

Construction

Level 1: Developing carpentry skills (R/502/3687)

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Introduction

Our Skilled for Life resources are designed to provide you with ideas for delivering the unit content and engaging tasks and activities that will help learners work towards assessment.

The materials consist of standalone sheets that can be used in a range of ways to suit most situations. Whether you are working in a classroom or a less formal learning environment, with individual learners or with groups, it is hoped that you will find these sheets and the accompanying tutor guidance notes useful.

The sheets are in pdf format; they are downloadable and may be photocopied for use only within your institution. Alternatively, learners can access them on-screen – the write-in sections are interactive so that answers to activities can be recorded electronically.

Each sheet addresses one or more of the assessment criteria in the unit (ACs are clearly marked at the top of each page). Page 1 of each sheet provides a starter stimulus or introductory idea based around the suggested unit content in the specification; it can be used to explain key concepts, or as the basis for a discussion. You could use the stimulus to draw together key learning points and encourage learners to engage with the topic or concept from the outset. There is plenty of scope for you to introduce your own content or ideas as well.

Page 2 of each sheet includes tasks that will consolidate learners' knowledge and understanding and, in some cases, may provide evidence for assessment.

This tutor guidance document provides detailed suggestions for how to use each of the resource sheets in the unit, and includes tips and advice together with suggested extension activities, alternative ideas, useful reference sources and answers to activities where applicable.

Guidance for tutors

Unit overview

This unit is designed to introduce learners to the hand tools, materials, personal protective equipment (PPE) and skills used in carpentry. Learners will have the opportunity to produce a carpentry item, such as a photograph or mirror frame with a hinge

Although learners will work independently when constructing their carpentry item, they will also function as effective members of a team by contributing to the maintenance of a clean and tidy workshop, and by working responsibly with others.

When preparing for work in the construction industry it is important that learners are able to seek and respond to guidance from colleagues and tutors during the learning process. This unit will help learners to develop an understanding of the personal qualities that are valued by employers.

It is recommended that learners will either have successfully completed the Health and Safety and Welfare in Construction unit before starting this unit, or that they will be studying the Health and Safety and Welfare in Construction unit alongside this one, using an integrated delivery and assessment approach.

NOTE: These resource sheets suggest activities to enable learners to prepare for the practical tasks they will need to undertake in this unit. However, the tutor will need to ensure that the assignment chosen will generate suitable evidence to meet the assessment criteria fully. This evidence may be in the form of photographs (of the process and the finished product), observation records, or witness statements.

Learning and teaching activities in this unit

Resource sheet 1 - *Tooling up*

Use this starter stimulus to initiate a group discussion. Use this as an opportunity to identify the prior knowledge of your learners. You may want to introduce some historical references to assist the learners in recognising the names of the different tools.

For kinaesthetic learners, it may be useful to have a selection of suitable tools in the classroom. For visual learners, PowerPoint® slides are ideal; particularly since you can 'flip' the picture into text through the 'trigger' function. For aural learners, there is a wide selection of sound-clips available to download for free from the internet.

Encourage the learners to appreciate why it is important to know the correct terminology. Provide learners with example situations in which this information would be useful. For example if they were going to buy one from a shop, what would they do? Look around the store, until they found one? Take an example, and say 'I want one of these'? To promote active and independent learning, try to discourage them from always relying on others for an answer. Ask the learners, what other strategies they could use if they did not know the name and purpose of a particular tool.

Activity 1 - *The tool for the job*

This activity will help learners to identify the uses of tools by reading descriptions and discussing which tools these descriptions are identifying. It might be helpful to have examples of all the tools described available for learners to look at and handle to help them work out which are being referred to.

Due to this being a Level 1 qualification, it is expected that learners will be able to demonstrate appropriate literacy and numeracy skills. This activity is an ideal opportunity to promote such skills within a vocational context. Encourage the learners to improve these statements or create their own definitions by looking in textbooks or researching on-line.

Alternatively, you could cut out and laminate the image tiles from the starter stimulus, together with the descriptions and use it to create a mix and match exercise. You may want to include some 'red herrings' to avoid simple guess-work.

