

# **Apply water to landscaped areas**

## **Facilitator's Guide**

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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**

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**Study Session Overview**

**Study Session Purpose**

This study session forms part of the General Certificate in Ornamental Horticultural, NQF Level 1 and is aligned with the Unit Standard Applying water to landscaped areas, worth 3 credits.

The purpose of this study session is to equip learners with the skill and knowledge necessary to:

- Apply the optimum amount of water to various plants to ensure healthy growth and development.
- Select the most suitable watering equipment to water various plantings.
- Select the appropriate frequency of watering to suit prevailing conditions.
- Demonstrate the correct methods of watering to prevent run-off and wastage.
- Utilise knowledge of good watering practices for the propagation and care of plants.

This forms the skills and knowledge base for people working with plants within the ornamental horticulture or landscaping industry.

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These skills and knowledge will form the basis of the learners' horticultural studies and help them to meet the assessment criteria, as outlined by the Unit Standard, namely:

- Describe the climatic factors that negatively affect watering efficiency.
- Explain the consequences of watering in windy conditions.
- Explain the effects of conducting watering at the hottest time of the day.
- Describe the ideal time and climatic conditions for watering.
- Demonstrate the various hose and spray nozzles and their adjustments.
- Demonstrate examples of hose end cone sprinklers, their application rates and uses.
- Demonstrate examples of hose end rotary sprinklers, their application rates and uses.
- Demonstrate the correct rate of application of water to suit various soil types.
- Describe the infiltration rates of various soil types.
- Explain the necessity of applying water at or below the infiltration rate
- Explain the effect that slopes and compaction have on the infiltration rate of soils.
- Explain the relationship that the various seasons have on the water requirements of plants.
- Describe the necessity of modifying the frequency and length of watering times to cope with seasonal changes in evapotranspiration rates.
- Explain the need to reduce the watering of deciduous plants in their dormancy period.
- Modify the frequency and quantity of watering to suit the evapotranspiration and rainfall.
- Demonstrate the use of a rain gauge and the reading of received rainfall.

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- Demonstrate the procedures for the manual testing of the soil water content.
- Explain the importance of increasing the watering timing relative to an increase in E.T.
- Explain the modification of the frequency of watering, to suit varying climatic conditions.
- Describe the adjustment of watering times, in response to rainfall received.
- Explain the importance of regular testing of the soil water content.

### **Specific Outcomes**

This study session covers all the Specific Outcomes as outlined in the Unit Standard: applying water to landscaped area, namely:

- Select the most appropriate time of day, or conditions to conduct watering.
- Select and demonstrate the use of watering equipment to affect an application rate that suits various conditions.
- Show an understanding of the season water requirements of plants.
- Modify the frequency and quantity of watering to suit the evapotranspiration and rainfall.

### **Unit Standard Pre-requisites**

Demonstrate knowledge of communication and Numeracy at Abet level 3.

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## **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.

## **The 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.

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

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In an effort to replicate the workplace situation, learners will use workplace examples and context to identify the major categories of plants.

This learning process caters for all learning styles and preferences.

### **Bloom's 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: applying water to landscaped areas.

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**How this study session works**

This study session has been divided into four lessons, held over a period of 3 days:

<p><b>Lesson 1: Soils and Water Requirements</b></p>	<p><b>After learners have worked through Lesson 1, they should be able to:</b></p> <ul style="list-style-type: none"><li>• Describe the infiltration rates of various soil types.</li><li>• Explain the necessity of applying water at or below the infiltration rate.</li><li>• Explain the effect that slopes and compaction have on the infiltration rate of soils.</li><li>• Explain the importance of regular testing of the soil water content.</li><li>• Demonstrate the procedures for the manual testing of the soil water content.</li></ul>
<p><b>Lesson 2: Seasons and Water Requirements</b></p>	<p><b>After learners have worked through Lesson 2, they should be able to:</b></p> <ul style="list-style-type: none"><li>• Explain the relationship that the various seasons have on the water requirements of plants.</li><li>• Describe the necessity of modifying the frequency and length of watering times to cope with seasonal changes in evapotranspiration rates.</li></ul>

