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**NATIONAL CERTIFICATE IN ORNAMENTAL  
HORTICULTURE LEVEL 1  
Facilitator's Guide : Identifying and Preparing Soils  
for Planting**

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**A c k n o w l e d g e m e n t s**

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**Developed by**

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**Lifestyle College**

**With special thanks to:**

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Rick Smit from Dynamic Solution Synergies**

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**Study Session Overview**

**Study Session Purpose**

This study session forms part of the National Certification in Ornamental Horticulture Learnership at NQF Level 1 and is aligned with the Unit Standard: Identifying and preparing soils for planting, which carries 4 credits.

This study session and unit standard forms the skills and knowledge for learners within the ornamental horticulture or landscaping industry who are required to prepare an area for planting and gives the learner the ability to identify:

- Topsoil and subsoil.
- Sand, loam and clay.
- The particle size and textures of each soil type.

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This study session will also help the learner to understand:

- The main differences between topsoil and subsoil.
- The benefits of planting in topsoil as opposed to subsoil.
- The reasons for stockpiling topsoil.
- The factors that influence water retention in the three soil types.
- The role that particle size plays in determining the infiltration rate of a soil.
- The benefits of tilling or digging a soil prior to planting.
- The various methods of loosening and turning soil and the depth that each achieves.
- The benefits of adding organic enrichments to the soil before planting.
- The improvements in the nutrient levels of a soil, through the addition of synthetic fertilisers.

### **Specific Outcomes**

This study session covers all the Specific Outcomes as outlined in the Unit Standard : Identifying and preparing soils for planting, namely:

- Recognise the differences between topsoil and subsoil.
- Understand why topsoil should be conserved.
- Identify the three main soil types and their characteristics.
- Understand the importance of tilling and digging an area to be planted.
- Understand the importance of adding soil enrichments to the ground before planting.

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## **Unit Standard Pre-requisites**

There is open access to this learning.

## **NQF Principles**

This study session has been designed to meet with the principles of the National Qualifications Framework. The lessons are outcomes based and aligned with an Agriculture and Nature Conservation Unit Standard. The competence acquired is portable and the content will articulate across the Horticulture industry.

## **Learning System**

The Learning Systems used in this study session are **outcomes based and process centered**.

The learner is expected to achieve competence in the process first and foremost. If the process is understood, learners can then adapt their actions under a range of different situations to include problem solving, critical thinking, diagnostics etc. This also means that learners can apply the same skill in different contexts, where the outcome is the same.

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Furthermore learners develop the competence to reflect on decisions made and judge the value and effectiveness of their performance in the outcomes mentioned.

In an effort to replicate the workplace situation, learners will use workplace examples and context to recognise the different parts of a plant and their functions. This learning process caters for all learning styles and preferences.

### **Bloom Level**

This study session has been designed at Blooms Cognitive Doom, Application level in accordance with the level set by the Specific Outcome and Assessment Criteria of the Unit Standard : Identifying and preparing soils for planting.

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**How the study session works**

This study session has been divided into four lessons, held over a period of 4 days:

<b>Lesson 1: Soil Layers</b>	<b>After learners have worked through Lesson 1, they should be able to:</b> <ul style="list-style-type: none"><li>▪ Describe the main differences between topsoil and subsoil.</li><li>▪ Explain the benefits of planting in topsoil as opposed to subsoil.</li><li>▪ Detail the reasons for stockpiling topsoil.</li></ul>
<b>Lesson 2: Soil Types</b>	<b>After learners have worked through Lesson 2, they should be able to:</b> <ul style="list-style-type: none"><li>▪ Identify the three main soil types.</li><li>▪ Describe the particle size and texture of each soil type.</li><li>▪ Describe the factors that influence water retention in the three soil types.</li><li>▪ Describe the role that particle size plays in determining the infiltration rate of a soil.</li></ul>
<b>Lesson 3: Soil Structure and Colour</b>	<b>After learners have worked through Lesson 3, they should be able to:</b> <ul style="list-style-type: none"><li>▪ Explain the benefits of tilling or digging a soil prior to planting.</li><li>▪ Describe the various methods of loosening and turning soil and the depth that each achieves.</li></ul>
<b>Lesson 4 : Soil Enrichments</b>	<b>After learners have worked through Lesson 4, they should be able to :</b> <ul style="list-style-type: none"><li>▪ Describe the benefits of adding organic enrichments to the soil before planting.</li><li>▪ Describe the improvements in the nutrient levels of a soil, through the addition of synthetic fertilizers.</li></ul>

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## **Delivery Methods**

Background notes have been written throughout this Guide to enable the facilitator to understand the essential background, concepts and frames of reference used by the design team during the development of this study session.

