

## Unit 34: Identification, Planting and Care of Trees

### Delivery guidance

#### Approaching the unit

Trees are one of the most diverse range of species on the Earth, thriving in both urban and rural locations across the world. Tree planting occurs for many different reasons, including the shaping of the landscape, the production of edible fruit or simply as ornamental, stand-alone specimens. Being able to correctly identify trees is essential for anyone working in horticulture, especially when selecting appropriate trees for planting.

Learners will learn the correct botanical nomenclature and terminology used when identifying trees, as well as the individual characteristics that aid their identification. They will research a range of different trees suitable for a given area and select appropriate trees for planting by applying their knowledge of each tree's individual requirements.

'Unit 34: Identification, Planting and Care of Trees' will give learners the skills required to identify, plant and care for trees. These skills are a huge advantage for career progression in roles such as a greenkeeper, gardener in the grounds of a stately home or an expert who recommends and sells plants in a garden centre. Alternatively, learners may wish to continue their studies into higher education, for example progressing onto a horticulture degree.

This unit could be introduced using a brainstorm activity, where learners collate their current knowledge of the identification, planting and care of trees. This will allow learners to reflect upon the relevant knowledge and activities from any work experience placements, previous studies, employer visits and personal experience.

As this is a very practical unit that requires access to different tree specimens, an area should be available for planting, and a suitable selection of trees should be available for learners to plant in their identified area, as this is central to the unit. Centres should ensure that they have access to suitable resources for the unit.

## Delivering the learning aims

### Learning aim A

It focuses on the botanical nomenclature and terminology for the purpose of tree identification. Elements of this could be delivered practically, with learners identifying both native and non-native trees in the wider environment and in garden settings. To demonstrate the range of characteristics that can be used to identify trees, it may be necessary to use visual resources, such as photographs, as not all the characteristics are available or obvious all year around, e.g. leaves on deciduous trees in winter.

A range of characteristics need to be available for the learners to use for identification purposes, so tutors may wish to consider the timing of this unit to ensure that there is a suitable range available, especially where flower form and leaf structure in deciduous trees is important for identification.

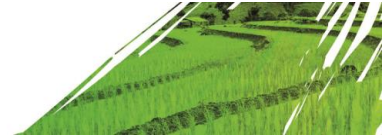
A range of identification tools must be available for the learners to use, including illustrated textbooks, nursery catalogues, brochures, labels, the internet, smartphone apps and identification keys, including flow charts and dichotomous keys. Tutor may find it useful to build up a library of these tools before this section of the course starts so they are immediately available for learners to use.

### Learning aim B

It focuses on the factors affecting the selection of trees and their suitability for use in a given area. Elements are practical, and learners will need access to an area so that they can select suitable planting. They need to be able to identify the factors that affect the planting in the area, so they must be able to survey the area, and link the identified factors with the requirements and purposes of the trees they have selected. If learners are going to plant their own selection of trees, tutors will need to offer some direction regarding the plants that are available. Again, the tutor will need to consider the timing of the delivery of this unit, so that the plants selected are available to plant out. For example, possible stock types including bare root, root balled and containerised, may only be suitable at specific times of the year and this is one of the factors that will have to be considered, e.g. planting bare root whips is carried out when the trees are dormant in winter and early spring.

### Learning aim C

It focuses on undertaking planting and aftercare of trees in a given area. It is very practical, and learners need to demonstrate and analyse the planting of their selection of trees. They will require access to the area to carry out their planting and the appropriate personal protective equipment (PPE) to allow them to carry out the planting safely and effectively. To deliver this section effectively, the selection of trees actually planted may well be different to the trees chosen in the learners' own selection in learning aim B. This may be of particular relevance if the planting is carried out as part of the learner's own work experience, where the selection planted may be dictated by the needs of the employer/client.



