

Construction

Level 1: Developing joinery skills (H/502/3693)

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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 and useful reference sources.

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 joinery. Exercises within this unit will provide learners with the opportunity to produce a three-legged wooden stool as evidence of the skills they will have learnt. Emphasis is placed on the correct selection and safe use of the appropriate tools, materials and equipment required to carry out this joinery task.

Although learners will work independently when constructing their joinery 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 – *Tools for the job*

This starter stimulus illustrates some of the different hand tools used in joinery. Use this as an opportunity to identify the prior knowledge of your learners by asking them if they recognise any of the tools in the images. Emphasise that, although there are generic names, it is important to understand the specific differences. To visually demonstrate the variations that exist, you may want to bring in a selection of hammers, saws or measuring instruments. Get the learners to identify why certain tools are

used for specific tasks. Ask learners what property of the tool makes it the best choice for that task.

For learners with low levels of numeracy, this is an ideal opportunity to introduce the concept of a metric scale. Ask them to identify the millimetres, centimetres and metres on a steel rule and a tape measure. Then ask them to identify specific lengths on different measuring instruments. During this task, remember to take care when explaining the use of conflicting units – metric combined with imperial. First, find out which units the learners commonly work in. If they are school leavers, this is likely to be centimetres. Mature learners may prefer feet and inches. Encourage them to visualise different sizes. Confirm their knowledge by asking them to estimate the length of a room, or the size of a nail.

Activity 1 - Which tool is which?

This activity is a precursor to the assessment criteria as it provides some useful phrases to describe the tools used in basic joinery. It would not be too difficult to turn this activity into a quiz with two teams, particularly if you combined tools, materials and fittings. PowerPoint® would be ideal to present the definitions, with the image arriving on the next mouse-click.



Stretch activity

Encourage the more confident learners to create improved definitions – they may choose the tools they decided to improve the definitions of. Use opportunities in the practical sessions to ask the learners why they have chosen specific tools. Encourage correct use of terminology

Resource sheet 2 - Fitting it in place

This starter stimulus shows some of the materials and fixings that could be used to make a stool. Use this as an opportunity to deduce the prior knowledge of your learners by asking them if they can identify any of the materials or fixings. It may be good to bring in a range of samples, providing learners with the opportunity to develop their knowledge of the size and weight of the different items. Encourage them to explain, in their own words, the decision-making process when choosing a particular material or fitting.



Stretch activity

Ask the more confident learners to present a set of data, depicting the different sizes of panel pins and/or nails. They could design their own chart to include the headings of Name, Size and Common use. Provide examples of requisition orders or manufacturers' catalogues, and ask

the learners to identify any differences in the amount of information supplied.

Activity 2 – Fitting it together

This activity is a precursor to the assessment criteria as it provides some useful phrases to describe the materials and fixings used in basic joinery. During the practical tasks, encourage the learners to use the right descriptions when asking for tools, materials or fittings. Bring in examples where the choice of materials or fittings affected the final product. Ask the learner to identify what went wrong and what could be done differently in the future.

To reinforce the importance of correct dimensions, use a memory game or similar strategy. Hold the item out of sight and allow the learners a limited number of questions related to size, type of material, common use, etc.

Resource sheet 3 – How can you do it safely?

This sheet introduces the issue of health and safety for different joinery 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 move beyond simple observations and to think about what is happening in terms of hazards, or risk to health and/or property. Use differentiation techniques to encourage participation in the discussions. For example, with the less confident learners, you may want to ask them the reason behind the PPE used.



Stretch activity

Introduce some examples of risk assessments and ask the 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.

Activity 3 - How do these keep you safe?

This sheet can act as precursor to the assessment criteria if the learners write a comprehensive description. Since this is a Level 1 vocational qualification, learners should be able to write compound sentences with correct spelling, punctuation and grammar. To help them achieve this, you may want to provide a selection of suitable words.

Encourage the learners to think about other construction operations in contrast to their joinery projects. For instance, why might dust-masks be different for painters? What kinds of hazards are present in the air? (e.g. fumes or vapours, compared to saw dust).



