.

If you set too few assignments (by, say, adopting the one-off project approach), you can place too much reliance on large pieces of evidence that may only be available late in the programme. These large assignments can be hard to assess and difficult to put right if things go wrong.

Too many assignments puts a burden on both you and the learners. This can lead to fragmentation of the unit. The unit content, outcomes and grading criteria have generally been produced to provide a coherent package. As such, the assignments should, wherever possible, maintain the coherence and links between the outcomes and grading criteria of the unit.

When should assignments be set?

There are two issues here when considering timing. First, be aware of the possibility of assessment overload – when there is a bunching of assignment deadlines across a number of units at any point in the programme. To avoid overload, detailed planning needs to take place at programme level to spread the assessment load. Second, there is the issue of identifying the most appropriate place within the unit for the assignment. This will be determined by a combination of the nature of the unit and the way the outcomes link together plus the overall approach taken to teaching and learning.

As a third consideration, if you are aware of the timing of external quality checks, it is good to prepare for this early in the year by setting some assignments and assembling all learner work. This will take away any pressure on your delivery and assessment.

Can tests be used?

Any valid method of assessment can be used and this includes tests in the appropriate place. However, the assessment must be made against the grading criteria set within the unit and this equally applies to tests as any other method. The overriding issue is the need to prepare assessment instruments that are fit for purpose, challenging, vocationally relevant and provide a vocational focus that will interest and engage the learner.

What if the work is handed in late?

Deadlines are an important aspect of any work. In general, time deadlines should be given for the end of the unit.

Pacing for your learners

Using Unit 1: Health, Safety and Welfare in Construction and the Built Environment, as an example, the outcomes and assessment criteria can be covered either through three large assignments as shown in the unit specification's programme of suggested assignments, or you can set a number of assignments dealing with smaller 'bite-sized' chunks which may be more appropriate if this is the first unit taught.

For example, setting a class exercise on finding out how health and safety is managed in a particular construction company, with detail on how responsibilities are assigned and to whom, would satisfy the P1 grading criteria, which ask learners to outline the roles and responsibilities of people assigned specific health and safety duties at work.

There will be underlying factors such as lack of skills and confidence that constrain learners from acquiring the necessary independence and deeper understanding for a merit grade. Distinction criteria demand the evidence of creativity and a thorough understanding of theoretical concepts and their application to the business in question. They require the ability to show that learners can critically analyse these issues.

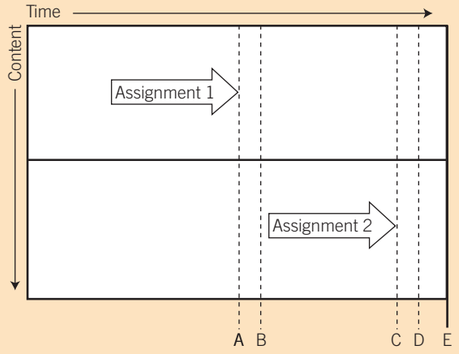
A developmental delivery pattern in which this unit would underlie others will allow your learners to grow their confidence and understanding and to show that they can deliver to the higher grade criteria in a consistent and complex manner. Some learners with limited ability will achieve consistent pass level results but will also see a definite improvement in the quality of their work.

Centres need to inform learners about their policy towards late work. If a learner hands in work late without prior negotiation, then the centre may decline to mark it. If the centre marks the work, then all grades applicable to the unit must be considered. In this case, the learner must not be punished for late work. As these programmes are vocational, some assignments will not permit late submissions, such as those that involve the performance to an audience or production of a newspaper.

How can learners be encouraged to achieve more than just a pass?

The assignment design, guidance and support are all important factors in getting learners to achieve at the highest possible level. It must be recognised that learners do have choice and if they make a conscious and informed choice to only achieve at pass level then there is probably very little anyone can do. However, experience shows that learners who become fully engaged in their BTEC programme – understanding its interim and varied assessment model, the importance of tutorials and clear recording of grading criteria they have achieved – will be encouraged and will aim higher.

Example of an assessment plan for two assignments



The first assignment covers the first outcome and has an initial deadline for feedback indicated at A. If this deadline is met, the work is reviewed and detailed feedback provided to learners at B. Learners can then rework the evidence, based on the feedback provided and resubmit for final assessment at E.