The target audience profile conducted indicates the need for a highly interactive and motivating lessons with much of the work being done by the learners. The study session design is therefore highly interactive and has as its premises the following core Learning Methodology:

- Trainee 'state' management to draw on the curiosity, anticipation, suspense, confidence building, delight and exploration in order to ready trainees for learning.
- Mind-set management to address trainees' learning barriers and mental reservations about the training at the outset of the experience.
- Planned format variety to stimulate all five of the learners senses i.e. sight, sound smells, taste and touch and to appeal to the Visual, Auditory and Kinesthetic learning styles identified by NLP.
- Participant-centered activities to actively involve learners in the learning process. The activities are comprehensive, practical and experiential in nature with great emphasis on the process, which *integrates* foundational, practical and reflective competence.
- Activities are based on "real work" where learners work with real workplace scenarios and case studies.

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The range of delivery methods include:

- Experiential activities, Demonstrations, Observation, Lecture and Self-study.

The trainer's role throughout these study sessions is that of a guide, a mentor, and a facilitator. Where explanations are needed these are provided for the facilitator.

Your responsibility as a facilitator using this material is to establish:

- Trust – without trust we feel foolish and cease to learn. Trust is vital because many of the activities require a willingness to give genuine feedback and to experience feedback in order to develop and progress.
- Curiosity.
- Enthusiasm – nothing works better than a little enthusiasm. Enthusiasm is contagious. If you, the facilitator, are enthusiastic about the outcomes of the activities, and genuinely believe in what is possible, your enthusiasm will be communicated to the participants. It is essential to believe in the activities and feel an adventurous excitement about what can achieve.

Specific learning outcomes listed at the beginning of each section within both the Facilitators' Guide and Learner's Workbook serve to guide and inform the learning.

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## **Learner Roles and Responsibilities**

The learner is expected to actively take part in the lessons by:

- Taking part in and completing group activities, practical assignments and discussions.
- Planning and preparing for the training.
- Asking for support when needed.
- Giving meaningful input into and challenging the status quo.
- Finding new and better ways of doing things
- Developing sound and effective practices given the input from the facilitator and the rest of the group
- Comply with assessment requirements.

## **Learner Guidance and Support**

The facilitator will provide guidance as to the content and suitability of the course to potential delegates.

Throughout the learning experience, the facilitator will:

- Provide ongoing support to the learners to assist them with the achievement of the outcomes.
- Provide delegates with all the necessary training material.
- Manage the learning process during the training.

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## **Assessment Strategy**

Assessment is focused on the applied competence of the learner and the assessment criteria are determined by the relevant unit standard.

- **Formative** - Learners are assessed continually during the lessons, by means of practical and experiential activities.
- **Summative** – Assessment is integrative and evidence is collected through observation and a knowledge questionnaire.
- **Rating** – On successful completion of the summative assessment, learners are rated "Competent" or "Not Yet Competent" against the Unit Standard assessment criteria.

The laid down policies and procedures with regard to assessment, moderation, RPL and appeals govern this assessment.

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**Facilitator Qualifications**

Facilitators must be selected based on their Education, Training & Development experience (facilitation / learner support/ plan a learning programme/ assessment) as well as subject matter expertise.

The facilitator must at least have a qualification on an equal NQF level as the qualification that they are facilitating or a qualification at a higher NQF level.

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## **Program Evaluation**

The program evaluation will be conducted using an on-course evaluation checklist, assessment results and feedback from the assessors.

The value of the study session will be judged in terms of Learner reaction, learning, behaviour, and transfer of learning to the workplace measured through results of learning and workplace assessments.