Resource sheet 2 - *Fitting it in place*

This starter stimulus encourages pre-planning and thinking about what is required, prior to starting a practical task. You may want to provide a range of finished examples of suitable carpentry items, together with a selection of fixtures and fittings. Ask the learners to precisely identify how the item was made. Encourage the correct use of terminology, together with a clear understanding of the properties and purpose of the different materials and fixtures. Offer hints and tips by referring to the stages of design and manufacture, i.e. planning, making, finishing, etc.



Stretch activity

Ask more confident learners to draw up their own plan for what they would need to create a carpentry item, including a tools list and materials and resources.

Activity 2 - When would you use these?

Ask the learners to fill out the table on the activity sheet. This allows learners to demonstrate their understanding of fittings and materials, and their uses, as well as enabling you to identify any areas in which learners are struggling.

Since this is a Level 1 qualification, learners are expected to be functioning at around Entry 3. This requires them to provide more than just short, simple sentences.

As a quick guide for literacy skills at the different levels, learners should be able to do the following.

Entry Level 1	Write short, simple sentences with correct spelling of familiar words.
Entry Level 2	Compound sentences and simple punctuation (i.e. capital letters, full stops).
Entry Level 3	Write logically and clearly with basic grammar (i.e. subject-verb agreement).
Level 1	Write a range of texts to communicate information, ideas and opinions, using correct grammar, generally accurate punctuation and spelling.
Level 2	Present information on complex subjects, clearly and concisely, using accurate spelling, grammar and punctuation.

For details of the Functional Skills Criteria in English, Maths and ICT, see www.ofqual.gov.uk/downloads/category/68-functional-skills-subject-criteria.



Stretch activity

Ask the learners to research different requisition orders, with varying degrees of complexity, and then present their findings to the class. As an example, learners may want to research:

- What are the minimum requirements for such a form, and why? Or:
- What are the benefits of using an electronic system?

Resource sheet 3 - How can you do it safely?

This sheet introduces the issue of health and safety during different carpentry tasks.

You could use the three headings of work activities, hazards and safer practices to help the learners analyse the different situations. Encourage them to go beyond simple and obvious observations, to identify the hidden hazards (e.g. noise). Provide hints and tips about the safe use of tools and equipment, emphasising that having this knowledge not only reduces the risk of danger to health, but also prevents damage to property.



Stretch activity

Introduce simple risk assessments and ask learners to explain their relevance in accordance with current legislation. Depending on the learners, you could also mention the Hierarchy of Hazard Control. To generate a group discussion, try to get the learners to explain their understanding of the following terms and to provide some real-life examples:

- elimination
- substitution
- engineering controls
- administrative controls
- PPE.

You may wish to explain why PPE is the last resort for controlling hazards.

Activity 3 - How do these things keep you safe?

This sheet can act as precursor to the assessment criteria. Although, the simple answers would be 'to protect the head, hands or feet', encourage the learners to write more comprehensive descriptions, perhaps to include why you should not share PPE.

Encourage the learners to think about other construction operations and their specific carpentry activities. For instance, why might dust-masks be different for painters? What kinds of hazards are present in the air? For example, fumes or vapours, compared to sawdust.



Stretch activity

Provide some short case histories, either written or pictorial, that require specific PPE related to different occupations. Ask the learners to identify the correct PPE and to explain the reasoning behind the choices.

Resource sheet 4 - *Using the tools*

This starter stimulus introduces safe working practices, specifically for the maintenance and use of wood chisels. Getting learners to articulate their reasoning behind manual tasks is a valuable tool in clarifying their understanding of the process. To generate a discussion, ask the learners open questions such as:

- What is happening, and why?
- What is the purpose of each step?
- How is the sharpening stone maintained, and why?

Learners should record their thoughts. Encourage their language skills by promoting full descriptions instead of short sentences, or single words. To endorse the use of good literary skills, you could mention that their work might be displayed in the workshop, or shared with other groups etc.

Alternatively, if there is a particular process that your learners are struggling with, create your own step-by-step guide; for example, accurate measurements or chopping out the hinge.



Stretch activity

You may want to consider the maintenance and storage of other hand tools, like planes or saws. Run a small group project, where the learners investigate both the correct methods, and the consequences of poor maintenance.

Activity 4 - *Preparing to work*

The activity is designed to prepare the learner to carry out their practical work. Learners will need to have decided upon the practical work they are going to carry out in order to complete this activity. The key aim is for learners to start thinking about the work they will need to carry out and how to work safely. It is important that learners follow the correct processes and observe all health and safety issues at all times while working.



