

## 2021 Annual Teaching Plan – Term 1: AGRICULTURAL SCIENCES: Grade Gr 10

Term 1 45 days	Week 1 27-29 January (3 days)	Week 2 1-5 February (5 days)	Week 3 8-12 February (5 days)	Week 4 15-19 February (5 days)	Week 5 22-26 February (5 days)	Week 6 1-5 March (5 days)	Week 7 8-12 March (5 days)	Week 8 15-19 March (5 days)	Week 9 23-26 March (4 days)	Week 10 29-31 March (3 days)
CAPS Topic	(CAPS pg. 14) Agro-ecology	(CAPS pg. 14) Interactions in ecosystems and ecological farming	(CAPS pg. 14) Grazing ecology	(CAPS pg. 14) Pasture or veld management	(CAPS pg. 15) Biomes of South Africa	(CAPS pg. 15) Agricultural economics	(CAPS pg. 15) Population growth and economic value of plant and animal products	(CAPS pg. 15) Land redistribution	(CAPS pg. 15) Indigenous knowledge	(CAPS pg. 16) Agricultural organisations
Core Concepts, Skills and Values	Concepts: ecology, levels of organisation, agro-ecology, agro-ecosystems, components of ecosystems, biotic and abiotic factors	Energy flow in ecosystems, nutrient cycling in ecosystems, interactions between organisms, ecological farming methods	Pastures, grazing ecology, optimal grazing, veld types of Southern Africa, characteristics of grazing plants, scientific approach to pasture evaluation and monitoring	Importance of pastures for the livestock industry, relationship between pasture management and pasture condition, veld management practices and systems, advantages and disadvantages of grazing systems, pasture veld management practices that lead to poor pasture conditions	Main types of biomes of SA, identification of biomes on a map, human impact on biomes, importance of biomes, climate change and global warming, factors that cause global warming, impact of climate change or global warming, long and short term weather predication and cyclic pattern of rainfall in SA, adaptation measures	Agri – industry, classification and utilisation patterns of food products in SA	Impact of population growth and shift on agricultural production in SA, impact of the demand for agricultural commodities on industries, changes in the world's and SA population over the past 100 years, impact of secondary and tertiary agricultural development in SA.	Land ownership models in SA, land reform programmes in SA, land redistribution and development after 1994, legal concepts, aims/purposes of agricultural legislation, important Laws affecting agriculture.	Concept of IKS, comparison between indigenous and scientific knowledge, indigenous knowledge used in agriculture, constraints of using indigenous technical knowledge, advantages of using IK in agricultural production, protection and management of IKS in SA	Basic aims, national, provincial and local levels of agricultural organisations, roles of agricultural organisations in SA, FOUR benefits/advantages of nationally recognised agricultural organisations for individual farmers
Requisite Pre-Knowledge	Link with Grade 7 and 8 NS and SS									
Resources (other than textbook) to enhance learning	Own developed Power Point slides and videos, past examination papers, practical work									
Informal Assessment	Questions from past papers, tests									
SBA (Formal Assessment)	TASK 1: (25%) Practical Investigation / Assignment								TASK 2: TEST (75%) – 75 -100 marks	