Facilitator Evaluation On-course evaluations forms will be used to judge:

- The facilitation skills of the facilitator.
- That the learning outcomes were stated clearly.
- That the key or major learning points were illustrated and clarified.
- That the learning outcomes were met.
- That the key or major learning points were summarised.
- That the Principles of Adult Learning were applied.

Course Evaluation On-course evaluation forms will be used to judge:

- The extent to which the course achieved the learning outcomes.
- The overall learner reaction to the programme.
- The relevance of the content of the training material.
- The sequence, pacing and timing of the lessons.
- The effectiveness of the delivery methods and activities.
- Duration of the study sessions and the number of delegates.
- The extent to which the learning can be applied back on the job.
- The use of media, handouts and equipment.

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The on-course evaluation forms will also be used to judge the value of: the logistic arrangements in terms of:

- The physical classroom environment.
- The seating arrangements.
- Meals and refreshments.
- Room layout.
- Accommodation (if applicable).

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**Unit Standard**

<b>Title</b>	<b>Identifying and preparing soils for planting</b>
<b>Number</b>	Draft
<b>Level</b>	1
<b>Credits</b>	4
<b>Field</b>	Agriculture and Nature Conservation
<b>Sub field</b>	Horticulture
<b>Issue date</b>	
<b>Learning assumed to be in place</b>	None

<b>Specific Outcomes</b>	<b>Assessment Criteria</b>
<b>1. Recognise the difference between topsoil and subsoil and explain why topsoil should be conserved.</b>	1.1 Describe the main differences between topsoil and subsoil. 1.2 Explain the benefits of planting in topsoil as opposed to subsoil. 1.3. Detail the reasons for stockpiling topsoil.
<b>2. Identify the three main soil types and their characteristics.</b>	2.1. Identify the three main soil types. 2.2. Describe the particle sizes and textures of each soil type. 2.3. Describe the factors that influence water retention in the three soil types. 2.4. Describe the role that particle size plays in determining the infiltration rate of a soil.
<b>3. Understand the importance of tilling and digging an area to be planted.</b>	3.1. Explain the benefits of tilling or digging a soil prior to planting. 3.2. Describe the various methods of loosening and turning soil and the depth that each achieves.

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<b>Specific Outcomes</b>	<b>Assessment Criteria</b>
<b>4. Understand the importance of adding soil enrichments to the ground before planting.</b>	4.1. Describe the benefits of adding organic enrichments to the soil before planting. 4.2. Describe the improvements in the nutrient levels of a soil, through the addition of synthetic fertilizers.

**Embedded Knowledge**

Embedded knowledge is reflected within the assessment criteria of each specific outcome and must be assessed in its own right, through oral and written evidence. Observation cannot be the only assessment.

**Critical Cross Field Outcomes**

- Identify and solve problems in which responses display that responsible decisions using critical and creative thinking have been made – specific outcomes 1 and 4.
- Work effectively with others as a member of a team, group, organisation or community. Specific outcome embedded in the learning for this level of learner.
- Organise and manage oneself and one's activities responsibly and effectively.
- Collect, analyse, organise and critically evaluate information. Specific outcome 1,2, 3 and 4.
- Communicate effectively using visual, mathematical and/or language skills in the modes of oral and/or written presentation. Specific outcome embedded in the learning for this level of learner.

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- Use science and technology effectively and critically, showing responsibility toward the environment and health of others. Specific outcome 1,2, 3 and 4.
- Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation. Specific outcome 1, 2, 3 and 4.

**Unit Standard Accreditation and Moderation Options**

1. Internal moderation.
2. External moderation.
3. Moderation of assessment will be overseen by the relevant ETQA, according to the moderation guidelines in the relevant qualification the agreed ETQA procedures.
4. Internal assessment.
5. External assessment with the relevant registered/accredited industry body/ETQA.
6. An Assessor accredited by the relevant ETQA, will assess the Learner's competency.
7. Formative and summative assessment of qualifying Learners against this unit standard should be in alignment with the requirements of the NSB.
8. Practical assessment activities will be used that are appropriate to the contents in which the qualifying Learners are working.
9. Assessment will include self and peer assessment, practical and oral assessment, observations, questions and answers, etc.
10. Direct observation is required in simulated or actual work conditions.