Stretch activity

Learners could be encouraged to work in pairs to prompt each other to think about the key safety concepts behind each tool. Working in pairs will also allow them to help each other to identify what they might need.

Ask the more confident learners to present, or demonstrate details about the maintenance, use or storage of other hand tools. Alternatively, run a group project in which the learners create a poster depicting safe

working practices. Encourage them to source images from the internet, textbooks, or from their workshop environment using their own cameras, to create a resource suitable for other learners.

Resource sheet 5 - Keeping safe and tidy

This case study highlights the issues of working responsibly in a tidy environment and the possible outcome of rushing around in a messy workplace.

Case studies are a useful tool to discuss behavioural or affective learning. Sometimes, it is possible to use examples directly from the class, although problems can arise if the learners take offence and feel you are putting them in the spotlight. Case studies are realistic, but anonymous, situations in which the learners can analyse the motivation and consequences of different actions.

Although there are some questions on the following sheet, encourage your learners to identify not only the simple solutions, but also the effects of 'larking about'.



Stretch activity

You may want to instigate a group discussion on what 'appropriate behaviour' actually means. For instance, being too formal and reserved is often seen as being humourless or unfriendly, whereas jokes and banter are commonplace on a construction site, as a means of communication and establishing relationships. Ask learners where they feel the dividing line is.

Activity 5 - Avoiding problems

For learners with low levels of literacy, you may have to read this case study aloud. Allow time for the learners to digest the information and perhaps suggest food for thought at the end of each paragraph.

The question sheet provides an opportunity for learners to record and reflect upon their responses. Encourage them to go beyond simple statements, perhaps by asking for three different solutions to each question. Learners could work on the questions as a group exercise, in pairs or individually. It is useful to have a 'plenary' session at the conclusion of the session to share views and opinions and allow an open discussion of different viewpoints.



Stretch activity

This resource, together with the following sheet, refers to Learning Outcome 5. Both activities are encouraging learners to investigate the

issues behind 'working responsibly with others'. You could invite the more confident learners to write their own personal statements to cover 5.1 and 5.2, based on the evaluation techniques used in the case study and the phrases from the Diamond Nine activity from Activity Sheet 6.

Resource sheet 6 - *Behaving well*

Although this image illustrates behaviour that should not happen in a workshop, learners may laugh at the realism portrayed. Initiate a group discussion, by asking about what is happening and why. If appropriate, bring in current examples of practices recently seen in the workshop. Encourage your learners to think reflectively about their own motivation and personal opportunities for change.

There will be some immediate responses to this drawing, so be prepared to record what learners say, in order to be able to refer back to them at a later stage.

Activity 6 - *Responsibility at work*

This activity follows on from the previous resource. You could use the statements provided by the learners during that group discussion, or promote some of the employability skills recommended by government and business websites. Try to compose sentences in which the 'bad' practices are initially appealing to your learners, so that they have to think twice before selecting their choices. A few suggestions are given below:

- Having a laugh makes the day go faster.
- Being polite is too posh for construction.
- The culprit is not always complicit.
- People don't listen, so you have to shout.
- Being self-centred means achieving your goals.
- Personal hygiene is difficult to maintain in construction.
- Sometimes people just don't fit in, and that's their fault.
- If I don't like someone, they should know about it.
- I reserve the right not to change my behaviour.

Learners should share their explanations for their ranking decisions with each other in a group discussion. Encourage learners to discuss any differences and explore the reason for these differences in thinking.



Stretch activity

Alternatively, you could ask the learners to work in pairs and create their own statements which reflect their own priorities and understanding of the phrase 'appropriate behaviour at work'.

Resource sheet 7 - Listen up!

The key message behind this worksheet is the importance of following instructions and encouraging learners to be comfortable with asking for help/further guidance from you (their tutor) and people with more experience. Use the photograph to explain how listening and following instructions and advice is vital to ensure success for teams. Make sure you establish that listening is a two-way skill – when learners are giving each other instructions, they will need to listen to the person they are explaining things to, in order to ensure they are being understood.

Learners can start a discussion on the situations where listening to, and understanding, instructions is important to ensure work is successfully completed. Ask learners to explain their situations clearly to the rest of the class. An exercise around listening and questioning could be built into this, where learners are quizzed on what they have just heard to test their listening and understanding.