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	<ul style="list-style-type: none"><li>• Explain the need to reduce the watering of deciduous plants in their dormancy period.</li><li>• Modify the frequency and quality of watering to suit the evapotranspiration and rainfall.</li><li>• Describe the adjustment of watering times, in response to rainfall received.</li><li>• Demonstrate the use of rain gauge and the reading of received rainfall.</li></ul>
<p><b>Lesson 3: Climate and Water Requirements</b></p>	<p><b>After learners have worked through Lesson 3, they should be able to:</b></p> <ul style="list-style-type: none"><li>• Describe the climatic factors that negatively affect watering efficiency.</li><li>• Explain the consequences of watering in windy conditions.</li><li>• Explain the effects of conducting watering at the hottest time of the day.</li><li>• Describe the ideal time and climatic conditions for watering.</li><li>• Explain the importance of increasing the watering timing, relative to an increase in evapotranspiration.</li><li>• Explain the modification of the frequency of watering to suit varying climatic conditions.</li></ul>

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**Lesson 4 :  
Watering Equipment**

After learners have worked through Lesson 4, they should be able to :

- Demonstrate the various hose end spray nozzles and their adjustments.
- Demonstrate examples of hose end cone sprinklers, their application rates and uses.
- Demonstrate examples of hose end rotary sprinklers, their application rates and uses.
- Demonstrate the correct rate of application of water to suit various soil types.

## **The 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 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:

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- 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.

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.

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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 Facilitator's Guide and Learner's Workbook serve to guide and inform the learning.

## **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.

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## **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.

## **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 an observation and knowledge questionnaire.
- **Rating** – On successful completion of the summative assessment, learners are rated "Competent" or "Not Yet Competent" against the Unit Standard assessment criteria.

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

### **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>Apply water to landscaped areas.</b>
<b>Number</b>	119702
<b>Level</b>	1
<b>Credits</b>	3
<b>Field</b>	Agriculture and Nature Conservation
<b>Sub field</b>	Horticulture
<b>Issue date</b>	
<b>Learning assumed to be in place</b>	Demonstrate knowledge of communication and Numeracy at Abet level 3.

<b>Specific Outcomes</b>	<b>Assessment Criteria</b>
<b>1. Select the most appropriate time of day, or conditions to conduct watering.</b>	1.1. Describe the climatic factors that negatively affect watering efficiency. 1.2. Explain the consequences of watering in windy conditions. 1.3. Explain the effects of conducting watering at the hottest time of the day. 1.4. Describe the ideal time and climatic conditions for watering.
<b>2. Select and demonstrate the use of watering equipment to affect an application rate that suits various soil conditions.</b>	2.1. Describe the infiltration rates of various soil types. 2.2. Explain the necessity of applying water at or below the infiltration rate. 2.3. Explain the effect that slopes and compaction have on the infiltration rate of soils. 2.4. Demonstrate the various hose and spray nozzles and their adjustments.

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<b>Specific Outcomes</b>	<b>Assessment Criteria</b>
	<p>2.5. Demonstrate examples of hose end cone sprinklers, their application rates and uses.</p> <p>2.6. Demonstrate examples of hose end rotary sprinklers, their application rates and uses.</p> <p>2.7. Demonstrate the correct rate of application of water to suit various soil types.</p>
<p><b>3. Show an understanding of the seasonal water requirements of plants.</b></p>	<p>3.1. Explain the relationship that the various seasons have on the water requirements of plants.</p> <p>3.2. Describe the necessity of modifying the frequency and length of watering times to cope with seasonal changes in evapotranspiration rates.</p> <p>3.3. Explain the need to reduce the watering of deciduous plants in their dormancy period.</p> <p>3.4. Modify the frequency and quantity of watering to suit the evapotranspiration and rainfall.</p>
<p><b>4. Modify the frequency and quantity of watering to suit the evapotranspiration and rainfall.</b></p>	<p>4.1. Explain the importance of increasing the watering timing, relative to an increase in E.T.</p> <p>4.2. Explain the modification of the frequency of watering to suit varying climatic conditions.</p> <p>4.3. Demonstrate the use of a rain gauge and the reading of received rainfall.</p> <p>4.4. Describe the adjustment of watering times, in response to rainfall received.</p> <p>4.5. Explain the importance of regular testing of the soil water content.</p> <p>4.6. Demonstrate the procedures for the manual testing of the soil water content.</p>

