Unit 105: Protecting health, safety and the environment when working in the construction and built environment sector

# Sample scheme of work

This sample scheme of work covers both classroom and workshop-based learning for Unit 105. It is based on 3 hours per session for 16 sessions. It is an example only of a possible scheme of work and is based on theory and practical within an FE centre, but can be amended to suit all learning facilities with the necessary adjustments to meet individual learners’ needs.

**You can use the sample scheme of work as it is, adjust it or extract content to create a scheme of work to suit your delivery needs. It can also be adjusted by adding theory and practical workshops to support learners who have/need additional learning time.**

Centres should also incorporate the following themes, where appropriate, as strands running through each of the sections within the qualification. Although they are not specifically referred to in the section content section, City & Guilds regards these as essential in the teaching of the qualification:

* health and safety considerations, in particular the need to impress upon learners the fact that they must preserve the health and safety of others as well as themselves
* Essential Skills (Application of Number, Communication, Digital Literacy and Employability)
* extension tasks and differentiation, inclusion, entitlement and equality issues
* spiritual, moral, social and cultural issues
* environmental education and related European issues
* British Values
* use of information learning technology (ILT).

Unit 105: Protecting health, safety and the environment when working in the construction and built environment sector

# Sample scheme of work

**Course/qualification:** Foundation in Construction and Building Services Engineering **Tutor’s name:** Enter the tutor’s name here

**Number of sessions**:16 **Delivery hours**: 48 **Venue**:Enter the venue here **Group**: Enter the group here

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| --- |
| **Learning outcomes**   1. Know workplace health and safety 2. Know health and welfare considerations for working on site 3. Understand principles of risk management 4. Know the equipment and associated risks within the construction and built environment 5. Know the principles of environmental protection 6. Be able to apply waste management principles when working in the construction and built environment sector |