You can play a “Chinese Whispers” game to illustrate how simple instructions can quickly become misunderstood when passed through a chain of people.

The construction industry is not well-known for its communication skills; hence the plethora of legally binding contracts to avoid lengthy industrial disputes. In a hardworking environment, such ‘people-skills’ are often seen as too soft and gentle. However, ignoring basic communication skills can have significant and costly results.



Stretch activity

Task your more confident learners to research any current industrial disputes, within construction, that were caused by poor communication. These could range from small domestic work, through to large infrastructural projects.

Activity 7 - Drawing together

This activity should build upon the discussion you have had with learners. Ask learners to expand their thoughts about key words associated with good teamwork to include actions and behaviours that are vital to ensuring smooth working. Learners will need to understand that they need to work responsibly to make sure that teams operate smoothly.

Learners can work in pairs to complete the mind-map. This would also be a good opportunity to practise good team work and sharing ideas.

More confident learners could be asked to think of some key tips for making sure that listening and following instructions is enforced

throughout businesses. Ask these learners to think of examples in a professional setting where careful listening would be vital (not only onsite, but also preparing quotes for clients, ordering materials, changes to specifications etc.).



Stretch activity

This resource, together with the following sheet, refers to Learning Outcome 6. Both activities investigate the issue of communication in the workplace. To promote ownership and responsibility of learning, you could encourage the more confident learners to write their own personal statement to cover 6.1 and 6.2, based on the example above and the reflective practice below.

Resource sheet 8 - *Making an impression*

This starter stimulus illustrates a 'first day at work'. Ask your learners for their understanding of 'bad impression' and invite them to provide examples. This photograph also recalls the issue of 'appropriate behaviour', but in a more formal setting. This activity is an ideal opportunity to introduce a few aspects of interview technique and work readiness.

Ask the learners what they see in the picture and use this to generate a discussion about approachability and willingness to learn. If appropriate, ask the learners to share their experiences of starting a new job, or college course, in order to reflect upon what they would do differently next time.

Activity 8 - *Smart working*

This activity is an ideal precursor to writing a personal statement for a CV since it is not uncommon for application forms to include an example which demonstrates 'following instructions' or 'helping others'.

Use the structure of the table to illustrate how attitude and behaviour can directly affect the outcome of work or practical tasks. However, for this to be effective, learners will have to be open and honest, and be able to receive constructive criticism.

Encourage learners to explore all the options available; for example, 'boredom' may not be an admirable attitude, but dealing with mundane assembly-work in a factory, for instance, requires certain personal strategies in response to the repetitive tasks.

Although, ideally, it is better for the learners to complete this table individually, a group setting may encourage them to recognise that people have different strengths and weakness, and to see the benefit of working together as a team.

Useful resources

Textbooks

Brett P – *Wood Occupations: Level 1* (Nelson Thornes, 2007)
ISBN 9780748781836

Jarvis, K. – *Level 1 Diploma Carpentry and Joinery* (Pearson, 2010)
ISBN 9780435027025

Porter B – *Carpentry and Joinery Volume 1* (Butterworth-Heinemann, 2001)
ISBN 9780750651356

Topliss S and Murray-Smith J – *BTEC Entry 3/Level 1 Construction Student Book* (Pearson, 2010) ISBN 9781846909207

Websites

www.geoffswoodwork.co.uk
Website covering a range of woodworking skills

www.getwoodworking.com
Website for popular woodwork magazines

www.hse.gov.uk
Website for the Health and Safety Executive

Answers to activities

Activity 1 – The tool for the job

Description	Name of the tool?
Used with a drill bit to drill holes in timber.	Hand drill
Use for gently tapping joints together.	Mallet
Used to set out lines on timber and for checking right angles.	Tri-square
Used to mark a single line along a timber edge.	Marking gauge
Used to cut woodwork joints or small pieces of timber.	Tenon saw
Used to start or make small holes in timber.	Bradawl
Used to shave timber to make it smoother.	Planing tool
Used to cut out a housing joint.	Chisel

Used to set out angled lines on timber and measure angles.	Sliding bevel
Used to punch nails below the surface of timber.	Nail punch

Activity 2 - The right materials

The materials are (top to bottom):

- Lost head nail
- Panel pin
- Countersunk screw
- Oval wire nail
- Plywood
- Softwood timber
- PVA