



Forename: _____ Surname: _____

School / College / Institution: _____

Course date: _____

These Training and Accreditation Guidelines are based on, and should be used in conjunction with the following essential publications:

- Health and Safety Training Standards in Design and Technology: D&T Association.
- BS 4163:2021+A1:2022 Health and safety for design and technology in educational and similar establishments – Code of practice.
- Model Risk Assessments for D&T in Secondary Schools and Colleges: CLEAPSS.

Summary Overview**Please tick the boxes below to confirm the sections that you have completed in this document:**

1. Requirements relating to hand tools.	☐
2. Practical Assessment – skills using hand tools.	☐

The RDTHSC/Trainer will sign and date this form on completion.

RDTHSC/Trainer signature: _____

Date: _____

Delegate signature: _____

Date: _____

Please tick the individual requirements listed in the following sections to confirm your knowledge, skills and understanding, and that you have completed the Practical Assessments:

Assessment Task 1 Requirements Relating to <u>Hand Tools</u> – what you should know and understand:			
Hazards	Safe system of working (control measures)		
Sharp tools/falling tools.	- Tools should be stored at a suitable height for ease of access. - Sharp or pointed tools should be handled with care (with cutting edges protected or pointing downwards). - Tools should not be carried in pockets or under belts. - Hand tools should not be left projecting from a bench. - Instruction should be given on the correct use of hand tools. - An apron or work coat should be worn.	☐	
Blunt tools.	- Edged tools should be kept sharp and in good condition. - They should be stored appropriately, e.g. in racks.	☐	
Tools breaking/coming apart in use.	- The condition of tools should be checked before use. - Learners should be aware of the action required when tools break or fall apart. - Faces of hammer heads/hammer shafts should be frequently inspected. Damaged heads and shafts should be discarded. The correct handle must be securely fixed on the tool. Wedges in hammer shafts should be kept tight. 'Mushrooming' on the struck ends of metalworking chisels should be removed regularly.	☐	
Slipping of tools, when pressure is applied.	- Workpieces should always be held/clamped firmly in place. - Sawing boards (bench hooks) should be maintained in good condition. - The correct size of spanner should be used to fit nuts and bolts. Packing pieces should not be used.	☐	
Position/space around benches.	- Benches should be heavy-duty and robust enough for practical activities, with adequate knee space for comfort if used for seated tasks. - Working surfaces should be at the correct height for tasks and appropriate for the materials being used.	☐	
Flooring.	- Floor surface should not be slippery and should be kept free of loose items. - Suitable footwear should be worn. - See BS 4163:2021+A1:2022 Section 6 Working Area Environment.	☐	
Lighting.	- Adequate lighting should be provided. - See BS 4163:2021+A1:2022 Section 6 Working Area Environment.	☐	

Teaching Strategies

- It is essential that a risk assessment is completed to cover the use of hand tools by learners and colleagues. This will normally involve the adoption and adaptation of a model risk assessment, e.g. BS 4163:2021+A1:2022.
- It is essential that a regular maintenance programme is put into operation and that a maintenance log is kept. This should involve daily, weekly and termly checks, covering general maintenance and identifying any faults that require repairs.
- Learners should be aware of the hazards associated with hand tools and the precautions that should be taken during use.
- Before using the tools, learners should be trained and assessed as competent, and a record of their training should be kept.
- Learners should be supervised at all times by a trained, competent person.
- Health and safety rules should be available and observed.

Demonstration of hand tools to learners should include:

- Where/how to access tools, place them safely on the bench and replace them when finished.
- Teaching the correct names and parts of hand tools.
- The correct use of each hand tool.
- Preparation of practice pieces (Focused Practical Tasks) for learners to improve skills using hand tools.
- Making adjustments to tools and how to renew worn parts where applicable.
- Checking the adequacy of the workspace for the safe use of hand tools.
- Ensuring that personal protective equipment is used.
- Reinforcing correct positioning and use of tools with individual learners during lessons but encouraging learners to practise for themselves.
- Avoiding doing too much for individual learners, taking away the opportunity for them to learn and have responsibility for their own work.