Stretch activity

To challenge more able learners, provide short case histories, either written or pictorial, relating to different occupations that require specific PPE. Ask the learners to identify the correct PPE and to explain the reasoning behind their choices.

Resource sheet 4 - Getting the job right

This starter stimulus refers to the pre-planning required for joinery projects. Encourage your learners to think about the whole design process, from planning through to making and finishing. You may want to provide samples or different designs for the construction of a stool, either by the finished article, or through drawings. Encourage the learners to analyse how they are made, with reference to their own skills and abilities in joinery. It may be necessary for them to practise the techniques first, not only to achieve the quality required, but also to make apparent the benefit of pre-planning, in respect of tools, materials and equipment needed.



Stretch activity

For learners with some experience of the construction industry, you may want to scale-up this theme of pre-planning and introduce some of the aspects relating to larger construction projects, i.e. allocation of resources (labour, materials and plant), regulatory requirements (CDM and HASAWA), contract documents (tenders and bills of quantities).

Activity 4 - Preparing to work

This sheet provides the learners with an opportunity to record their thinking process around the practical task of making a joinery item. Although most learners should be able to identify a range of tools and materials, encourage them to think about any associated legislation, i.e.

HASAWA and PUWER, or specific PPE requirements. You may also want to discuss sustainability issues with regard to construction, the timber industry or consumer choice. There are vast amounts of teaching and learning resources available online regarding this topic.

This sheet can also act as a preparatory task for the assessment criteria. During this activity, encourage learners to think about safe working practices, safe maintenance and storage of tools, materials and equipment.



Stretch activity

To challenge more confident learners, ask them to write their own personal statement for the assessment criteria 4.1. Since this requires a range of evidence, there is an opportunity to promote 'ownership of learning', self-management and reflective practices, with regard to their achievement of the practical task.

Resource sheet 5 - *Putting everything in the right place*

The purpose of this sheet is to introduce the importance of keeping the workplace tidy. This will involve not only tidying up while working, but also knowing how to store materials. It is important that learners understand the possible health and safety implications of working in an untidy workplace.

The illustrations on the front page show some examples of good practice for storing a selection of materials. Discuss these with the learner and explain why these are good examples. Ask them to suggest possible problems they might have with storing other materials, for example; glass, plastics, paints and liquids, gases etc. Ask the learners to identify the specific functions of the different storage methods shown in the picture. For instance:

- What is the purpose of the tarpaulin?
- Why is timber stored on scaffolding racks?
- What is the purpose of cross-bearers?
- Why is timber stored flat?
- How storage arrangements help might or hinder, stock control?
- How do the different storage methods protect the items from damage?

You might consider small group projects, to investigate different kinds of damage (weather, vandalism, ease of access) or different kinds of hazards (slips and trips or biological fungi).

Ask learners to explain what processes they think they should follow when tidying up. Explore with them the impact of not tidying up as you work, in terms of safety hazards and time planning. Explain to learners that they have a shared duty, as well as a personal responsibility, to ensure that their workplace place is tidy and safe to work in.



Stretch activity

For learners who want to progress into the timber trade, you may want to introduce the topic of moisture content, conditioning and the hygroscopic nature of timber.

Activity 5 - *Where does it go?*

The learner activity is designed to encourage learners to look at their own workplace and understand why items are stored in a particular way. It helps avoid the usual response of 'stored off the ground', when learners are asked about storage of materials on site.

Learners could be asked to work in pairs or small teams to complete this table, explaining why decisions about storage have been made. Learners need to understand that teamwork is an important part of creating and maintaining a tidy work environment.

Encourage them to think more deeply about the specific requirements of each item and to explain why such methods are effective.



Stretch activity

For the more confident learners, you might suggest they create a poster, explaining the purpose and function of the different methods of storage, used in your workshop, as an information guide to other learners.

Resource sheet 6 - *Why is teamwork important?*

This sheet is designed to consolidate with learners the importance of teamwork; something which should be central to all their activities in their professional lives. This worksheet may be used earlier in the teaching of this unit to ensure learners begin thinking about teamwork and responsible working before they begin any practical work.