The deadline for feedback on assignment 2 is C, with feedback at D and final submission for assessment also at E. To encourage learners to meet the deadlines, work submitted after point B will only be assessed and then returned with feedback at D. Learners' work is only ever double handled using this process but it does provide learners with an opportunity to reflect on their work and achieve at the highest possible level.

Concerns about the advantages in this system for those learners who 'take more time' to achieve are balanced out by the advantages gained by the informed feedback and, possibly, the removal of work burden for those who meet deadlines. What this system does achieve is that it encourages learning based on sound assessment decisions.

What if a learner doesn't achieve a pass?

Feedback and support should be provided to ensure that the learner is aware of any failings in the work presented for assessment and then given the opportunity to rectify these failings through some means (such as reworking material, taking advantage of a further assessment opportunity, etc). However, if by the end of a unit or course the learner has still not been able to achieve all of the pass criteria, this would be considered 'completed' but not 'achieved/passed'. This assumes that the programme team is satisfied that the learner has attempted the assessment(s) instruments. If the learner has not attempted assessment, then the programme team could indicate that the unit/course had not been completed by the learner, and in such cases the qualification certificate would be withheld.

How many times can a learner rework or resit an assignment?

The issue here is the validity of the assessment instrument. If a learner is simply going round and round on a single task or activity brief, then the validity of the assessment must come into question and the tutor should consider the need for an alternative assessment instrument.

If the assignment is prompting learning, then that is what the course is about in the first place and therefore rework is to be encouraged whenever applicable.

The final assessment evidence simply needs to be a valid and reliable measure of the learner's current level of achievement against the outcomes and criteria of the unit.

Improving grades

Lack of achievement can usually be attributed to poor attendance and the non-production of or inadequate work for assessment. Ongoing assessment through teaching tutorials and portfolio reviews using the unit assessment criteria can highlight weaknesses in performance that can be addressed through individual learning plans.

Resubmitting work

Learner should be allowed to resubmit their work for further assessment; however this cannot go on indefinitely. The diagram above indicates the recommended schedule of resubmission of work. All learners should be treated the same and the rules and regulations regarding the programme should be clearly spelt out during the induction period.

Appendix: a sample assignment

A sample assignment follows for **Unit 1: Health, Safety and Welfare in Construction and the Built Environment**.

All assignments you set for your learners must be internally verified

It is intended that sample assignments are used as examples of good practice. However, they may not be entirely appropriate for every learner in every centre. You are advised to make suitable amendments to sample assignments in response to your own centre's requirements to meet the needs of your learners. All sample assignments used, whether amended or not, must be internally verified by a suitable person at your centre.

The assignment that follows covers P1, P2, and M1 and allows learners to explore health, safety and welfare issues in the construction industry. Learners need to appreciate the roles and responsibilities of construction site personnel, understand the legislation associated with site safety and discuss the methods of interaction on site regarding health and safety.

Given the size of this assignment and the knowledge needed to complete it, it may be best to break it down into smaller sections. For example, you could first tackle P1 ('Outline the roles and responsibilities of people assigned specific health and safety duties at work'), asking learners to research the different roles within the construction industry. This could be presented with some of the occupations under the headings of operative, craftsperson, technical, supervisory, managerial, and professional. Links to equality and diversity should be encouraged at all times. This could be delivered as a card activity, with each occupation written, or depicted, on a card for learners to move around and place under the appropriate headings – stimulating debate and discussion in the classroom. A presentation of a building team's hierarchy and roles and responsibilities should be encouraged, with learners comparing a small and a large construction company.

Moving on and expanding their understanding into P2, the learners could be asked to link the health, safety and welfare legislation used on site to describe the legal duties that employers and employees must fulfil. Talks from the Health and Safety Executive would be useful to link the topic to real life situations and scenarios. Research on the HSE website would allow learners to determine what is mandatory for employers and employees to do to comply with health, safety and welfare guidelines on-site.

Research into current legislation and regulations, and presentation and group work, will develop the learners and link to personal, learning and thinking skills.