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11. Reporting skills are demonstrated by effective communication, using verbal and/or writing skills.
12. Assessment is to be structured to include formative and summative component, as well as the submission of a Portfolio of Evidence.
13. The assessment should ensure that all the specific outcomes; critical cross-field outcomes and embedded knowledge are assessed.
14. Specific outcomes must be assessed in their own right, through oral and practical evidence and cannot be assessed by observation only.
15. Essential embedded knowledge must be assessed in their own right, through oral and practical evidence and cannot be assessed by observation only.
16. Special outcomes and essential embedded knowledge must be assessed in relation to each other.
17. If qualifying Learners are able to explain the essential embedded knowledge, but are unable to perform the specific outcomes, then they should not be assessed as competent.
18. If qualifying Learners are able to perform specific outcomes, but are unable to explain the essential embedded knowledge, they should not be assessed as competent.
19. Evidence of the specified critical cross-field outcomes should be found, both in performance and in essential embedded knowledge.
20. All assessment activities must be fair, so that all Learners have equal opportunities. Activities must be free of gender, ethnic or other bias.
21. This unit standard can be assessed together with any other relevant registered unit standard.

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**Day 1 : Introduction**

**Note to Course Facilitator**

**Making the most of the first 60 minutes of the training:**

The first 60 minutes of any learning intervention produces the highest learning volume per second than at any other stage of the program. This is your opportunity to mold the group into active, working learners. There are many worthwhile things to do at this stage:

- Neutralise the incipient teacher-pupil relationship.
- Begin to form a class community.
- Encourage participants to discover and start to correct any non-productive learning agendas they may have.
- Encourage participants to formulate definite in-course and post-course objectives for themselves.

The lesson introduction whilst focusing on the above outcomes also includes a focus on:

- Warming up of participants.
- Building confidence
- Building rapport.
- Eliciting of learning expectations.

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- Standard classroom set up (u-shape).
- Standard stationery requirements.
- Facilitator's Guide.
- Learner Workbooks for each learner.
- Assessment Guide for each learner.
- Learner registration Forms.
- Learner Information Forms (PAETA SETA)

**Lesson duration 1 hour**

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<b>Day 1 : Introduction</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Welcome and Introductions</b></p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>TIME: 15 MINUTES</b></p>	<p>To introduce the trainer and build learner confidence.</p>	<p>Use this session to:</p> <ul style="list-style-type: none"> <li>• introduce yourself</li> <li>• tell the group a little about yourself                             <ul style="list-style-type: none"> <li>• trainer's name</li> <li>• brief background</li> </ul> </li> </ul> <p>Tell the learners that you will be going around the room and you want each of them to tell you:</p> <ul style="list-style-type: none"> <li>• Their name.</li> <li>• Where they work.</li> <li>• What type of work they do.</li> <li>• What they hope to learn, today.</li> </ul>
<p><b>Lesson Overview</b></p> <div style="text-align: center;">  </div> <p style="text-align: center;"><b>TIME: 30 MINUTES</b></p>	<p>To match what the learner hopes to learn with the Unit Standards specific outcomes and assessment criteria.</p>	<p>Discuss the Study Session Overview as per the notes on pages 4 to 13 of the learner workbook, covering::</p> <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Who is it for?</li> <li>• What's in it for you?</li> <li>• What about assessment?</li> <li>• The Unit Standard?</li> <li>• Who does what?</li> </ul> <p>Complete learner registration forms and Learner Information Form (PAETA Seta).</p>

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<b>Day 1 : Introduction</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<b>Lesson Introduction</b> 	To build learner confidence and enthusiasm for the learning.	Read the story under Introduction, on pages 14 to 15 of the learner's workbook.  Discuss what will be covered today, finishing and starting times and any breaks.
<b>TIME: 15 MINUTES</b>		

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**Day 1  
Lesson 1: Soil Layers**

**Notes to the Course Facilitator**

At this stage of the workshop, you should have developed an informal, relaxed training atmosphere.