Assessment Task 2 Practical Assessment –

what you should be able to demonstrate when using Hand Tools:



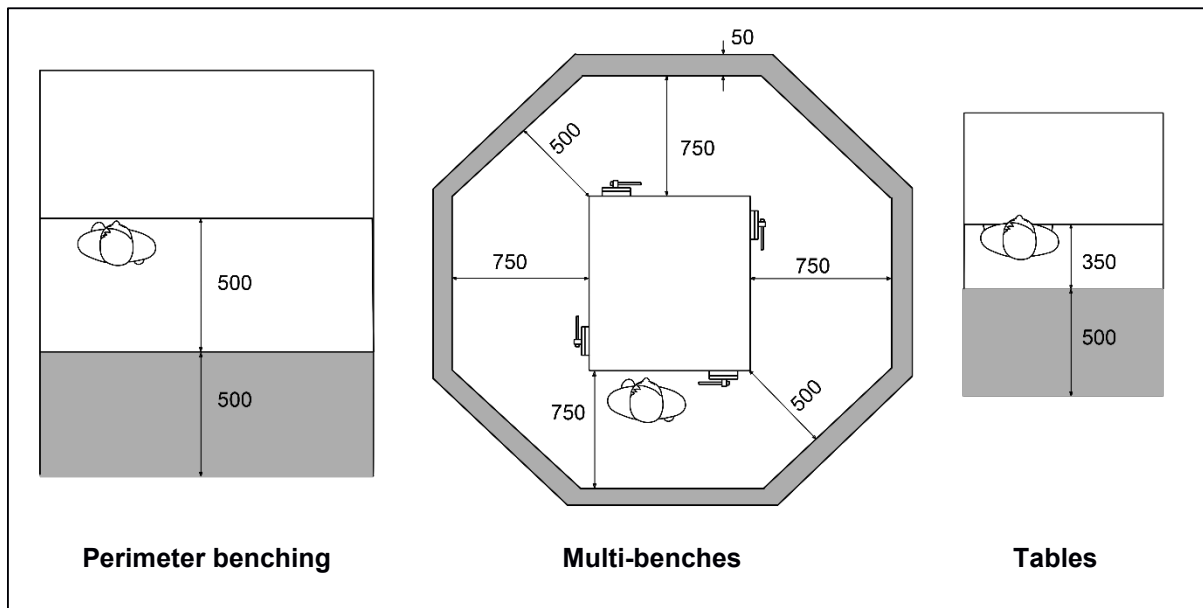
Demonstrate safe use of a range of hand tools for working in wood, metals and plastics:

- Marking out accurately, e.g. using ruler, pencil, scribe, try-square, dividers.
- Holding workpieces securely, e.g. using bench vices, bench hook, 'G' clamp.
- Sawing to length using appropriate saws, e.g. using frame saw, coping saw, back saws, hacksaw, handsaw.
- Preparing and testing smooth surfaces, e.g. using planes and files, try-square, straight edge and correct use of face side/face edge.
- Shaping materials with appropriate tools, e.g. using rasps, files, chisels, surform, craft knife.
- Selecting appropriate joining techniques using fixings and fasteners, e.g. correct marking out for nailing/screwing, using hand drills, countersink bit, screwdrivers, hammers, pincers, spanners.
- Selecting appropriate jointing techniques, e.g. correct marking out of joints, using saws, mallet and chisels to fit joints together accurately.
- Selecting and using appropriate adhesives and clamping devices to join materials.
- Selecting and using appropriate surface finishes for materials, e.g. using abrasives, polishes, applied finishes.



Supplementary materials:

The space-allocation diagrams indicate the clear working space required on either side of the machine. Where machines are next to another, dimensions can be overlapped, as indicated by the shaded zone on the diagram. Distances in front of the machine are assumed to adjoin circulation routes. A 200mm space has been allowed at the back of the machine for cleaning and maintenance.



The following references provide additional notes and guidance to support training sessions:

<https://www.axminstertools.com/hand-tools>

