



NQF Level: **1** US No: **7461**

# Assessment Guide

## Primary Agriculture

**Use maps to access and communicate information concerning routes, location and direction**



Assessor: .....

Workplace / Company: .....

Commodity: ..... Date: .....

## Before we start...

This assessment guide contains all necessary activities and instructions that will enable the assessor and learner to gather evidence of the learner's competence as required by the unit standard. This guide was designed to be used by a trained and accredited assessor whom is registered to assess this specific unit standard as per the requirements of the AgriSETA ETQA.

Prior to the delivery of the program the facilitator and assessor must familiarise themselves with content of this guide, as well as the content of the relevant Learner Workbook.

The assessor, facilitator and learner must plan the assessment process together, in order to offer the learner the maximum support, and the opportunity to reflect competence.

The policies and procedures that are required during the application of this assessment are available on the website of the AgriSETA and should be strictly adhered to. The assessor must familiarise him/herself with this document before proceeding.

This guide provides step-by-step instructions for the assessment process of:

<b>Title:</b>	Use maps to access and communicate information concerning routes, location and direction		
<b>US No:</b>	<b>7461</b>	<b>NQF Level:</b>	<b>1</b>
		<b>Credits:</b>	<b>1</b>

This unit standard is one of the building blocks in the qualification listed below. Please mark the qualification you are currently assessing, because that will be determined by the context of application:

Title	ID Number	NQF Level	Credits	Mark
National Certificate in Animal Production	48970	1	120	<input type="checkbox"/>
National Certificate in Mixed Farming Systems	48971	1	120	<input type="checkbox"/>
National Certificate in Plant Production	48972	1	120	<input type="checkbox"/>

Please mark the learning program you are enrolled in:

Are you enrolled in a:	Y	N
Learnership?	<input type="checkbox"/>	<input type="checkbox"/>
Skills Program?	<input type="checkbox"/>	<input type="checkbox"/>
Short Course?	<input type="checkbox"/>	<input type="checkbox"/>

### Note to Assessor:

If you are assessing this module as part of a full qualification or learnership, please ensure that you have familiarized yourself with the content of the qualification.

## 1

### AC 1

#### Divide into groups and brainstorm...

What kinds of maps you have encountered in your life and why you used it. Write keynotes on the discussion as a reminder to yourself.

**Learner Workbook: Page    Facilitator Guide: Page 10**

Discuss in your group what kinds of maps you have encountered in your life and why you used it. Write some keynotes on the discussion as a reminder to yourself.

#### Model Answer(s):

#### AERIAL PHOTOGRAPHY

The Chief Directorate of Surveys and Mapping is the government agency responsible for aerial photography and has an archive of aerial photographs dating back to the 1930's. The photography is at a variety of scales and has provided complete coverage of the country since the 1950's. These are all vertical aerial photographs taken from aircraft.



Unlike a generalised line map, almost all detail is visible on an aerial photograph. The user, although unable to make accurate measurements on the photograph, is able to perform his or her own interpretation of what exists on the ground. Aerial photographs are also an historic record of what existed at the time the photograph was taken.

Modern aerial photographs are a standard contact size of 23 x 23cm. Enlargements of up to three times a photograph area are available. Overlapping stereo pairs may be purchased for stereo viewing, providing the user with a 3-dimensional image. Colour photography is also available in selected areas.

## ORTHOPHOTO MAPS (Scale 1:10 000)

The 1:10 000 orthophoto maps combine all the advantages of conventional line maps and aerial photography. The photographic background has been rectified to remove image displacements and enlarged to a scale of 1:10 000. Unlike a conventional aerial photograph, accurate measurements can be made on the orthophoto map. Cartographic elements that cannot be derived from the photographic background have been added, namely: a co-ordinate grid, contours and spot heights, place names and route numbers. These maps are well suited for detail planning and analysis of what exists on the ground.



The orthophoto maps cover all metropolitan and peri-urban areas and growth areas. At present, about 25% of the country is covered by these sheets. These sheets are available as ammonia-developed prints on either paper or opaque film or as bromide prints on photographic paper.

