

SDG 15 Seeding Sustainability

MM4 Growing and Foraging



MM4: Growing and Foraging

Experimentation and Exploration

Lesson 12: Tree Planting

Subjects: CSPE, English, Geography, Horticulture, Science

Lesson Title and Summary: Tree Planting

By planting trees, we contribute to the environment over long periods of time as they provide oxygen, improve the quality of air, improve climate, conserve water, preserve soil, and support wildlife.

In this lesson, learners will be introduced to the life cycle of trees, the difference between bare root and potted trees, and review language related to trees.

Vocabulary: Bare Root, Deciduous, Evergreen, Life Cycle, Nurse Crop, Potted

In this lesson, the learner will:

- begin to understand the life cycle of trees
- gain an understanding of the advantages and disadvantages of bare root and potted trees
- explore different methods of planting trees
- explore options for planting trees on site

Materials

- Worksheet: Tree Planting & Identification
- Images: tree-part identification, bare root and potted trees
- Tablets/access to computers and the Internet
- Site map for planting



MM4: Growing and Foraging

L12: Tree Planting



ACTIVITY INSTRUCTIONS

Activity 1: Tree Identification (20 mins)

1. Using Worksheet: Tree Planting & Identification, get learners working in pairs to answer the following questions, using the internet to search for information.
 - What is the difference between deciduous and evergreen trees? Give some examples of each.
 - How do trees change as the seasons pass? Can you identify a growing and dormant season?
 - Can you identify the various parts of a tree? Label the image on the worksheet.
 - How does planting distance affect tree growth?
 - Do you know what a nurse crop is?
2. Share answers with another pair and then as a whole class.

Activity 2 The difference between bare root and potted plants (10 mins)

1. Show learners images of bare root and potted plants and ask them to discuss the following questions in groups of 3. They can use the Worksheet to compile their answers.
 - When can you plant bare root and potted trees?
 - Can you think of some advantages and disadvantages for both types?
 - Which do you think would be the most difficult to plant? Why?

Activity 3 Choosing where to plant trees on site (20 mins)

1. Working in groups using a site map, identify areas where trees can be planted. Keep in mind how you would like to define the spaces within the site and what has been learned about planting distances.
2. After 10 mins, form new groups (with at least one member of each group in a new group). Explain and discuss your planting design with other members of the group.

REFLECTIVE EXERCISE: 3-2-1 (10 mins)

- Three things they feel they have learnt from the tasks
- Two things they found most interesting and would like to explore more
- One – their opinion they have about the tasks

Use Post-its or a mentimeter survey - www.mentimeter.com - to gather reflections

MM4: Growing and Foraging

L12: Tree Planting



EXTENSION / REDUCTION ACTIVITIES:

For a shorter class, extend the time of Activity 1 & 2 and set Activity 3 as homework to be discussed in groups in the next lesson.

For a longer class, increase the amount of time in Activity 3 and spend time condensing the group designs into one class planting design.

Additional Classes: Learners can search for free trees or contact Trees on the Land or Trees for Secondary schools to get free trees and organise planting sessions. This includes watching videos that instruct on planting trees.

MEDIA BOX: (materials, online video links, extra resources, case studies etc)

Tree Information <https://www.treecouncil.ie/native-irish-trees>

Video: Tree Positioning <https://www.youtube.com/watch?v=d5FiqoypXfo>

Video: Notch Planting (1:18min) <https://www.youtube.com/watch?v=foSRWkDI1Cg&t=6s>

Planting Hole <https://www.gardeners.com/how-to/planting-bare-root/8764.html>

Planting Advice <https://connectingtonature.ie/blogs/news/how-to-plant-bare-root-hedging-and-trees#:~:text=The%20best%20year%20for%20planting,of%20your%20trees%20have%20moisture.> or <https://www.bowhayestrees.co.uk/planting-guides>

Coillte woodland restoration projects <https://www.woodlandrestoration.ie/>

Green Schools biodiversity resources <https://greenschoolsireland.org/themes/biodiversity/>

Trees for Secondary Schools - [Free Trees](https://treesforsecondaryschools.ie/) <https://treesforsecondaryschools.ie/>