Building on this for M1, learners should now be looking for ways in which on-site personnel communicate and interact in terms of their health, safety and welfare roles and responsibilities. Learners would benefit from a site visit where they could speak to a site manager who would give them understanding of how on-site communication takes place at weekly meetings, tool box talks, etc.

Each of the three criteria can be treated as mini assignments in themselves. The BTEC programmes allow for flexibility and you should always bear in mind that as long as learners meet the required criteria, assignments can be designed in any way or combination to make the learning as interesting and fun as possible and to engage the learner and stimulate their knowledge.

All learners are different and will approach their assignments in different ways

The sample assignment that follows shows how one learner answered a brief to achieve pass, merit and distinction level criteria. The learner work shows just one way in which grading criteria can be evidenced. There are no standard or set answers. If your assignment is fit for purpose, and if your learners produce the required evidence for each task, then they will achieve the grading criteria covered by the assignment.

Sample assignment front sheet

This front sheet must be completed by the learner where appropriate and included with the work submitted for assessment.

Learner name	Assessor name
Sarah Jackson	Michael Croft

Date issued	Completion date	Submitted on
21 October 2010	15 November 2010	15 November 2010

Qualification	Unit
BTEC Level 3 National in Construction and the Built Environment	Unit 1: Health, Safety and Welfare in Construction and the Built Environment

Assignment title	Health and safety responsibilities at work

In this assignment you will have opportunities to provide evidence against the following criteria.
Indicate the page numbers where the evidence can be found.

Criteria reference	To achieve the criteria the evidence must show that the student is able to:	Task no.	Page numbers
P1	outline the roles and responsibilities of people assigned specific health and safety duties at work	1	1–4
P2	outline the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector	2	1–4
M1	explain how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities	3	1–4

Learner declaration

I certify that the work submitted for this assignment is my own and research sources are fully acknowledged.

Learner signature: *Sarah Jackson* Date: *15 November 2010*

Sample assignment brief

Unit title	Unit 1: Health, Safety and Welfare in Construction and the Built Environment
Qualification	BTEC Level 3 National in Construction and the Built Environment
Start date	21 October 2010
Deadline date	15 November 2010
Assessor	Michael Croft

Assignment title	Health and safety responsibilities at work

The purpose of this assignment is to enable learners to prepare a presentation to new apprentices undertaking a site induction.

Scenario
You have been appointed Assistant Health, Safety and Welfare Advisor to Jambs Construction Ltd, a construction company who are undertaking new building work on the outskirts of your town.

The company has recruited new construction apprentices to work on the site and gain valuable site experience.

You have been asked to prepare a presentation about health and safety responsibilities at work for the new apprentices who are undertaking their on-site induction.

Your presentation could be in the form of handouts, PowerPoint™, verbal presentation, toolbox talk or any other appropriate form of presentation.

Task 1
Outline to the apprentices the roles and responsibilities of people assigned specific health and safety duties at work.

This provides evidence for P1

Task 2
Outline to the apprentices the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector.

This provides evidence for P2

Task 3
Explain to the apprentices how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities.

This provides evidence for M1

Sources of information

Books
Topliss S, Skarratt G and Hurst M – *BTEC National Construction and the Built Environment Student Book* (Pearson Education, 2010) ISBN 9781846906565
Chudley R and Greeno R – *Building Construction Handbook, 7th Edition* (Butterworth-Heinemann, 2008) ISBN 9780750686228
Allen E and Iano J – Fundamentals of Building Construction: Materials and Methods, 5th Edition (John Wiley & Sons, 2008) ISBN 9780470074688
Hands D – *Safe Start: GE 707: Safety Handbook, 2nd Edition* (ConstructionSkills, 2005) ISBN 9781857511093
Hughes, P and Ferrett E – *Introduction to Health and Safety in Construction, 3rd Edition* (Butterworth-Heinemann, 2008) ISBN 9781856175210
St John Holt, A – *Principles of Construction Safety* (WileyBlackwell, 2005) ISBN 9781405134460

Websites
www.hsebooks.co.uk Health and Safety Executive Books

This brief has beeen verified as being fit for purpose			
Assessor	Michael Croft		
Signature	*Michael Croft*	**Date**	*21 October 2010*
Internal verifier	John Peters		
Signature	*John Peters*	**Date**	*21 October 2010*