## TOPOGRAPHICAL MAPS (Scale 1:50 000)

The 1:50 000 topographical maps are the largest scale maps providing full coverage of South Africa. The series consists of a total of 1916 sheets. They accurately depict the location of natural and man-made features by means of symbols and colour, and elevation by means of spot heights and contours (20 m interval). Additional information added is place names, boundaries, magnetic data, etc. These maps contain essential information for planning and decision making but also have many other uses.



The 1:50 000 topographical maps are generally compiled from aerial photographs. A standard 1:50 000 map sheet covers a rectangle of 15 minutes of latitude by 15 minutes of longitude or approximately 640 square kilometres

## TOPO-CADASTRAL MAPS (scale 1:250 000)

The 1:250 000 topo-cadastral maps show topographical detail with the addition of names, numbers and boundaries of original farms, the boundaries of magisterial districts, and provincial and international boundaries. Elevation, depicted by means of contours at 50m intervals, is further enhanced by hypsometric tints, i.e. shades of brown becoming progressively darker as elevation increases. This series is a firm favourite for regional planning and administrative purposes.



These sheets are generally derived from the larger scale 1:50 000 topographical maps with some detail of necessity being generalised, i.e. thinned out to show only the more important features. 70 maps of this series cover South Africa with each sheet generally covering an area of one degree of latitude and two degrees of longitude.

## PROVINCIAL MAPS

The series of provincial maps provides a map of each province, on its own in a single sheet. The maps are designed mainly for administrative purposes and depict the cities, towns, smaller urban centres, district/regional councils, rural councils (rural local government) and magisterial districts, as well as the main road and rail networks, main rivers and dams, nature reserves and airports. Topography is depicted by hill shading.



With the whole province shown on one sheet, the scale of the map of each province varies depending on the size of the province.