### Assessment model

Learning aim	Key content areas	Recommended assessment approach
<b>A</b> Understand botanical nomenclature and terminology for the purpose of tree identification	<b>A1</b> Terminology used in tree nomenclature <b>A2</b> Categorisation of trees <b>A3</b> Characteristics of trees for identification	A written report on the biological nomenclature, and tree characteristics that are used to identify trees, including their effectiveness.
<b>B</b> Explore factors affecting selection of trees and their suitability for use in a given area	<b>B1</b> Considerations affecting the choice of trees for specific areas <b>B2</b> Factors affecting the suitability of trees	Research notes on the factors that affect the selection and suitability of trees for planting, using findings to select trees to plant in a given area
<b>C</b> Undertake planting and aftercare of trees in a given area	<b>C1</b> Preparation for planting <b>C2</b> Planting methods <b>C3</b> Providing aftercare	A portfolio of evidence showing how trees are selected, planting activities and aftercare to ensure trees establish successfully.

### Assessment guidance

The recommended structure of assessment is shown in the unit summary. The recommended assessment for this unit is two assignment briefs, one to cover learning aim A and the other to cover learning aims B and C.

Evidence for learning aim A can be produced as a written report. This may include images to demonstrate the tree characteristics being discussed. If this is not appropriate for learner’s needs, a slide presentation or an illustrated handbook on tree identification may be more appropriate. Whichever form is chosen, learners must produce their own individual evidence.

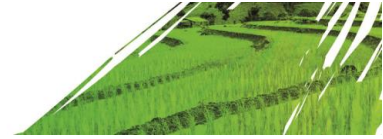
For learning aims B and C, learners are expected to produce research notes and a portfolio of evidence showing how they selected their choice of trees, their planting activities and the initial aftercare that they have provided. These notes should include observation records of practical activities, and the research notes may be in the form of a journal or notebook. This notebook could also include a review of the methods they have used for planting and aftercare. Learners may also choose to include photographic evidence of their planting activities.

For both assignments, learners need to demonstrate that they have an understanding of the content that is commensurate with the command verbs used in the relevant grading criteria. It would support the vocational ethos of this unit if learners could use their work experience setting to produce this evidence.

For this unit, learners must have access to:

- a range of trees to study, from young to mature (this can be off site)
- an area to plant and establish new trees
- appropriate and well-maintained tools, equipment and materials for preparing ground, planting and providing initial aftercare to trees
- suitable PPE.

For learning aims B and C, learners should be provided with a given area to carry out the selection, preparation, planting and aftercare of trees. It may be that the area they select their trees for may be different to the one where they carry out their planting or, especially where they carry out their practical work on work experience, the trees they select and the ones they actually plant out may be different.



## Getting started

This provides you with a starting place for one way of delivering the unit, based around the recommended assessment approach in the specification.

### Unit 34: Identification, Planting and Care of Trees

#### Introduction

To cover the content of 'Unit 14: Identification, Planting and Care of Trees', a range of trees should be available for learners to study. These should include young to mature specimens. These may be available off-site, but centres should make appropriate arrangements for learners to access these specimens. Learners will also require an area where they can plant and establish new trees, which may be a possible activity for learners to complete when on their work experience placement.

To plant and provide aftercare for their trees, learners should have access to appropriate, well-maintained tools, equipment and materials for preparing the ground. This will enable them to provide the necessary initial aftercare to the trees that they have planted.

Centres must also ensure that learners have access to appropriate personal protective equipment (PPE) to ensure that the activities are carried out safely.

The unit could be introduced using a brainstorm activity where learners collate their current knowledge of the identification, planting and care of trees. This allows learners to reflect upon the relevant knowledge and activities from any work experience placements and visits to arboriculture settings. Learners may also have personal knowledge gained from their own gardening activities. They may have watched suitable television programmes and seen information on social media and other online sources that are available about gardening. This is often aimed at the amateur gardener and a discussion could be about the differences that may be found for someone gardening professionally.

Both of these activities would lead to an introduction to the unit, where discussion about the importance of the unit and modes of study (including a read through of the learning aims) could take place.

The scheme of work details a range of activities that learners can undertake in order to gain knowledge and provide information for the assessment of this learning aim. These activities can be adapted to suit your learner's needs and preferences.

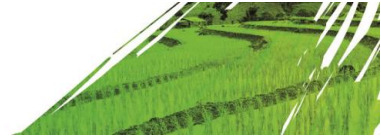
Please remember that, where group work is undertaken, it is important that all learners have the range of knowledge commensurate with the content of the unit and not just the information from their particular group's presentation. Each group could produce a handout summarising their findings to give out to all the class in order to ensure that the relevant range of information is available to all learners.