Lesson 1 develops the learning to meet Specific Outcome 1 of the Unit Standard

- **Recognise the differences between topsoil and subsoil and explain why topsoil should be conserved.**

At the end of this lesson, learners should be able to:

- Describe the main differences between topsoil and subsoil.
- Explain the benefits of planting in topsoil as opposed to subsoil.
- Detail the reasons for stockpiling topsoil.

The **lesson notes** must be used as an overall guide to facilitation. It is important that each facilitator personalise the learning experience to suit personal and learner styles. However, the learning outcomes, practical exercises, theory and assessment are strictly aligned with national unit standards and must therefore be covered as they have been set out in the material. . Comfort breaks must be organised according to the facilitator and learners liking.

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**Materials required:**

- For Activity 1, - two trays for each workgroup – one containing topsoil and one containing subsoil.
- For Activity 4, a selection of coloured Koki's and flipchart paper.

**Lesson duration 5 hours**

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<b>Day 1 : Lesson 1 : Soil Layers</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Soil Layers</b></p>  <p><b>TIME: 20 MINUTES</b></p>	<p>To build the learning to meet the specific outcome and related assessment criteria for this section.</p>	<p>Discuss as per the notes, on pages 17 to 18, of the learner workbook.</p>
<p><b>Activity 1</b></p>  <p><b>TIME: 50 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <ul style="list-style-type: none"> <li>• Recognise the differences between topsoil and subsoil.</li> </ul>	<p>Divide learners into small workgroups. Since research tells us that bigger groups will fragment and form break away groups, ensure that there are no more than 5 learners per work group.</p> <p>Ask learners to complete Activity 1, on page 19, of the learner workbook.</p> <p>Allow 20 minutes for this activity.</p> <p>Debrief by covering key learning points on pages 20 and 21 of the learner workbook.</p>

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<b>Day 1 : Lesson 1 : Soil Layers</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Activity 2</b></p>  <p><b>TIME: 60 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <ul style="list-style-type: none"><li>• Describe the main differences between topsoil and subsoil.</li></ul>	<p>Divide learners into small work groups and ask them to complete Activity 2, on page 22 of the learner workbook.</p> <p>Allow 20 minutes for completion of this activity.</p> <p>Ask learners to share their answers and make sure that all key learning points are covered.</p>
<p><b>Activity 3</b></p>  <p><b>TIME: 60 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <ul style="list-style-type: none"><li>• Explain the benefits of planting in topsoil as opposed to subsoil.</li></ul>	<p>Ask learners to complete Activity 3, on page 23 of the learner workbook.</p> <p>Allow 20 minutes for the completion of the activity.</p> <p>Go around the room and give each learner a chance to answer the question.</p> <p>Ensure that all key learning points are covered.</p>

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<b>Day 1 : Lesson 1 : Soil Layers</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Activity 4</b></p>  <p><b>TIME: 40 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <ul style="list-style-type: none"> <li>• Explain why topsoil should be conserved</li> </ul>	<p>Ask learners to complete Activity 4, on page 24 of the learner workbook.</p> <p>Allow 20 minutes for the completion of the activity.</p> <p>Go around the room and give each learner a chance to answer the question.</p> <p>Ensure that all key learning points are covered.</p>
<p><b>Stockpiling Topsoil</b></p>  <p><b>TIME: 15 MINUTES</b></p>	<p>To build the learning to meet the specific outcome and related assessment criteria for this section.</p>	<p>Explain as per the notes on page 25, of the learner workbook.</p>
<p><b>Activity 5</b></p>  <p><b>TIME: 30 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <ul style="list-style-type: none"> <li>• Detail the reasons for stockpiling topsoil.</li> </ul>	<p>Divide learners into small work groups and ask them to complete Activity 5, on page 26 of the learner workbook.</p> <p>Allow 20 minutes for completion of the Activity.</p> <p>Ask learners to share their answers and ensure that all key learning points are covered.</p>

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<b>Day 1 : Lesson 1 : Soil Layers</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<b>Conclusion</b>   <b>TIME: 25 MINUTES</b>	To close day 1, lesson 1.	Ask learners if check their learning by completing the Lesson Checkpoint on page 29, of the learner workbook.  Allow 15 minutes for completion of this activity.  As learners are completing this activity, walk around the room and check that all learners are feel that they can meet the assessment criteria.  Recap on any learning points that arise.  Thank learners, advise on date for the next lesson and close for the day.