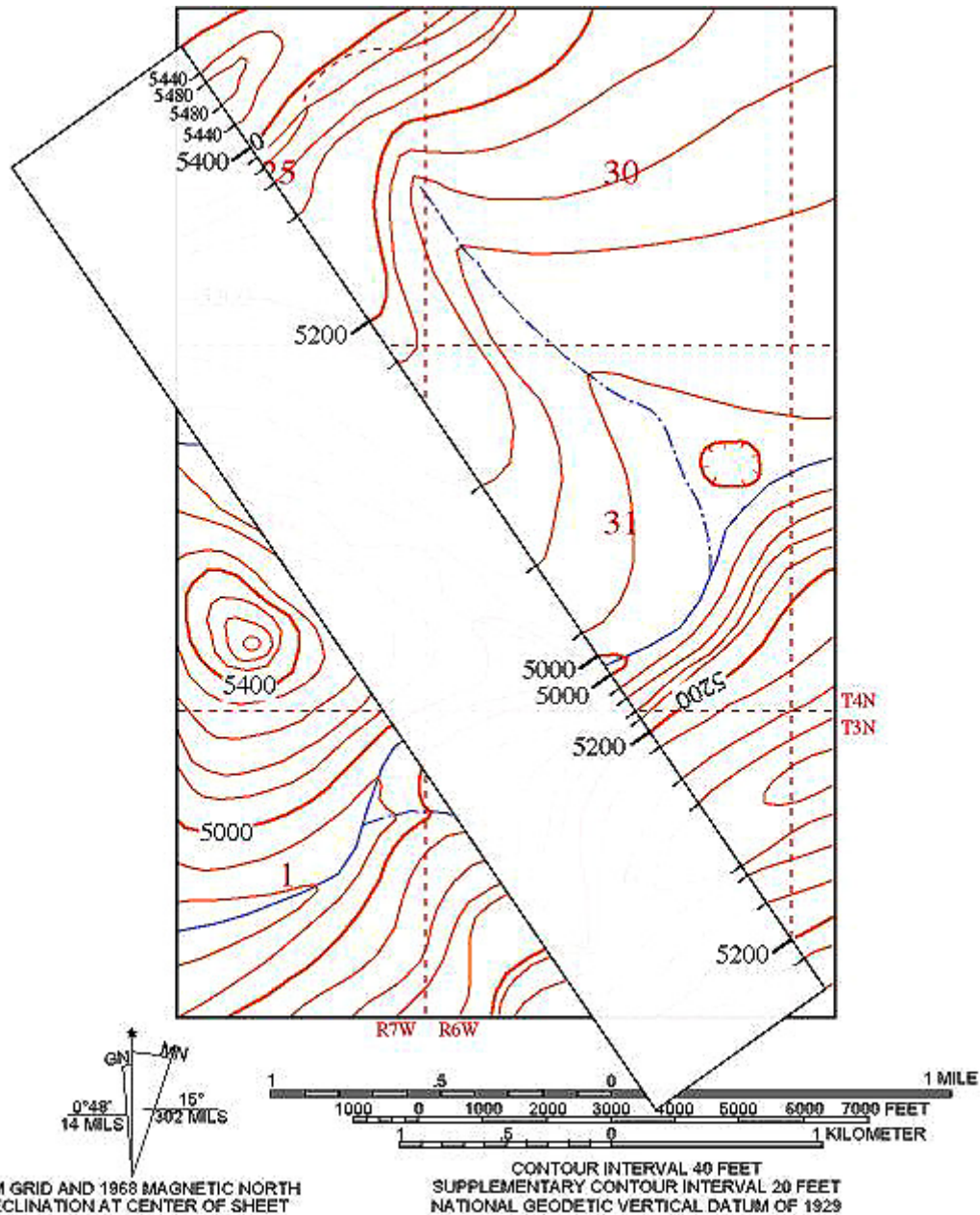


**Exercise** :Draw a topographic profile, by working through this exercise step by step, then summarising what you have learnt in your own words in a short paragraph below.

**Learner Workbook: Page 15    Facilitator Guide: Page 12**

1. Pencil the line of you interest in lightly on your map (or you can put a transparent film of mylar over the map and draw on it if you don't wish to mark your map). If you use mylar, it may be a good idea to mark the corners of the map on the mylarso you can reorient the mylar on the map later if necessary.
2. Place a blank piece of paper along the line you have drawn. You may want to tape the paper to the map using drafting tape to keep them from moving relative to one another (don't use any other kind of tape unless you don't mind taking some of the map off with the tape later).
3. On both the blank paper and the map (or mylar), mark clearly the starting an ending points of your line of section. Below these marks, write down the elevation of the starting and ending points of your section.
4. Make a tic mark wherever the paper crosses a contour line on the map, making larger tics for the index contours and smaller tics for the intermediate contours. Write the elevation of the index contours below their tics on your paper...you might want to start off writing the elevation of the intermediate contours as well to avoid confusion, but it will soon become tedious. Make a note of the highest and lowest points on the profile for use later. Be sure to keep track of the number of intermediate contours between the major contours; if there are more than four intermediate contours it means that there has been a change in slope and you need to check to see if you crossed a hill or a valley.
5. Once you are certain you have all of the appropriate tic marks and elevations, remove your paper from the map. Get a piece of graph paper that is at least as long as your line of section (you can piece them together if you have to, but make sure all the grids line up). If you are using a map with a scale of 1:24,000 you will want to use graph paper that has one inch grids to make your life much easier (because at a scale of 1:24,000, one inch on the paper is equal to 2000 feet). Place your paper with the tic marks on the graph paper (once again, you may want to tape it down) and mark the starting and ending points of your line of section on the graph paper.