| Session | Objectives/learning outcomes **The learner will:** | Activities and resources | Skills check |
| --- | --- | --- | --- |
| 1  3 hours | 1. **Know workplace health and safety**   1.1 The importance of health and safety. | Activities:   * Discussion and Q&A session on importance of personal and site safety in the construction industry. * Discuss the consequences of poor health and safety practices, including non-compliance. * Show PowerPoint 1 * Check learners understand site safety procedures, including toolbox talks, inductions, safe access and egress. * Learners to complete Worksheets 1-3   Resources:   * **PowerPoint 1: Health and safety overview** * **Worksheet 1: Health and safety abbreviations** * **Worksheet 2: Workplace safety** * **Worksheet 3: Toolbox talk** * <http://www.hse.gov.uk/construction/healthrisks/index.htm> | **Classroom discussion**  **Questions and answers**  **Worksheets 1–3** |
| 2–3  3–6  hours | 1. **Know workplace health and safety**   1.2 Regulations | Activities:   * Introduce learners to the regulations that control the construction industry. * Show PowerPoint 2 * Explain how to access general advice and guidance available and how it helps with compliance. * Learners to complete Worksheet 4   Resources:   * **PowerPoint 2: Regulations** * **Worksheet 4: Regulations** | **Classroom discussion**  **Questions and Answers**  **Worksheet 4** |
| 4  3 hours | 1. **Know workplace health and safety**   1.3 Roles and responsibilities | Activities:   * Discuss learners’ personal responsibility towards working safely on-site and the role and responsibility of their employer. * Show PowerPoint 3. * Learners to divide into small groups and brainstorm the individual responsibilities of the following members of the team under the regulations listed: client, architect, employer, employee. * Discuss how to recognise poor practice and responsibilities for reporting through the correct channels. * Discuss the role of the HSE and the responsibilities of the client and the architect under the CDM regulations. * Check learner understanding through consolidation questions. For example: State two duties of an employer. State two duties of an employee. What is the role of the HSE? * Learners to complete Worksheet 5.   Resources:   * **PowerPoint 3: Roles and responsibilities** * **Worksheet 5: Health and Safety Executive** * [The Health and Safety Executive Story - YouTube](https://www.youtube.com/watch?v=FZO8R9giCf0) | **Classroom discussion**  **Questions and Answers**  **Worksheet 5** |
| 5  3 hours | 1. **Know health and welfare considerations for working on-site**   2.1 Accidents and injuries at work  2.2 Reporting procedures | Activities:   * As a class, ask learners to come up with a list of common causes of accidents in the industry. * Show PowerPoint 4. * Discuss how to respond to accidents and injuries at work. * Learners to complete Worksheet 6.   Check learner understanding through consolidation questions. For example: What is the definition of an accident? What is the consequence to an employer of an accident in the workplace?  Resources:   * **PowerPoint 4: Accidents and injuries** * **Worksheet 6: Workplace accidents** * [Falls and trips in construction 2007 - Update (hse.gov.uk)](https://www.hse.gov.uk/construction/campaigns/watchyourstep/video/index.htm) | **Classroom discussion**  **Questions and Answers**  **Worksheet 6** |
| 6  3 hours | 1. **Know health and welfare considerations for working on-site**   2.3 Personal welfare  2.4 Site welfare | Activities:   * Ask learners to write a list the of welfare facilities they think must be made available to them by employers. * Show PowerPoint 5. * Discuss the importance of maintaining physical and mental health and how to access help or report issues. * Discuss behaviour at work, signs of bullying and support available. * Discuss standards for personal hygiene and presentation when at work. * Discuss standards set in industry for the enforcement and zero tolerance of use and abuse of both alcohol and drugs and the consequences of use to the individual and wider organisations. * Consider the importance of site layout for safety and the safe storage of materials. * Learners to complete Worksheet 7.   Resources:   * **PowerPoint 5: Welfare of staff and safe storage of materials** * **Worksheet 7: Welfare** | **Classroom discussion**  **Questions and Answers**  **Worksheet 7** |
| 7&8  3–6 hours | 1. **Understand principles of risk management**   3.1 Terminology  3.2 Risk assessment process | Activities:   * Learners should be able to identify and use the range of terminology associated with managing risk. * Discuss the purpose of risk assessments, how they are used in industry and who is responsible for producing them. * Discuss the consequences of failing to carry out a risk assessment, to both the employee and the employer. * Review how a risk assessment would inform a method statement and/or permit to work. * Learners to complete Worksheets 8–12 * Check learner understanding through consolidation questions. Eg What is a method statement? Who should carry out a risk assessment?   Resources:   * **PowerPoint 6: Risk assessment** * **PowerPoint 7: Method statements** * **Worksheet 8: Risk assessment** * **Worksheet 9: Risk activity** * **Worksheet 10: Fives steps to risk assessment** * **Worksheet 11: Method statement** * **Worksheet 12: Method statement information** * [Risk assessment: Template and examples - HSE](https://www.hse.gov.uk/simple-health-safety/risk/risk-assessment-template-and-examples.htm) | **Classroom discussion**  **Questions and Answers**  **Worksheets 8–12** |
| 9  3 hours | 1. **Understand principles of risk management**   3.3 Protective equipment | Activities:   * Show common pieces of PPE and discuss their suitability for a range of activities. * Show PowerPoint 8. * Learners to complete Worksheet 13.   Resources:   * **PowerPoint 8: PPE** * **Worksheet 13: PPE** | **Classroom discussion**  **Questions and Answers**  **Worksheet 13** |