Sample internal verification of assignment brief

Qualification	BTEC Level 3 National in Construction and the Built Environment
Unit	Unit 1: Health, Safety and Welfare in Construction and the Built Environment
Assessor	Michael Croft

Internal verifier checklist		Comments
Are accurate programme details shown?	Y	
Are accurate unit details shown?	Y	
Are clear deadlines for assessment given?	Y	
Is this assignment for whole or part of a unit?	P	
Are assessment criteria to be addressed listed?	Y	
Does each task show which criteria are being addressed?	Y	
Are these criteria actually addressed by the tasks?	Y	
Is it clear what evidence the learner needs to generate?	Y	
Are the activities appropriate?	Y	
Is there a scenario or vocational context?	Y	
Is the language and presentation appropriate?	Y	
Is the timescale for the assignment appropriate?	Y	
Overall is the assignment fit for purpose?	Y	

* If "No" is recorded and the Internal Verifier recommends remedial action before the brief is issued, the Assessor and the Internal Verifier should confirm that the action has been undertaken

Internal verifier	John Peters		
Signature	*John Peters*	**Date**	*1 October 2010*

Action required:
No action required for this assignment
Action taken:
N/A

Assessor	Michael Croft		
Signature	*Michael Croft*	**Date**	*1 October 2010*
Internal verifier	John Peters		
Signature	*John Peters*	**Date**	*1 October 2010*

Sample learner work

Sample learner work: page 1

Staff site induction

Sarah Jackson
Health, safety and welfare officer

1

Welcome

- Welcome to Jambs Construction Ltd
- Who are Jambs?
- Aims of today's induction
  - Roles and responsibilities for health and safety
  - Legal requirements
  - Team interaction on health and safety matters

2

Jambs construction

- A national reputation for innovation and quality in design and house-building built up over 50 years in the industry
- The key priorities evident in any Jamb development, regardless of price: space, light, flexibility, contemporary comfort, and individual choice.
- Our ideas and designs have earned us an impressive number of awards and an impressive number of lifelong customers.
- We look after our employees and see them as the future of our growth.

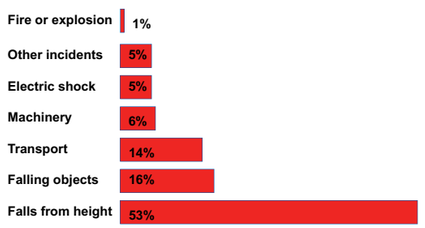
3

Accidents at work

- If laws were not in place to ensure safety on construction sites, then accidents would frequently occur much more frequently.
- All employers, employees, subcontractors and members of the public must abide by the provisions of health and safety law.

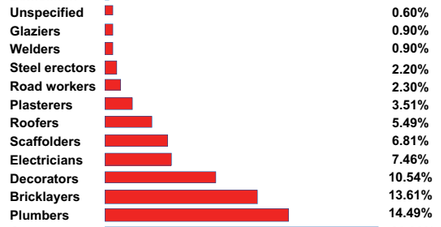
4

The causes of fatal accidents



5

Who gets injured?



6

Note: These slides are available on the CD-ROM in the Specification Pack.

Sample learner work: page 2

Health and safety

- All staff present on any of our sites are primed with health and safety law.
- From builders to admin staff, everyone must adhere to the company rules and regulations.

7

Staff with responsibilities

On site there are a variety of people responsible for heath, safety and welfare and these people are grouped into:

- Employers
- Employees
- Health and Safety Executive (HSE)
- Subcontractors
- Visitors

8

Both the employer and the employee are responsible for health, safety and welfare on the construction site. The employer needs to look after the employees and act to prevent hazards and accidents.

The employer needs to identify any hazard that might injure. The employer must carry out a risk assessment by law and give clear information about the risks on site and how employees can be protected from them.

Employees must be given full training by the employer regarding any health and safety matter that has arisen.

9

Employees are responsible for their own safety and that of others on site.

They need to act responsibly at all times and report any concerns that they may have regarding health and safety.

10

The Health and Safety Executive (HSE)

- The HSE makes sure that risks to employees' health and safety are kept under control.
- The HSE are the police of health, safety and welfare world. They can shut down a site if there is a major accident or the site is not enforcing safety procedures.
- The HSE offers guidance and advice to companies on health, safety and welfare, and ensures that everyone is safe in their place of work.