**Model Answer(s):**

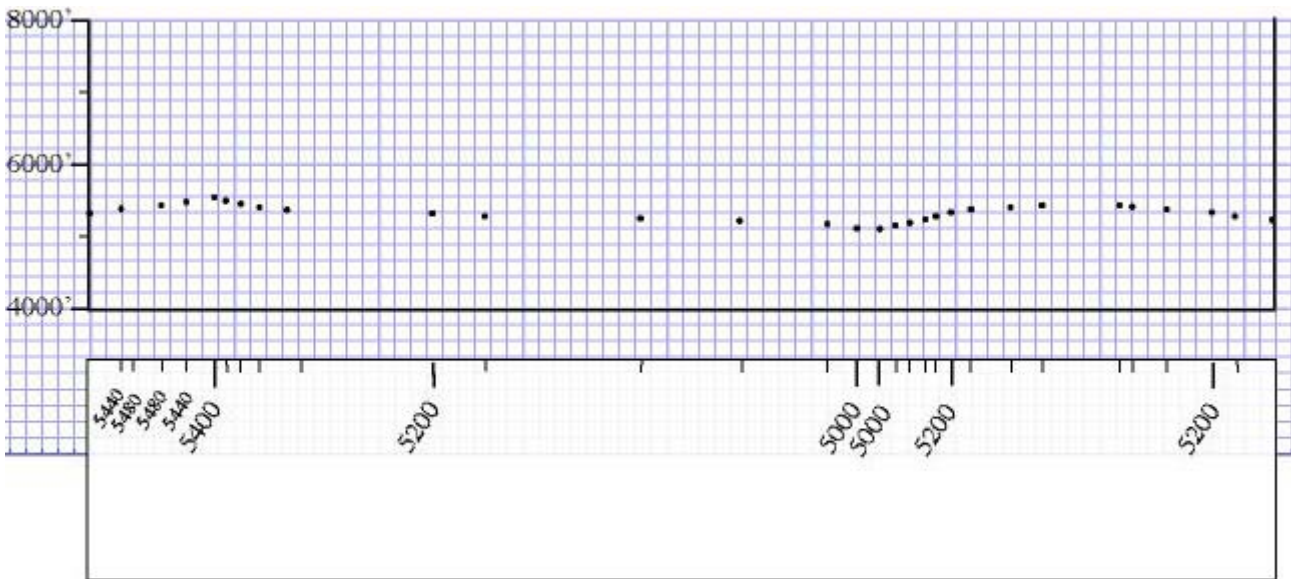


6. Draw vertical lines above your starting and ending points, these will be the boundaries of your profile. Use the maximum and minimum elevations along your line of section to determine how long to draw these lines. For example, if your minimum elevation is 4320 ft and your maximum elevation is 6280 ft, you will want your vertical line to be at least two inches long. Remember that one inch equals 2000 feet on a 1:24,000 scale map. The difference between 6280 feet and 4320 feet is less than 200 feet, so it would be possible to draw your profile in just

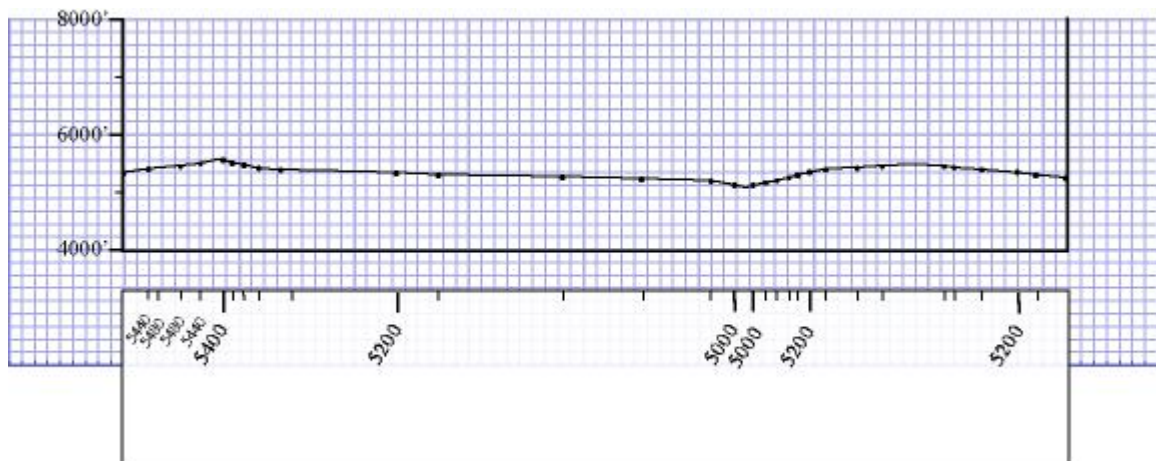


one inch. However, it is much easier to construct a profile if your lowest elevation is a multiple of 2000, so you would want to start at 4000 feet and go to 8000 feet (two inches).

- Beginning with your starting elevation, go directly above the tic mark on your paper and make a small dot on the graph paper at the corresponding elevation (if your graph paper has one inch squares divided into tenths, each smaller square will represent 200 feet of elevation change; each index contour should lie along a horizontal grid line). Make a small dot for each tic mark on your paper



- Connect the dots on the graph paper, and you have a topographic profile



What I have learnt:

A map is a representation of the Earth, or part of it. The distinctive characteristic of a topographic map is that the shape of the Earth's surface is shown by contour lines. Contours are imaginary lines that join points of equal elevation on the surface of the land above or below a reference surface, such as mean sea level. Contours make it possible to measure the height of mountains, depths of the ocean bottom, and steepness of slopes.