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## **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 outcome 1, 2 and 3.
- 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. Specific outcome 1, 2 and 3.
- Collect, analyse, organise and critically evaluate information. Specific outcome 1, 2 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.
- Use science and technology effectively and critically, showing responsibility toward the environment and health of others. Specific outcome 1, 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 and 3.

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## **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.
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.

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Essential embedded knowledge must be assessed in their own right, through oral and practical evidence and cannot be assessed by observation only.

15. Special outcomes and essential embedded knowledge must be assessed in relation to each other.
16. 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.
17. 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.
18. Evidence of the specified critical cross-field outcomes should be found, both in performance and in essential embedded knowledge.
19. Assessment activities must be fair, so that all Learners have equal opportunities. Activities must be free of gender, ethnic or other bias.
20. 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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**Materials required:**

- 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 (AgriSETA)

**Lesson duration : 60 minutes**

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**Day 1 : Introduction**

<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Welcome and Introductions</b></p>  <p><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>  <p><b>TIME: 25 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 (AgriSeta).</p>

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<b>Day 1 : Introduction</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<b>Introduction</b>  <b>TIME: 20 MINUTES</b>	To build enthusiasm and motivation for the learning to come.	Discuss as per the notes on pages 14 and 15 of the learner's workbook.

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**Day 1  
Lesson 1: Soils and Water Requirements**

**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 Outcomes 2 and 4 of the Unit Standard

- **Select and demonstrate the use of watering equipment to affect an application rate that suits various soil conditions.**
- **Modify the frequency and quantity of watering to suit the evapotranspiration and rainfall.**

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

- Describe the infiltration rates of various soil types.
- Explain the necessity of applying water at or below the infiltration rate.
- Explain the effect that slopes and compaction have on the infiltration rate of soils.
- Explain the importance of regular testing of the soil water content.
- Demonstrate the procedures for the manual testing of the soil water content.

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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.

**Materials required:**

- Activity 1, page 18– garden soil.
- Page 20 – examples of sandy, clay and loam soils.
- Activity 3, page 21 – tray of sandy soil, tray of loam soil, tray of clay soil for each workgroup.
- Activity 4, page 23 – 3 tins, clay, loam and sandy soil, water for each workgroup.
- Page 30 – compacted soil and sloping area.

**Lesson duration 4 hours and 20 minutes.**

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<b>Day 1 :</b>		
<b>Lesson 1 : Soils and Water Requirements</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<p><b>Soil Water Content</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 and demonstrate as per the notes on page 17 of the learner workbook.</p>
<p><b>Activity 1</b></p>  <p><b>TIME: 20 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <p>Demonstrate the procedure for the manual testing of the soil water content.</p>	<p>Divide learners into work groups and instruct learners to complete Activity 1, on page 18 of the workbook.</p> <p>Allow 15 minutes for activity.</p> <p>Ask each work group to share their answers and make sure that all key learning points have been covered.</p>
<p><b>Activity 2</b></p>  <p><b>TIME: 20 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <p>Explain the importance of</p>	<p>Ask learners to complete Activity 2, on page 19 of the learner workbook.</p> <p>Allow 10 minutes for this activity.</p> <p>Ask learners to share their answers and make sure</p>

