



NQF Level: **1** US No: **116199**

Learner Workbook

Primary Agriculture

Plant Physiology




My name:

My Workplace:


Commodity: Date:

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Department:
Agriculture
REPUBLIC OF SOUTH AFRICA

agriculture



AgriSETA

Before we start...

Dear Learner - on completion of the Learner Guide, you should have acquired all the knowledge and skills to be assessed against the following unit standard:

Title:	Demonstrate a basic understanding of the structure and function of a plant in relation to its environment		
US No:	116199	NQF Level:	1
		Credits:	4

Please read the unit standard at your own time (see Learning Guide).

What is assessment all about?

Assessment takes place at different intervals of the learning process and includes various activities. Some activities will be done before the commencement of the program whilst others will be done during programme delivery and other after completion of the program.

The assessment experience should be user friendly, transparent and fair. Should you feel that you have been treated unfairly, you have the right to appeal. Please ask your facilitator about the appeals process and make your own notes.

How to use this workbook ...

Your activity workbook will be handed in from time to time on request of the facilitator for the following purposes:

- ◆ The activities that follow are designed to help you gain the skills, knowledge and attitudes that you need in order to become competent in this learning module.
- ◆ It is important that you complete all the activities and worksheets, as directed in the learner guide and at the time indicated by the facilitator.
- ◆ It is important that you ask questions and participate as much as possible in order to play an active roll in reaching competence.
- ◆ When you have completed all the activities and worksheets, hand this workbook in to the assessor who will mark it and guide you in areas where additional learning might be required.
- ◆ You should not move on to the next step in the assessment process until this step is completed, marked and you have received feedback from the assessor.
- ◆ Sources of information to complete these activities should be identified by your facilitator.
- ◆ **Please note** that all completed activities, tasks and other items on which you were assessed must be kept in good order as it becomes part of your **Portfolio of Evidence** for final assessment.



1

SO 1, AC 1

Discuss with a working partner

My Name:
.....

My Workplace:
.....

My ID Number:
.....

What do you think the words "Plant structure" means?

[Large dashed-line box for writing the answer]

Facilitator comments:

Assessment:



2

SO 1, AC 1

Go outdoors and explore.

My Name:

.....

My Workplace:

.....

My ID Number:

.....

Can you find an example of one type of herbaceous plant and one type of woody plant? Pick a small piece of stem of each and paste it here in your workbook to remind yourself:

Herbaceous	Woody

Facilitator comments:

Assessment:



3

SO 1, AC 2

Individual Activity.

My Name:
.....

My Workplace:
.....

My ID Number:
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Think about some plants that grew where you grew up...

Can you remember the cycle in which they grew? They were not constantly the same were they? Now write down what you remember to remind yourself.

[Large dashed-line box for writing notes]

Facilitator comments:

Assessment:



4

SO 1, AC 2&3

Practical Activity.

My Name:

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My Workplace:

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My ID Number:

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Pull up a weed – do it gently in order to make sure that you get all its parts and don't break it off at the roots (it might mean that you have to loosen the soil a little bit first!)

Now paste it on a separate piece of paper and draw lines to each part as we go through all the details.



Facilitator comments:

Assessment:



5

SO 2 & 3, AC 5

Individual Activity.

My Name:
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My Workplace:
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My ID Number:
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Why do you think roots are important for a plant?

Write notes to remind yourself what this part does & how it works.

[Large dashed-line box for writing notes]

Facilitator comments:

Assessment:



6

SO 3 & 4 AC 6

Group Activity.

My Name:
.....

My Workplace:
.....

My ID Number:
.....

Why do you think stems are important for a plant?

Write notes to remind yourself what this part does & how it works!

[Large dashed-line box for writing notes]

Facilitator comments:

Assessment:



7

SO 3 & 4 AC 7

Individual Activity. Make a list as a group

My Name:

My Workplace:

My ID Number:

Make a list of plants that are bearing their flowers and fruit in the leaf axils on the shoot.

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Make another list of plants that are bearing their flowers and fruit at the shoot tips.

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Facilitator comments:

Assessment:



8

SO 3 & 4 AC 8

Practical Activity. Research and discover.

My Name:

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My Workplace:

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My ID Number:

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Go outside and look for 3 types of plants that have buds attached. Think of what part of the plant you think this bud might develop into.

Write notes for yourself.

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Facilitator comments:

Assessment:



9

SO 1 AC 4
SO 2 AC 3

Individual Activity. Worksheet.

My Name:
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My Workplace:
.....

My ID Number:
.....

Do you think that all plants have tendrils? Why do you think that only some plants need tendrils? Write notes for yourself.

[Large dashed rectangular area for writing notes]

Facilitator comments:

Assessment:



10

SO 1, AC 4
SO 2, AC 3

Individual Activity. Worksheet.

My Name:

My Workplace:

My ID Number:

Hold a class discussion and write down a list of answers next to the questions in the worksheet

Say why you think the following factors would be important in the environment of a plant in terms of growth, survival and to reproduce a crop:

Roots and soil for water-uptake	
Soil	
Water	
Sunlight	
Air	

Facilitator comments:

Assessment:



11

SO 2, AC 3

Group discussion. Write key notes.