This starter stimulus provides an illustration of learners working together. Use this to prompt learners to share some of the words they think are important descriptors for effective team work. Explore each of these words in depth in a whole class discussion, encouraging learners to explain the ideas and concepts that lie behind their words. You could ask the learners as a group to vote for the ones they think are the most important, or rank

them in some other way. A secret ballot could be used if learners are nervous about having their ideas voted on.

There are a lot of teaching and learning resources available online about this subject, including short team-building activities that could be used as ice-breakers, as well more personal attributes, related to employability skills.

Unlike a group of individuals, teamwork tends to encourage co-operation, rather than competition and team-building exercises are useful for improving cognitive outcomes, affective outcomes, team processes, and performance outcomes.

Ask the learners to identify some examples of teamwork within construction – manual handling/lifting operations or duplication of labour on site. Try and get them to consider the benefits of working as a team, in terms of both the individual and the employer.

Remind learners of the importance of personal responsibility to good teamwork. Evidence of good teamwork and responsible working may need to be in the form of a witness statement.

Activity 6 - Working together

This activity should build upon the discussion you have had with learners. It should encourage learners to analyse and evaluate their understanding of teamwork. 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 teamwork and sharing ideas. Learners should be encouraged to recognise each other's strengths and weaknesses and work together to present their ideas to the rest of the group.

You may want to write these on the board or flip-chart paper, not only to identify the correct spelling, but also to demonstrate what a mind-map looks like. Suitable phrases for teamwork could include the following:

- reliable, consistent and committed
- constructive communication
- effective listening skills
- active participation
- sharing information, knowledge and experience

- respectful and considerate
- sense of belonging.



Stretch activity

Providing an example of being a team-member is a common requirement on many job application forms, so this is an ideal opportunity for learners to consolidate their thinking and formulate a suitable statement for their CV.

Alternatively, encourage the learners to use the phrases generated in these resources to write their own personal statement to cover Assessment Criteria 5.1 and 5.2.

Resource sheet 7 - *Why do I need to listen?*

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 their tutors 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. Encourage the learners to interpret the body language of both the coach and the players and to realise the effect this has on each other.

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.

External incentives can positively affect self-motivation. Ask the learners if they can think of any incidents that had a negative effect on their confidence or skills-building. You might consider a short discussion on why it appears to be easier to criticise than to praise.

Activity 7 - *Listen to this!*

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 the teams operate smoothly.

Learners can work in pairs to complete the mind-map. This would also be a good opportunity to practise good teamwork 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 client, ordering materials, changes to specifications etc.).

Resource sheet 8 - *In a rush*

This case study looks at communicating appropriately and also reinforces concepts of listening and following instructions. Discuss with the learners what Alex does well and what she does badly. Learners should identify that Alex is clearly enthusiastic, friendly and approachable. Her main mistake is that she continues to work without checking she has all the information. Learners should appreciate that the case study is not completely negative and does contain some elements of good practice.

Learners could work as a group to draw up a plan that Alex could follow to improve in the future, or suggest ways in which she could plan her time more flexibly to deal with last-minute changes.

Case studies provide an opportunity to evaluate behaviours and outcomes, within a realistic, but anonymous situation. For learners with low levels of literacy, you might need to read this out loud, but allow breathing space at the end of each paragraph, for the learners to digest the new information.

Activity 8 - *Finishing up in time*

This resource relates to the previous Starter Stimulus and provides a structure for the learners to record the outcomes of their discussions. Encourage them to refer what they have identified in the Case Study, to incidents in their own experience and how they might change their own behaviour or time-management skills.

Learners can work in groups or pairs to discuss these issues. Encourage learners to record their thoughts. More confident learners can be asked to present their findings back to the rest of the group or respond to a Q&A from the author learners from the reasoning behind their thinking.

Try to group learners in complementary pairings, to support less able learners.

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

For Teamwork and employability skills, see the following:

<http://www.careers.brad.ac.uk/employability/skills/teamwork.php>
University of Bradford – Careers Development Services

<http://www.kent.ac.uk/careers/sk/teamwork.htm>
University of Kent – Careers and Employability Service