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<b>Day 1 :</b>		
<b>Lesson 1 : Soils and Water Requirements</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
	regular testing of the soil water content.	that all key learning points are covered.
<p><b>Soil Types</b></p> <p><b>Activity 3</b></p>  <p><b>TIME: 30 MINUTES</b></p>	To build the learning to meet the specific outcome and related assessment criteria for this section.	<p>Discuss and show examples of the three soil types as per the notes on pages 20 of the learner workbook.</p> <p>Divide learners into workgroups and ask them to complete Activity 3, on page 21 of the learner workbook.</p> <p>Allow 15 minutes.</p> <p>Call for group answers and make sure that all learners can identify the three soil types.</p>
<p><b>Infiltration rates of soils</b></p> <p><b>Activity 4</b></p>  <p><b>TIME: 30 MINUTES</b></p>	To build the learning to meet the specific outcome and related assessment criteria for this section.	<p>Discuss as per the notes on page 22 of the learner workbook.</p> <p>Ask learners to completed activity 4, on page 23 of the learner workbook.</p> <p>Allow 15 minutes for completion of this activity.</p> <p>Call for group responses and make sure that all key learning points are covered.</p>

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**Facilitator's Guide :**

**Apply water to landscaped areas**

<b>Day 1 :</b>		
<b>Lesson 1 : Soils and Water Requirements</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
		Discuss as per the notes on page 24 of the learner workbook.
<p><b>Activity 5</b></p>  <p><b>TIME: 20 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <p>Describe the infiltration rates of various soil types.</p>	<p>Ask learners to completed activity 5, on page 25 of the learner workbook.</p> <p>Allow 15 minutes for completion of this activity.</p> <p>Ask the group to share their answers and make sure that all key learning points are covered.</p>
<p><b>Soil Infiltration Rates and Watering Needs</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 26 to 28 of the learner workbook.</p>
<p><b>Activity 6</b></p>  <p><b>TIME: 20 MINUTES</b></p>	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <p>Explain the necessity of</p>	<p>Divide learners into workgroups and ask them to complete Activity 6 on page 29 of the learner workbook.</p> <p>Allow 15 minutes.</p>

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<b>Day 1 :</b>		
<b>Lesson 1 : Soils and Water Requirements</b>		
<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
	applying water at or below the infiltration rate.	Ask the group to share their answers and make sure that all key learning points are covered.
<p><b>Watering Compacted Soil</b></p> <p><b>Watering Sloping Areas</b></p> 	To build the learning to meet the specific outcome and related assessment criteria for this section.	<p>Discuss and demonstrate as per the notes on page 30 of the learner workbook.</p> <p>Discuss and demonstrate as per the notes on page 30 of the learner workbook.</p>
<b>TIME: 30 MINUTES</b>		
<p><b>Activity 7</b></p> 	<p>A formative assessment to check that the learner can meet the assessment criteria:</p> <p>Explain the effect that slopes and compaction have on the infiltration rate of soils.</p>	<p>Divide learners into workgroups and ask them to complete Activity 6 on page 29 of the learner workbook.</p> <p>Allow 15 minutes.</p> <p>Ask the group to share their answers and make sure that all key learning points are covered.</p>
<b>TIME: 20 MINUTES</b>		

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**Day 1 :**

**Lesson 1 : Soils and Water Requirements**

<b>Lesson Content</b>	<b>Purpose</b>	<b>Lesson Activities</b>
<b>Conclusion</b>  	To close day 1, lesson 1.	Ask learners to check their learning against the lesson checkpoint, on page 32 of the learner workbook.  Allow 15 minutes.  Call for any questions.  Recap on any learning points that arise.  Thank learners, advise on date for the next lesson and close for the day.

**TIME: 30 MINUTES**

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**Day 2**

**Lesson 2 : Seasons and Water Requirements**

**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 3 and 4 of the Unit Standard

- **Show an understanding of the seasonal water requirements of plants.**
- **Modify the frequency and quantity of watering to suit the evapotranspiration and rainfall.**

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

- Explain the relationship that the various seasons have on the water requirements of plants.
- Describe the necessity of modifying the frequency and length of watering times to cope with seasonal changes in evapotranspiration rates.
- Explain the need to reduce the watering of deciduous plants in their dormancy period.
- Modify the frequency and quality of watering to suit the evapotranspiration and rainfall.
- Describe the adjustment of watering times, in response to rainfall received.
- Demonstrate the use of rain gauge and the reading of received rainfall.

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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 be