Unit 213: Install first fixing components

# Delivery guide

Unit information

This unit is about setting out and fixing first fix site carpentry components including partitions, floor coverings, door frames and linings.

Learners may be introduced to this unit by asking themselves questions such as:

* What is first fixing?
* What tasks will I be doing in first fixing carpentry?
* How do I plan for and fit a flight of stairs?
* Why would I use wood or metal for building a partition?
* How do I measure out and fit floor coverings?

Learning outcomes

1. Understand resource selection
2. Understand working to a contract specification
3. Comply with the given contract information to carry out the work safely and efficiently to the required specification

Suggested resources

* BS 8000-5:1990. *Workmanship on building sites. Part 5: Code of practice for carpentry, joinery and general fixings.*
* BS 8000-0:2014. *Workmanship on construction sites. Part 0: Introduction and general principles.*
* BS EN 13647:2021. *Wood flooring and wood panelling and cladding. Determination of geometrical characteristics.*
* ISO 19049:2016. *Timber structures. Test method. Static load tests for horizontal diaphragms including floors and roofs.*
* BS 8233:2014. *Guidance on sound insulation and noise reduction for buildings.*

Websites

* [Cadw (gov.wales) | Homepage](https://cadw.gov.wales/)
* [NHTG | Homepage](https://www.the-nhtg.org.uk/)
* [TRADA | Timber Research and Development Association](https://www.trada.co.uk/)
* [NHBC Standards 2021 | House-Building Standards](https://nhbc-standards.co.uk/)
* [BWF | Homepage](https://www.bwf.org.uk/)

Legislation

* Approved Codes of Practice (ACOPs)
* [GOV.UK (www.gov.uk) | Structure: Approved Document A](http://Structure:%20Approved%20Document%20A%20-%20GOV.UK%20(www.gov.uk))
* [GOV.UK (www.gov.uk) | Fire safety: Approved Document B](https://www.gov.uk/government/publications/fire-safety-approved-document-b)
* [GOV.UK (www.gov.uk) | Protection from falling collision and impact: Approved Document K](https://www.gov.uk/government/publications/protection-from-falling-collision-and-impact-approved-document-k)
* [GOV.UK (www.gov.uk) | Conservation of fuel and power: Approved Document L](https://www.gov.uk/government/publications/conservation-of-fuel-and-power-approved-document-l)

Suggested resources (continued)

Legislation (continued)

* GOV.UK (www.gov.uk) | Access to and use of buildings: Approved Document M
* [GOV.UK (www.gov.uk) | Material and workmanship: Approved Document 7](https://www.gov.uk/government/publications/material-and-workmanship-approved-document-7)
* [GOV.UK (www.gov.uk) | Building regulations approval](https://www.gov.uk/building-regulations-approval)
* [GOV.UK (www.gov.uk) | The Personal Protective Equipment at Work Regulations 1992](https://www.legislation.gov.uk/uksi/1992/2966/contents/made#:~:text=The%20Personal%20Protective%20Equipment%20at%20Work%20Regulations%201992,9%20Information%2C%20instruction%20and%20training%20More%20items...%20)
* [GOV.UK (www.gov.uk) | The Manual Handling Operations Regulations 1992](https://www.legislation.gov.uk/uksi/1992/2793/made)
* [GOV.UK (www.gov.uk) | The Control of Noise at Work Regulations 2005](https://www.legislation.gov.uk/uksi/2005/1643/made)
* [HSE | Woodworking Publications - Free leaflets](https://www.hse.gov.uk/pubns/woodindx.htm)
* [HSE | Safe use of woodworking machinery](https://www.hse.gov.uk/pubns/books/l114.htm)
* [HSE | Health and Safety at Work Act 1974 explained](https://www.hse-network.com/health-and-safety-at-work-act-1974-explained)
* [HSE | Health and safety in the woodworking industry](https://www.hse.gov.uk/woodworking/index.htm)
* [HSE | Construction Design and Management Regulations 2015](https://www.hse.gov.uk/construction/cdm/2015/index.htm)
* [HSE | PUWER](https://www.hse.gov.uk/work-equipment-machinery/puwer.htm)
* [HSE | RIDDOR](https://www.hse.gov.uk/riddor/)
* [HSE | COSHH](https://www.hse.gov.uk/coshh/)
* [HSE | LOLER](https://www.hse.gov.uk/work-equipment-machinery/loler.htm)

Suggested resources (continued)

Textbooks

* Jones, S., Redfern, S., Fearn, C. (2019) *The City & Guilds Textbook: Site Carpentry and Architectural Joinery for the Level 2 Apprenticeship (6571), Level 2 Technical Certificate (7906) & Level 2 Diploma (6706).* London: Hodder Education.