A topographic map shows more than contours. The map includes symbols that represent such features as streets, buildings, streams, and vegetation. These symbols are constantly refined to better relate to the features they represent, improve the appearance or readability of the map, or reduce production cost.

To construct a topographic profile, you must first decide on a line that is of interest to you. This could be an area where you want to go for a hike and want to know how steep to expect it to be, a line that shows the maximum relief (relief is the difference in elevation between the highest and lowest points) in the map area, or any other area in which you are interested. Once you have determined where you want to draw your profile, use the following guidelines to construct your profile.

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SO 1 AC 3-4








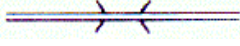
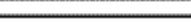
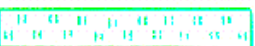



**Instructions to learner:**

Identify symbols on the map

**Learner Workbook: Page 16 Facilitator Guide: Page 13**

Draw a grid across the map given and number the rows from top to bottom with the numbers 1 to 20. Then label the columns from left to right with the alphabetical letter A-T. Write down the row and column, "co-ordinates" where you found each next to the symbols in the table.

**No Model Answer supplied due to variation between maps**

Road : National freeway 	
Trigonometrical beacon (with beacon number) 	
Road : National route 	
Urban built-up area 	
Road : Arterial route 	
Building (of significance or isolated) 	
Road : Main road 	
Bridge 	
Road : Secondary road 	
Cultivated land 	
Railway (showing a station) 	
Row of trees (where of significance) 	
River : Perennial (has water all year) 	

Wind pump 	
River : Non-perennial 	
Communication tower 	
Dam 	
Eroded area 	
Pan : Perennial 	
Boundary : International 	
Pan : Non-perennial 	
Boundary : Provincial 	
Pan : Dry 	
Boundary : Cadastral farm (original farm) 	
Canal 	
Boundary : Game reserve 	
Powerline (major lines only) 	
Boundary : State forest 	
Spot height (elevation at a point) 	
Contour 	

**4**

**SO 1 AC 3-4**

**Explore...**

Look at the maps below and answer the questions or complete the activities requested in the worksheet.

**Learner Workbook: Page 16    Facilitator Guide: Page 13**

Draw two different routes that one could follow (one in red and one in blue) on the city map of Cape Town, in order to travel from Sea point (Point A), to the Houses of Parliament (Point B.)

**Routes should reflect connection between point A and B**



Identify the scale of the map, given on the map below. Then measure Adderly and Heerengracht streets on the map. Do the mathematical conversion and calculate how long the two streets are together, in meter.

**Model Answer(s):**

- Scale: 3cm = 1000m
- Adderly: 1.5cm = 500m
- Heerengracht: 3cm = 100m
- Combined length: 500+1000 = 1500m = 1.5 km

Use the map above and write down detailed directions for a person who Somerset Hospital to de Waal Park.

**Model Answer(s):**

- e.g.
- From Somerset Hospital, face North, towards the V&A waterfront
- Turn right into Beach Road
- Turn first right into Portswood Road
- When you get to a traffic circle, turn left into Western Boulevard
- Travel in an Easterly direction until the road intersects with Buitengracht M62
- Turn right into Buitengracht M62
- Travel along Buitengracht M62 in a Southerly direction
- Continue, eventually the road turns into Kloofneck Drive M62
- Turn left into Camp Street
- Cross over Kloof Street
- Keep travelling in an Easterly direction until the road intersects with Upper Orange Street
- De Waal Park will now be on your right

**My Notes ...**

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# ASSESSMENT GUIDE

*Use maps to access and communicate information concerning routes, location and direction*

**15**

Primary Agriculture

NQF Level 1

Unit Standard No: 7461

## Activity Answers

**5**

**SO 2 AC 5-6**

**Explore...**As a group -Walk around the block from your training room (or walk around an area the size of 2 rugby fields from your training room on the farm), come back and draw a map for the other groups of the area.

**Learner Workbook: Page 21    Facilitator Guide: Page 15**

Select and indicate the appropriate scale for your map. Make sure to add a key to the symbols on your map. Now give your map to one of the other groups to check and comment on.