My Name:

.....

My Workplace:

.....

My ID Number:

.....

Your Facilitator will lead a group discussion where you look at the specific parts and stages of the crop that you will be growing and learning about on your farm. Write key words.

[Large dashed rectangular area for writing key words]

Facilitator comments:

Assessment:



12

SO 1, AC 4
SO 2, AC 3

Individual Activity. Worksheet.

My Name:

My Workplace:

My ID Number:

Go outside and look around at the area where you want to grow your crop – make some notes for yourself about factors that are good and the things that might cause a problem in terms of your crops’ needs

Write down notes for yourself.

What kind of environment does the roots of your crop need to grow in?

.....

.....

Name the media in which your crop’s roots are growing?

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How do the roots of your crop function in order to take up water and nutrients from the media in which it grows?

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Do you think that your type of crop would grow and produce high quality fruit and seed, without sunlight, water and nutrients? Motivate your answer.

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Do you think all plants have the same reproduction cycle? Motivate your answer.

Hint: Think of your crop and how it reproduces. Then go to the library and read how some different type of crop that grows in another part of the country reproduces...

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Facilitator comments:

Assessment:

Am I ready for my test?

- ◆ Check your plan carefully to make sure that you **prepare in good time**.
- ◆ You have to be found **competent** by a qualified **assessor** to be declared competent.
- ◆ Inform the assessor if you have any **special needs** or requirements **before** the agreed date for the test to be completed. You might, for example, require an interpreter to translate the questions to your mother tongue, or you might need to take this test orally.
- ◆ Use this worksheet to help you prepare for the test. These are **examples of possible questions** that might appear in the test. All the information you need was taught in the classroom and can be found in the learner guide that you received.
 1. **I am sure** of this and understand it well
 2. **I am unsure** of this and need to ask the Facilitator or Assessor to explain what it means

Questions	1. I am sure	2. I am unsure
1. What kind of environment does the roots of your crop need to grow in?		
2. Name the media in which your crop's roots are growing?		
3. How do the roots of your crop function in order to take up water and nutrients from the media in which it grows?		
4. Why do you think it is important for your type of crop to be exposed to sunlight, water and nutrients?		
5. Study your own crop and find out whether the plants have bisexual (complete) flowers or separate male and female flowers. Discuss the implication on pollination and production.		
6. Do you think all plants have the same reproduction cycle? Motivate your answer. Hint: Think of your crop and how it reproduces.		
7. Find out and write down what the best possible environment might look like for your type of crop to be pollinated. Hint: Your type of crop might need help from specific types of insects or birds		

Checklist for practical assessment ...

Use the **checklist** below to help you prepare for the part of the practical assessment when you are observed on the **attitudes** and **attributes** that you need to have to be found competent for this learning module.

Observations	Answer Yes or No	Motivate your Answer (Give examples, reasons, etc.)
Can you identify problems and deficiencies correctly?		
Are you able to work well in a team?		
Do you work in an organised and systematic way while performing all tasks and tests?		
Are you able to collect the correct and appropriate information and / or samples as per the instructions and procedures that you were taught?		
Are you able to communicate your knowledge orally and in writing, in such a way that you show what knowledge you have gained?		
Can you base your tasks and answers on scientific knowledge that you have learnt?		
Are you able to show and perform the tasks required correctly?		
Are you able to link the knowledge, skills and attitudes that you have learnt in this module of learning to specific duties in your job or in the community where you live?		

- ◆ The assessor will complete a checklist that gives details of the points that are checked and assessed by the assessor.
- ◆ The assessor will write commentary and feedback on that checklist. They will discuss all commentary and feedback with you.
- ◆ You will be asked to give your own feedback and to sign this document.
- ◆ **It will be placed together with this completed guide in a file as part of you portfolio of evidence.**
- ◆ The assessor will give you feedback on the test and guide you if there are areas in which you still need further development.

Paperwork to be done ...

Please assist the assessor by filling in this form and then sign as instructed.

Learner Information Form			
Unit Standard	116199		
Program Date(s)			
Assessment Date(s)			
Surname			
First Name			
Learner ID / SETA Registration Number			
Job / Role Title			
Home Language			
Gender:	Male:	Female:	
Race:	African:	Coloured:	Indian/Asian: White:
Employment:	Permanent:	Non-permanent:	
Disabled	Yes:	No:	
Date of Birth			
ID Number			
Contact Telephone Numbers			
Email Address			
Postal Address			Signature:

Assessment Feedback Form

Comments / Remarks	
<p>Feedback to learner on assessment and / or overall recommendations and action plan for competence:</p>	
<p>Feedback from learner to assessor:</p>	
<p>Assessment Judgement You have been found:</p> <p><input type="radio"/> Competent</p> <p><input type="radio"/> Not yet competent in this unit standard</p>	<p>Actions to follow:</p> <p><input type="radio"/> Assessor report to ETQA</p> <p><input type="radio"/> Learner results and attendance certification issued</p>
<p>Learner's Signature:</p>	<p>Date:</p>
<p>Assessor's Signature:</p>	<p>Date:</p>
<p>Moderator's Signature:</p>	<p>Date:</p>