ISBN 978-1-5104-5813-0

* Burdfield, M., Jones, S., Redfern, S., Fearn, C. (2020) *The City & Guilds Textbook: Site Carpentry & Architectural Joinery for the Level 3 Apprenticeship (6571), Level 3 Advanced Technical Diploma (7906) & Level 3 Diploma*. London: Hodder Education.

ISBN 978-1-5104-5815-4

| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Understand resource selection | * 1. Characteristics of the resources | * Learners to understand the characteristics and suitability of materials when selecting resources for the installation of first fix components. * Learners to understand the reasons for selecting: * white wood Tongue and Groove (T&G) or timber-based sheet material for floor coverings * white wood, Canadian Lumber Standard (CLS) or metal stud work for constructing partitions and the recommended coverings to match the location (i.e., moisture resistance, acoustic, fire, high impact areas) * European redwood or Medium Density Fibreboard (MDF) for internal hatch and door linings * Unplasticized Polyvinyl Chloride (UPVC), redwood or timber-based sheet materials for roof and verge finishings. * Learners to understand how to identify defects that can affect the structural integrity (i.e., knots, splits, shakes, grain direction) and those that only affect the aesthetics of the finished product. * Learners to understand the uses and limitations of resources and sustainable alternatives, including metal studwork for partitions and composite materials. |
| * 1. Use of resources | * Learners to understand which materials and fixings to use in specific locations and their suitability to fix, join and secure, including: * partitions and coverings (metal stud and timber) * stairs to walls and floors * door frames and linings to masonry (metal and timber studs) * flooring or flat roof coverings * eaves and soffit materials. * Learners to know how to use fixings, including: wafer head screws, dry wall screws, channel, C section studs, plasterboards, timber screws, screws, nails, proprietary fixings, wedges, spacers, twist nails, ring shank nails, mechanical fixed flooring cleats, cut clasp, adhesives, UPVC pins, nails and cappings. * Learners to know the procedures for reporting problems with selected resources, including defective materials found at point of delivery and during the construction process. |
| * 1. Organisational procedures to select resources | * Learners to understand the process for selecting materials using technical information sources, including drawings, specifications, schedules and manufacturers’ information. * Learners to know how to requisition and order resources to complete a specific task using organisational procedures, including: * completing a requisition order form * compiling a material list for a range of firstfix carpentry tasks. |
| * 1. Hazards | * Learners to understand the hazards and risks associated with the installation of first fixing components, including muscular/skeletal injuries from lifting, carrying and poor working posture, impact from tools and entrapment, repetitive strain, cuts, bruising, lacerations, vibration white finger/Von Willebrand Factor (VWF) (Raynaud’s syndrome) from using vibrating handheld machinery, irritants affecting the eyes, nose and throat, carcinogenic dusts, hearing impairment from machine noise. |
| 1. Understand working to a contract specification | * 1. Methods of work | * Learners to know how to write a method statement for the installation of first fix carpentry components and the procedure to follow in order to report a problem, ensuring all relevant parties are informed. |
| * 1. Tools and equipment | * Learners to know how to safely sharpen, maintain and store hand and power tools, check, store and maintain equipment required to install first fix carpentry components and record any faults found. Components include: * frames (door and/or window including window board) * linings (door and/or hatch) * floor joist coverings (or flat roof decking) * partitions with coverings (timber and metal) * straight flight staircases * roof verge and eaves finishing’s (timber, full composite and PVC cladding) open, closed, sprocketed. * Learners to understand the purpose, use and maintenance of the following tools and equipment: * measuring equipment * levels * straight edges * squares * saws (hand and portable power) * drill/drivers pilot bits * screwdriver bits * nails * planes and screws * drill/driver hammer * nail gun * snips * crimper * trimming knife * surform * adjustable bevel * string line * access equipment. |
| 1. Comply with the given contract information to carry out the work safely and efficiently to the required specification | * 1. Demonstrate work skills to measure, mark out, fit, finish, position and secure materials | * Learners to know how to install door and window frames, including window board. * Learners to understand the fabrication and fixing of door and hatch linings. * Learners to know how to cut and fit floor joist coverings. * Learners to know how to set out, fabricate and fix partitions (timber and metal) with sheet coverings. * Learners to know how to fit and fix straight flights of stairs. * Learners to know how to cut and fit a range of eaves (open, closed, sprocketed) and verge finishings (timber, full composite and Polyvinyl Chloride (PVC) cladding). * Learners to know how to select, safely set up, use and maintain the different types of hand tools, power tools and associated equipment separately listed. * Learners to know how to select, safely handle, stack and store resources using correct manual handling techniques. |
| * 1. Select, use and maintain hand and power tools to install at least three of the following to given working instructions: * frames (door and/or window) * linings (door and/or hatch) * floor joist coverings (or flat roof decking) * partitions * staircases * roof verge and eaves finishings |