**Model Answer(s):**

As per learner’s area

Our map:

Must show scale

Must show key to symbols

The scale of our map is:

The key to the symbols on our map:

Comments received from other groups:

**My Notes ...**

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SO 2 AC 5-6

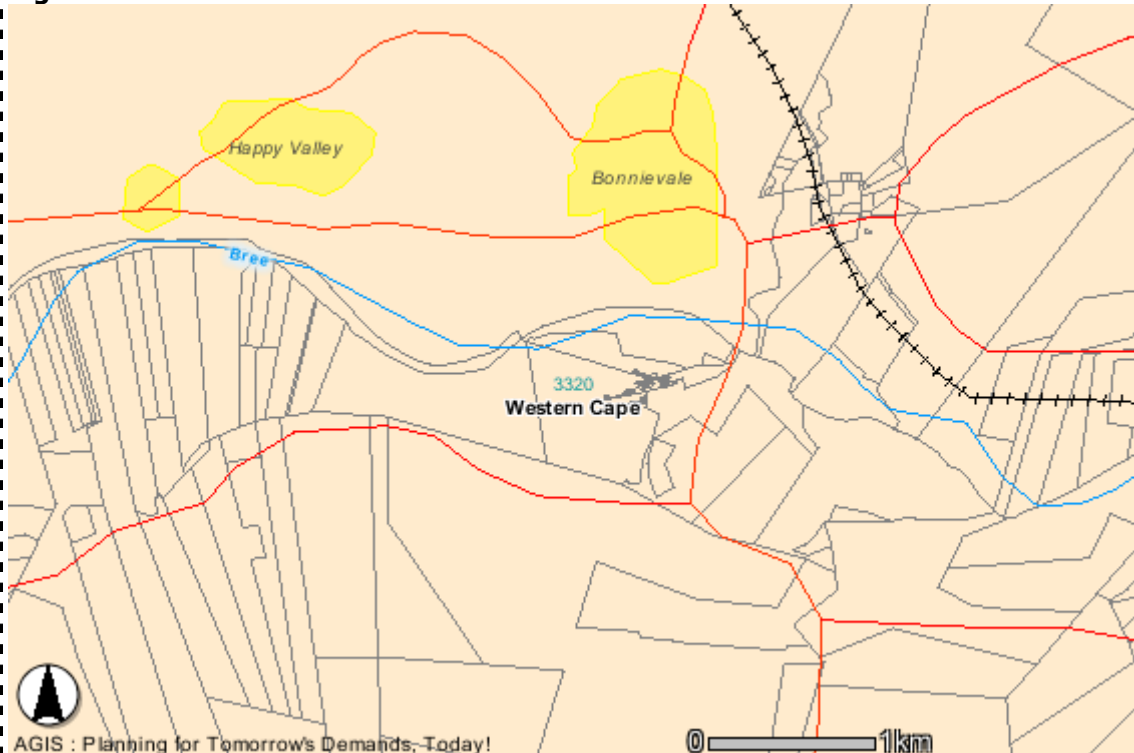
**Research and discover...**Try to access the orientation atlas from the Department of Agriculture's AGIS site for your closest town. Keep zooming in until you have the best possible image of the town – including the streets, then print a copy out and paste it below.

**Learner Workbook: Page 21    Facilitator Guide: Page 15**

**Model Answer(s):**

Our closest town is:

**E.g.**





# Summative Test and Attitude & Attribute Evaluation

Before the knowledge test is undertaken, the learner must be reminded of what is expected from him / her in terms of summative and reflexive competence. Read and explain to the learner, the **Preparation for Your Final Assessment** section in the learner workbook. Learners and assessor should sign off this section to acknowledge that this step was completed.

### Instruction to Assessor:

**Please set up a knowledge test from the questions given as a guideline to learners and supply each learner with a test sheet.**

Supply each report with the following heading:

<b>Unit Standard:</b>	7461	<b>NQF Level:</b>	1
<b>Learner Name:</b>			

**My Notes ...**

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### 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><b>Assessment Judgement</b> 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><b>Learner's Signature:</b></p>	<p><b>Date:</b></p>
<p><b>Assessor's Signature:</b></p>	<p><b>Date:</b></p>
<p><b>Moderator's Signature:</b></p>	<p><b>Date:</b></p>