### Learning aim A – Understand botanical nomenclature and terminology for the purpose of tree identification

- To deliver learning aim A1, learners could get into small groups to study the terminology used in tree nomenclatures. Each group could produce a set of posters, so the class covers each one of the different taxa, e.g. gymnosperms. The posters should include images to exemplify the characteristics that are in common at each level.
- Learners could produce an information sheet to explain the importance and format of botanical names. Learners could then identify the trees that they are likely to encounter in their local setting and produce a dichotomous key to identify them. They could then investigate the centre locality and see how many of the trees they can identify using the key they have produced.
- For learning aim A2, learners could produce an information booklet describing (with examples) the different categories of trees identified in the unit specification. They could then demonstrate the correct use of botanical names as exemplified in their information sheet.
- Learners could get into small groups and produce a set of flash cards. These could consist of three different colours, with each colour representing the following information:
  - generic names
  - specific names
  - common names.The flashcards can be used in various ways, e.g. a timed matching exercise where learners have to compete to match them accurately 'against the clock'.
- For learning aim A3, a variety of trees images at different stages of growth could be made available in the classroom and learners could use a selection of different tools in order to identify them. Learners could be given a time limit to identify the trees, and a running score of successful identifications could be kept as a class competition. This could be an on-going exercise throughout the unit.

### Learning aim B – Explore factors affecting selection of trees and their suitability for use in a given area

- Learning aim B explores the factors affecting the selection of trees and their suitability for use in a given area, and the assessment for this learning aim is through the observation of practical activities. Therefore, this unit contains practical elements, and it will require learners to carry out these tasks over several sessions to improve their knowledge and skills in this area.
- For learning aim B1, learners could conduct independent research and make notes on the various requirements of different trees. They should consider the requirements that affect their selection, e.g. the pH of the soil they grow in or their ability to withstand drought. They could then use their notes to survey the area they are going to use in their assessment and link this to the requirements of particular tree types from the unit content. This survey can then be used as the basis for their assessed work.
- For learning aim B2, learners could get into small groups to produce a set of information sheets, covering the different factors that affect the suitability of trees for use in the given area.



### Learning aim C – Undertake planting and aftercare of trees in a given area

- Learning aim C focuses on learners undertaking planting and aftercare of trees in a given area. Similar to learning aim B, the assessment for this learning aim is through the observation of practical activities. It is therefore a very practical unit, and it will require learners to carry out these tasks over several sessions to improve their knowledge and skills in this area.
- For learning aims C1, C2 and C3, learners will have to demonstrate how to prepare for planting, planting methods and how to provide initial aftercare.
- Tutors could demonstrate the appropriate methods then learners could produce a series of Standard Operating Procedures (SOPs) to cover the different procedures used when planting and caring for plants. These SOPs can be used to inform the learners practice when they are carrying out the practical planting and aftercare for their assessed work. The learners should then practise the skills and tasks identified in the SOPs to ensure they are practicable before using them as part of their assessed work.

## Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

- Unit 4: Developing a Land-based Enterprise

It also links to other industry roles, such as greenkeepers, gardeners in the grounds of a stately home or experts who recommend and sell plants in a garden centre.

## Resources

In addition to the resources listed below, publishers are likely to produce Pearson-endorsed textbooks that support this unit of the BTEC Internationals in Agriculture/Horticulture/Land-based subjects. Check the Pearson website (<http://qualifications.pearson.com/endorsed-resources>) for more information as titles achieve endorsement.

### Textbook

Hessayon DG, *The Tree and Shrub Expert*, Expert Books, 1999 ISBN 0903505177 – it is an introductory text into the growing conditions required by and problems associated with many species of trees

### Website

plantsnap.com– this website includes a lot of advice plant identification.

*Royal Horticulture Society (RHS)* – this website includes a lot of advice and general information about gardening. The 'Plantfinder' section could be especially useful for this unit.

*Pearson is not responsible for the content of any external internet sites. It is essential for tutors to preview each website before using it in class so as to ensure that the URL is still accurate, relevant and appropriate. We suggest that tutors bookmark useful websites and consider enabling learners to access them through the school/college intranet.*