Trees on the Land <https://www.treesontheland.com/plant-trees>

LOCAL TRIP / EXPERTISE / ADDITIONAL WORK AND ASSESSMENTS

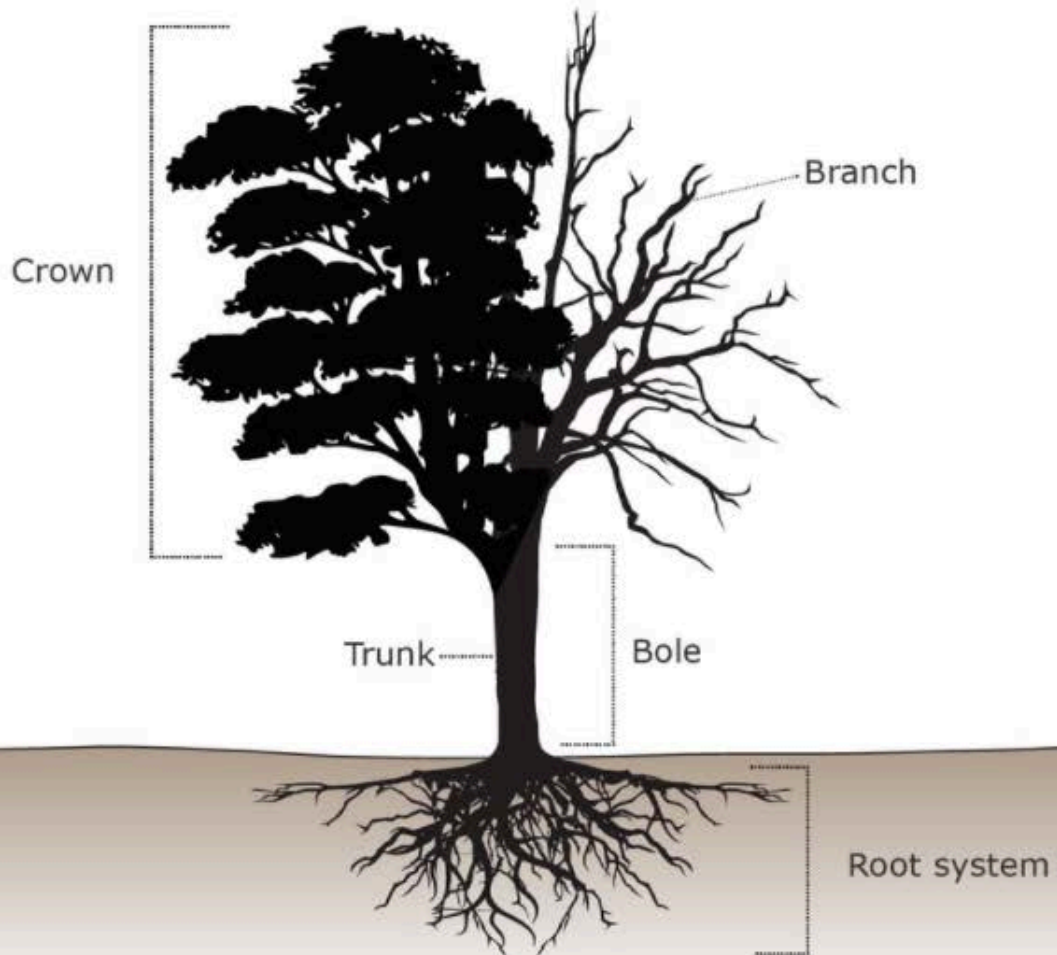
Invite allotment growers or a representative from Tidy Towns to discuss tree planting in the local area.

Organise a tree-planting day in the community. Involve learners in the Tidy Town plans.

Invite a local landscape designer to help put the tree planting on site into action.



MM4 L12 TG: TREE PLANTING & IDENTIFICATION





MM4 L12 TG: TREE PLANTING & IDENTIFICATION

TEACHER'S GUIDE

ACTIVITY 1: TREE IDENTIFICATION

Suggested responses:

a) Deciduous trees lose their leaves, evergreen trees do not.

Deciduous: ash, birch, oak, alder, hazel, etc.

Evergreen: holly, pine, fir, cedar, etc.

b) Trees grow from spring until autumn. The majority of growth takes place during the summer months. Deciduous trees lose their leaves during the autumn. The dormant season occurs when there are no leaves on deciduous trees, cold temperatures and less sunlight.

c) Limb: off trunk and supports a number of branches. Branch: off of the limb and is more than one year old, Twig: this year's growth, Tap root: goes straight down from the main trunk and keeps the tree stable, lateral roots: grow away from the tree and stabilise soil.

d) Trees planted closer together will grow taller and straighter, further apart will grow bushier. Plant closer to create hedges, further apart create shelter belts and individually as specimen trees. How we choose to plant trees encloses space and provides shelter, interest to a space. Planting distances are hedge: two rows 30-45cm apart 5-7 trees per meter, Shelter belt: 2 - 5 rows 4-6 meters apart 1 meter between trees, specimen trees 2-4 meters apart.

e) A nurse crop is a fast growing tree that is grown with a slower growing tree. Growing them together provides benefits to the slower growing tree. Birch and Alder are popular nurse trees for Oak. Oak is slow growing and spends a lot of its early establishment increasing its roots. Oak is quite vulnerable in its early years so growing it with Birch and Alder provides shelter and encourages the Oak to grow more upright with fewer lateral branches.