| 10  3 hours | 1. **Understand principles of risk management**   3.4 Emergency procedures | Activities:   * Discuss different fire extinguishers and their uses. * Show PowerPoint 9. * Review how to respond during an emergency, including raising the alarm, contacting emergency services, evacuation procedures and assembly points. * Learners to complete Worksheet 14. * Check learner understanding through consolidation questions. For example: What three elements does a fire need to burn?   Resources:   * **PowerPoint 9: Emergency procedures** * **Worksheet 14: Causes of accidents** * [Fire Prevention - Site Safety Plus Short Film - YouTube](https://www.youtube.com/watch?v=heNt9IBORlc) | **Classroom discussion**  **Questions and Answers**  **Worksheet 14** |
| 11  3 hours | 1. **Understand principles of risk management**   3.5 Safety signs | Activities:   * Discuss the use of safety signs on site. * Show PowerPoint 10. * Show images of various safety signs and check learners can correctly identify them. * Learners to complete Worksheet 15. * Check learner understanding through consolidation questions. Eg Name the four categories of safety signs   Resources:   * **PowerPoint 10: Safety signs** * **Worksheet 15: Safety signs** | **Classroom discussion**  **Questions and Answers**  **Worksheet 15** |
| 12  3 hours | 1. **Know the equipment and associated risks within the construction and built environment**   4.1 Access equipment and working at height | Activities:   * Show images of types of access equipment used in the industry and see which equipment learners can identify. * Show PowerPoint 11. * Discuss uses of the equipment and their suitability for carrying out tasks on site. * Learners to complete Worksheets 16 and 17. * Check learner understanding through consolidation questions. Eg Describe the purpose of a guard rail and a toe board on a scaffold.   Resources:   * **PowerPoint 11: Access equipment** * **Worksheet 16: Working at height** * **Worksheet 17: Access equipment – true or false** * <https://www.hseni.gov.uk/topic/work-height> * [Safe use of ladders and stepladders: A brief guide (hse.gov.uk)](https://www.hse.gov.uk/pubns/indg455.htm) * [Working from Height - Site Safety Plus Short Film - YouTube](https://www.youtube.com/watch?v=WKebfmZz2O0) | **Classroom discussion**  **Questions and Answers**  **Worksheets 16 and 17** |
| 13  3 hours | 1. **Know the equipment and associated risks within the construction and built environment**   4.2 Power tools | Activities:   * Demonstrate various power tools, including pre-use checks that need to be carried out. * Show PowerPoint 12. * Discuss how to select the most appropriate tool for the job, the controls to manage risk and the maintenance requirements for power tools. * Discuss the risks associated with the use of electricity, battery, fuel and compressed air operated power tools. * Learners to complete Worksheets 18 and 19. * Check learner understanding through consolidation questions. Eg What safety checks would you carry out on a power tool? Who would carry out repairs on a defective power tool?   Resources:   * **PowerPoint 12: Power tools** * **Worksheet 18: Electricity and power tools** * **Worksheet 19: Power tools** | **Classroom discussion**  **Questions and Answers**  **Worksheets 18 and 19** |
| 14  3 hours | 1. **Know the equipment and associated risks within the construction and built environment**   4.3 Plant and machinery | Activities:   * Discuss the hazards and risks associated with plant and machinery used in construction and the built environment. * Show PowerPoint 13. * Learners to complete Worksheet 20   Resources:   * **PowerPoint 13: Plant and machinery** * **Worksheet 20: Plant and machinery** * [The safe use of vehicles on construction sites HSG144 (hse.gov.uk)](https://www.hse.gov.uk/pubns/priced/hsg144.pdf) | **Classroom discussion**  **Questions and Answers**  **Worksheet 20** |
| 15  3 hours | 1. **Know the equipment and associated risks within the construction and built environment**   4.4 Risks in construction and the built environment | Activities:   * As a group discuss the areas of work that have high levels of risk and how special measures are put into place for these areas. * Show PowerPoint 14. * Discuss how to identify and deal with services in the ground and what actions should be taken upon finding these services. * Discuss the implications of building unsafe buildings, structures or products. * Review the techniques of identification, isolation, protection, commissioning and decommissioning of services. * Learners to complete Worksheets 21 and 22.   Resources:   * **PowerPoint 14: Areas of specific risk** * **Worksheet 21: Confined spaces** * **Worksheet 22: Site services** * [Confined Space- Site Safety Plus Short Film - YouTube](https://www.youtube.com/watch?v=hHdhFTPQUHs) | **Classroom discussion**  **Questions and Answers**  **Worksheets 21 and 22** |
| 16  3 hours | 1. **Know the principles of environmental protection**   5.1 Waste management and disposal  5.2 Pollution   1. **Be able to apply waste management principles when working in the** **construction and built environment sector**   6.1 Apply basic waste management and disposal practices. | Activities:   * Discuss the risks associated with the use of electricity, battery, fuel and compressed air operated power tools. * As a class come up with a list of the different types of waste commonly found on site * Show PowerPoint 15 * Discuss how waste should be segregated and safely disposed of or re-used/recycled. * Discuss the key causes of pollution within construction and the built environment and ways of working which can limit and reduce pollution. * Discuss types of air contamination including smoke, dust and fumes. * Learners to complete Worksheets 23 and 24.   Resources:   * **PowerPoint 15: Waste and pollution** * **Worksheet 23: Waste management** * **Worksheet 24: Waste questions** * [Waste in Wales - YouTube](https://www.youtube.com/watch?v=vh64UYsjt8Q) * [Waste Management - Site Safety Plus Short Film - YouTube](https://www.youtube.com/watch?v=wQCf65cvvEg) | **Classroom discussion**  **Questions and Answers**  **Worksheets 23 and 24** |