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**Day 2  
Lesson 2 : Soil Types**

**Notes to the Course Facilitator**

At this stage of the workshop, you should have developed an informal, relaxed training atmosphere.

Lesson 2 develops the learning to meet Specific Outcome 2 of the Unit Standard

- **Identify the three main soil types and their characteristics.**

At the end of this lesson, learners should be able to:

- Identify the three main soil types.
- Describe the particle sizes and textures of each soil type.
- Describe the factors that influence water retention in the three soil types.
- Describe the role that particle size plays in determining the infiltration rate of a soil.

The **lesson notes** must be used as an overall guide to facilitation. It is important that each facilitator personalise the learning experience to suit personal and learner styles. However, the learning outcomes, practical exercises, theory and assessment are strictly aligned with national unit standards and must therefore be covered as they have been set out in the material. . Comfort breaks must be organised according to the facilitator and learners liking.

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**Facilitator's Guide : Identifying and Preparing Soils  
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**Materials required:**

- Standard classroom set up (u-shape).
- Standard stationery requirements.
- Facilitator's Guide.
- Learner Workbooks for each learner.
- Assessment Guide for each learner.
- Activity 6 - 3 trays per learner workgroup – one tray to be filled with clay soil, the next with sandy soil and the next with loam soil. Water for sausage test.
- Activity 7 – 2 glass jars per learner workgroup – enough marbles and coins to fill the 2 jars.
- Activity 9 – infiltration test – 3 tins per learner workgroup with holes punched into the bottom, clay, loam and sand soils, and water.

**Lesson duration : 5 hours**

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<b>Day 2 : Lesson 2 : Soil Types</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Welcome and recap</b></p> 	<p>To build learner confidence and enthusiasm and recap on day 1 key learning points.</p>	<p>Welcome learners back to the Identifying and preparing soils for planting study session.</p> <p>Who can remember what we learnt in the last study session?</p> <p>Cover Lesson Summary, as outlined on pages 27 and 28 of the learner workbook.</p> <p>Ask learners what they noticed about soil layers since the last study session.</p> <p>Ask learners how learning about soil layers helped them in their jobs.</p>
<p><b>TIME: 15 MINUTES</b></p>		
<p><b>Soil Layers</b></p> 	<p>To build the learning to meet the specific outcome and related assessment criteria for this section.</p>	<p>Discuss as per the notes, on pages 31 and 32 of the learner workbook.</p>
<p><b>TIME: 20 MINUTES</b></p>		

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**Facilitator’s Guide : Identifying and Preparing Soils  
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<b>Day 2 : Lesson 2 : Soil Types</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Activity 6</b></p> <div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <b>TIME: 40 MINUTES</b> </div>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <ul style="list-style-type: none"> <li>• Identify the three main soil types.</li> </ul>	<p>Divide learners into small work groups and ask them to complete Activity 6, on page 33 of the learner workbook.</p> <p>Allow 30 minutes for completion of the activity.</p> <p>Ask learners to share their answers and ensure that all learners can conduct the sausage experiment and identify the three main soil types.</p>
<p><b>Activity 7</b></p> <p><b>Soil Types – Particle size and texture</b></p> <div style="text-align: center;">  </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <b>TIME: 60 MINUTES</b> </div>	<p>To build the learning to meet the specific outcome and related assessment criteria for this section.</p>	<p>Divide learners into small work groups and ask them to complete Activity 7, on page 34 of the learner workbook.</p> <p>Allow 10 minutes.</p> <p>Ask learners to think of clay particles as being coins and sand particles as being marbles and then cover the notes on page 35 of the workbook:</p> <ul style="list-style-type: none"> <li>▪ Show learners how clay particles are like the coins – there are more coins (clay particles) and more small air spaces between them?</li> <li>▪ Show learners how sand particles are like the marbles - there are fewer marbles (sand particles) and larger and fewer air spaces between them.</li> </ul>