MM4 L12 TG: TREE PLANTING & IDENTIFICATION

TEACHER'S GUIDE

ACTIVITY 2: THE DIFFERENCE BETWEEN BARE ROOT AND POTTED PLANTS

Suggested responses:

- Bare root trees can only be planted in the dormant season, potted trees can be planted year round.
- Bare root are easier to store, transport, and are much cheaper but can only be planted during the dormant season. Potted trees can be planted year round.
- Bare root are more difficult to plant. It's easy to damage the roots during planting, the most important thing is to make sure that the tree is planted at the same soil level as it was growing in its original location. Identify the top most root, this needs to be just below soil level.



bare root



potted



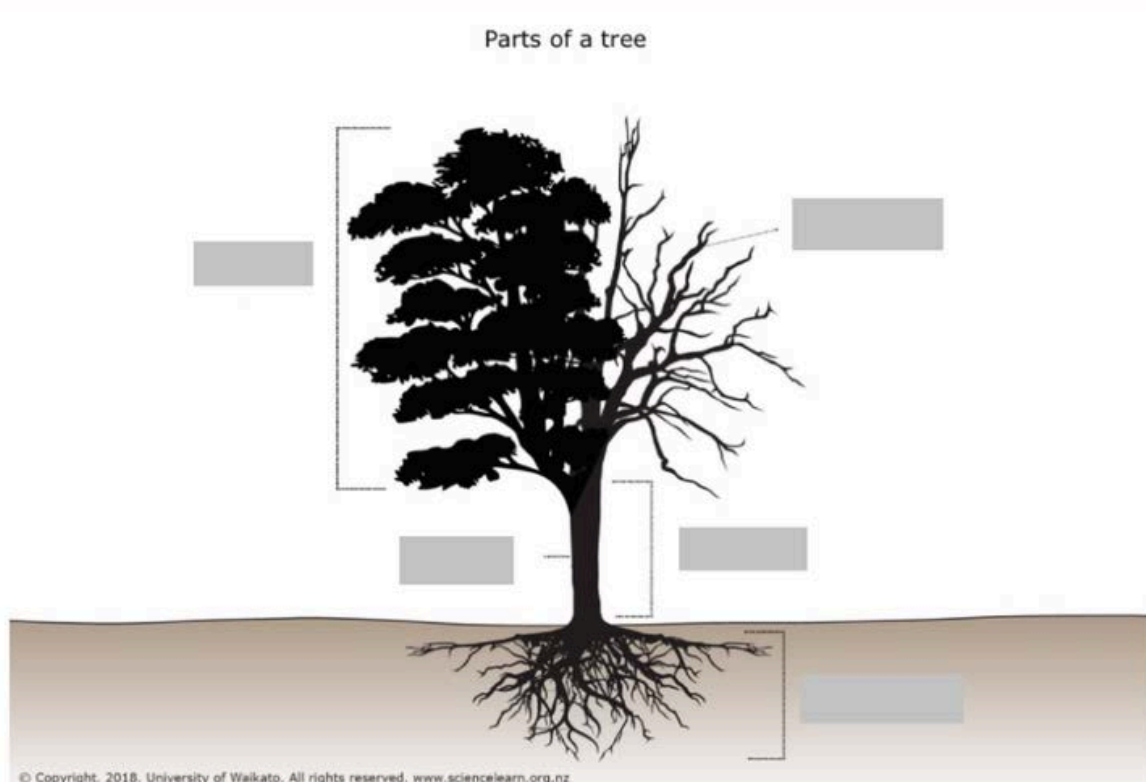
MM4 L12 WS: TREE PLANTING & IDENTIFICATION

15 LIFE ON LAND



Working with a partner, answer the following questions. Before you begin to research the answers, underline the key words in each question. Use these key words to search online for information.

- What is the difference between deciduous and evergreen trees? Give some examples of each.
- How do trees change as the seasons pass? Can you identify a growing and dormant season?
- Can you identify the various parts of a tree? Label the image.



MM4 L12 WS: TREE PLANTING & IDENTIFICATION



d) How does planting distance affect tree growth?

e) Do you know what a nurse crop is?

2. Working in groups of 3, take one question each. Research your answers for 2 mins and then share between you before a whole class discussion.

a) When can you plant bare root and potted trees?

b) Can you think of some advantages and disadvantages for both types?

c) Which do you think would be the most difficult to plant? Why?