HSE

11

Sub-contractor

- Sub-contractor are hired-in labourers on site and specialise in a variety of building work.
- It is the sub-contractor's responsibility to abide by all rules and to ensure the safety of anyone on site who may come into contact with them or be affected by their actions.
- Sub-contractors must abide by the same health and safety rules as employees.

12

Sample learner work: page 3

Visitors

- Any visitor entering the construction site must have undertaken a brief site induction prior to doing so. The site induction shows visitors the prohibited areas and what Personal Protective Equipment (PPE) is needed to tour the site.
- Visitors will also be briefed about fire evacuation procedures and procedures to follow in the event of any accidents.
- Visitors who do not abide by this requirement for a health and safety induction will not be allowed on site.

13

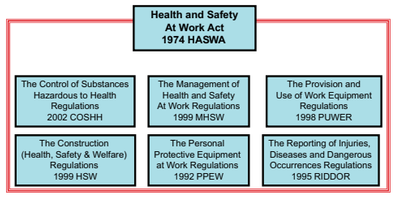
Construction law

There are many acts with relevant legislation which must be adhered to while on site, for example:

- HASWA 1994
- RIDDOR 1995
- COSHH 2007

14

Health and Safety Legislation



15

HASWA

- **HASWA** (The Health and Safety at Work Act 1994) is an Act of Parliament of Great Britain that set basic principles which must be followed by both employees and employers to help ensure a safe working environment.
- This act is what all legislation comes under and is the main piece of legislation which governs all other legislation.

16

RIDDOR

- **RIDDOR** (The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995) imposes a legal duty on all employers, employees and the self-employed. Under the regulations you must report death at work, major/minor injuries that result in three or more days absence from work, work-related diseases and near misses.
- It is mandatory for all on-site workers to abide by these rules.

17

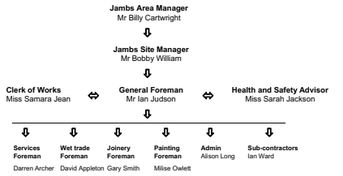
COSHH

- The **COSHH** (The Control of Substance Hazards to Health) regulations, consolidated between 1988 and 2002, are the main regulations covering the risks to employees and other people from exposure to harmful substances, in connection with any work activity under employers' control.
- The main objective of the regulations is to reduce occupational ill health by setting out a simple framework for controlling hazardous substances in the workplace.
- Some examples of materials which come under this legislation are glues, turpentine, thinners and aerosols.

18

Sample learner work: page 4

Jambs building team hierarchy



- The Jambs construction team is a diverse group of people with responsibilities for making the site safe.
- The building team consist of company employees and sub-contractors.

19

Site communication

- On a construction site communication is very important and health and safety discussions are essential at all times.
- There are many ways in which members of the team can interact over roles and responsibility for health, safety and welfare, for example:
  - calling meetings
  - giving written health and safety notices
  - make sure staff undertake correct training
  - having tool box talks
  - undertake staff awareness seminars

20

- Members of the work force can raise awareness of potential hazards by verbal/oral communication and by encouraging employers to display signs.
- They can protect each other and the public by enclosing their work space with fencing and red tape.
- Employees must be advised to use correct equipment when carrying out any task to ensure they are abiding by company health and safety policy.

21

- Employers and/or employees should communicate with the public by displaying information about the site and when work is taking place, to ensure that access is denied to the public.

- Letters are often sent out to nearby residents to inform them of the danger and who to contact if they have any problems.

22

- All staff who are using new tools and equipment, which may be unfamiliar to them, will be given appropriate training and supervision prior to them undertaking the task.
- Staff will be advised that they need to read risk assessments and compile method statements prior to undertaking any task on the site.
- All staff will receive regular updates on health and safety matters, as well as the company's quarterly newsletter, to keep them informed of all current issues.

23

In conclusion

When on site you must:

- adhere to all rules and regulations
- report all accidents and incidents.
- raise the alarm and report to the fire evacuation points when there is a fire.

24

Observation record (by tutor)

Learner name	Sarah Jackson
Programme	BTEC Level 3 National in Construction and the Built Environment
Unit number and title	Unit 1: Health, Safety and Welfare in Construction and the Built Environment

Description of activity undertaken (please be as specific as possible)

The scenario required Sarah to prepare a presentation about health and safety responsibilities at work for new apprentices undertaking their on-site induction.

Assessment and grading criteria

P1: Outline the roles and responsibilities of people assigned specific health and safety duties at work

P2: Outline the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and the built environment sector

M1: Explain how the members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities

How the activity meets the requirements of the assessment and grading criteria

Sarah's presentation was clear and understandable. She explained the roles and responsibilities of persons assigned specific health and safety duties at work, the legal duties of employees and employers in relation to three key pieces of health, safety and welfare legislation, including HASWA 1994, RIDDOR 1995 and COSHH 2007. She also gave a full explanation of health and safety legislation in the Construction industry. Her presentation covered how the members of the building team interact in terms of their health, safety and welfare roles and responsibilities.

Learner signature	Sarah Jackson	**Date**	15 November 2010
Assessor signature	Michael Croft	**Date**	15 November 2010
Assessor name	Michael Croft		

Sample assessor's comments

Qualification	BTEC Level 3 National in Construction and the Built Environment	**Year**	2010–2011
Unit number and title	Unit 1: Health, Safety and Welfare in Construction and the Built Environment	**Learner name**	Sarah Jackson

Grading criteria	**Achieved?**
P1 outline the roles and responsibilities of people assigned specific health and safety duties at work	Y
P2 outline the legal duties of employees and employers in relation to three pieces of health, safety and welfare legislation relevant to the construction and built environment sector	Y
M1 explain how members of the site construction team interact in terms of their health, safety and welfare roles and responsibilities	Y

Learner feedback

I found this a really engaging and interesting assignment. It was challenging to imagine myself giving a presentation on health and safety for new apprentices. This could be me in just a few years!

Assessor feedback

Good piece of work clearly showing all the grading criteria is met. Clear presentation and knowledge show of subject. Good research for subject. Well done.

Start to collate evidence now for Assignment 2 Risk Assessment.

You show in your final paragraph that you generated enough evidence to obtain the Merit grade which shows you presented work for interaction between workers.

Action plan

Start to collate evidence for Assignment 2 Risk Assessment.

Assessor signature	*Michael Croft*	**Date**	*17 November 2010*
Learner signature	*Sarah Jackson*	**Date**	*20 November 2010*

Sample internal verification of assessment decisions

Qualification	BTEC Level 3 National in Construction and the Built Environment				
Assessor	Michael Croft				
Unit(s)	Unit 1: Health, Safety and Welfare in Construction and the Built Environment				
Assignment title	Health and safety responsibilities at work				
Learner's name	Sarah Jackson				
Which criteria has the assessor awarded?	**Pass** P1, P2	**Merit** M1	**Distinction**		
Do the criteria awarded match those targeted by the assignment brief?	Yes. The assessor has awarded the correct criteria for the work that has been submitted.				
Has the work been assessed accurately?	Yes. The work is to the required standards.				
Is the feedback to the learner: **Constructive?** **Linked to relevant grading criteria?** **Identifying opportunities for improved performance?**	Yes. The assessor has given appropriate feedback and encouraged Sarah to research and start to prepare for her next assignment.				
Does the grading decision need amending?	No.				
Remedial action taken	None required or taken				
Internal verifier name	John Peters				
Internal verifier signature	*John Peters*		**Date**	*18 November 2010*	
Confirm action completed	N/A				
Assessor name	Michael Croft				
Assessor signature	*Michael Croft*		**Date**	*18 November 2010*	

CONSTRUCTION & THE BUILT ENVIRONMENT

LEVEL 3

BTEC National

This teaching support guide will help you get started with your BTEC delivery. It includes:

- An overview on planning course delivery: Should I teach unit-by-unit? What resources will I need? How should I induct my learners?
- A comparison chart to show how the specification has changed, unit by unit
- Ideas for tracking learner progress
- A sample scheme of work
- Case studies from schools and colleges delivering BTEC
- Hints and tips on good practice
- A walk through the assessment process, including a sample assignment with learner work and grading
- Frequently asked questions

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