## 2021 Annual Teaching Plan – Term 2: AGRICULTURAL SCIENCES: Grade 10

Term 2 51 days	Week 1 13 – 16 April (4 days)	Week 2 19 – 23 April (5 days)	Week 3 28 – 30 April (3 days)	Week 4 03 – 07 May (5 days)	Week 5 10 – 14 May (5 days)	Week 6 17 – 21 May (5 days)	Week 7 24 – 28 May (5 days)	Week 8 31 May – 4 June (5 days)	Week 9 07 – 11 June (5 days)	Week 10 14 – 18 June (5 days)	Week 11 21 – 25 June (5 days)	
CAPS Topic	(CAPS pg. 17) Sustainable natural resource utilisation	(CAPS pg. 17) Soil conservation and management	(CAPS pg. 17) Water management (CAPS pg. 17) Agricultural pollution			(CAPS pg. 17) Soil Science (CAPS pg. 17) Minerals			(CAPS pg. 17) Rocks and their formation	<b>Task 4 : TEST</b> <b>Marks: 100</b> <b>Time: 1½ hours</b> <b>Covers Term 2 Content</b>		
Core Concepts, Skills and Values	<p>Concepts: Natural and agricultural resources, different types of agricultural resources and their importance in Agriculture, pressure exerted on natural resources by growing population, sustainable utilisation of natural resources</p>	<p><i>The concept:</i> soil degradation, the types (physical, biological and chemical degradations) and processes of soil degradation (focus on causes, adverse effects and control), The impact of soil degradation on agricultural productivity</p>	<p>The criteria to define water quality, <i>the concepts:</i> water source and water supply (scarcity of water), the different sources of water utilized in Agriculture/farming industry, the different forms/ways in which water is used specifically in Agriculture, factors that affect the supply of water in Agriculture, the basic agricultural practices/activities that contribute to the pollution of soil water, subsoil or ground water and surface water (water quality), the appropriate management practices/strategies which can be adopted to prevent and control water pollution including the National Water Act of 1998</p> <p><i>The concept:</i> agricultural pollution and different types of pollution, the major kinds/types of soil pollutants (causes, effects and control measures), the economic impact of soil pollutants on natural resource sustainability for agricultural production, waste management in Agriculture</p>			<p><i>The concept:</i> soil, the main functions/importance of soil in an ecosystem, <i>the following major components of soil:</i> organic matter, soil air, soil water and mineral particles</p> <p><i>The concept:</i> minerals, the main differences between primary and secondary minerals, examples of primary minerals, examples of secondary minerals, the main characteristics used in mineral identification</p>			<p><i>The concept:</i> rocks/mother rock, the main types of rocks based on their origin (formation) that are important in soil formation processes (igneous rocks, sedimentary and metamorphic), the cultivation properties/suitability of soil that originate from different types of rocks</p>	<b>Cognitive levels:</b> <b>Knowledge – 40%;</b> <b>Comprehension and Application-40%;</b> <b>Analysis, Evaluation and Synthesis– 20</b>		
Requisite Pre-Knowledge	Link with Grade 9 NS											
Resources (other than textbook) to enhance learning	Own developed Power Point slides and videos , past examination papers											
Informal Assessment	Past examination papers, practical work											
SBA (Formal Assessment)	TASK 3 :RESEARCH TASK/ ASSIGNMENT 25% of TERM2								TASK 4:TEST : 75% of TERM			

## 2021 Annual Teaching Plan – Term 3: AGRICULTURAL SCIENCES: Grade 10

Term 3 52 days	Week 1 13 – 16 July (4 days)	Week 2 19 – 23 July (5 days)	Week 3 26 – 30 July (5 days)	Week 4 02 – 06 August (5 days)	Week 5 10 – 13 August (4 days)	Week 6 16 – 20 August (5 days)	Week 7 23 – 27 August (5 days)	Week 8 30 Aug. – 03 Sept (5 days)	Week 9 06 – 10 Sept (5 days)	Week 10 13 – 17 Sept (5 days)	Week 11 20 – 23 Sept (3 days)
<b>CAPS Topic</b>	<b>(CAPS pg. 19) Weathering of rocks</b>	<b>(CAPS pg. 19) Soil forming factors</b>	<b>(CAPS pg. 19) Soil forming processes</b>	<b>(CAPS pg. 19) Animal studies</b>	<b>(CAPS pg. 20) Cattle breeds</b>	<b>(CAPS pg. 20) Sheep breeds</b>	<b>(CAPS pg. 21) Goat breeds (72%)</b>	<b>(CAPS pg. 21) Pig breeds (75%)</b>	<b>(CAPS pg. 22) Poultry breeds</b>	<b>(CAPS pg. 22) Horse breeds</b>	<b>(CAPS pg. 22) Game animals</b>
<b>Core Concepts, Skills and Values</b>	<i>The concept:</i> weathering of rocks, the importance of the weathering of rocks, the weathering factors important in soil formation	The description of the following main soil forming factors: - geographical/topographical factors, <i>climatic factors</i> ; organisms / biological factors that influence soil formation, the human activities that can have a direct impact on soil formation; parent material and time.	Soil forming processes that are active in soils: mineralization, humification, leaching, luviation, plinthite formation, inversion and bioturbation.	Development and domestication of farm animals, the general economic importance of the livestock industry in SA, The basic differences between ruminants and non-ruminants, cattle – beef cattle breeds	Dairy cattle breeds, dual purpose cattle breeds	The main groups of sheep breeds on their utilization, general characteristics of a functional ram and ewe, wool breed, dual purpose sheep breeds, mutton breeds, pelt breeds	Classification of the following main goat breeds based on their utilisation: milk/dairy breeds, meat breeds, mohair breeds	Classification of the main group of pig breeds based on their production, the differences between indigenous and improved breeds, pork breeds, bacon breeds	Classification of the main types of poultry and differentiate between the main chicken/fowl breeds (SA indigenous breeds, dual purpose breeds or heavy breeds, light breeds and ornamental/pedigree breeds) according to the following types of production: Broiler production; and egg production. Basic requirements for successful production	Classification of the main horse breeds based on their purposes, warm-blooded and cold-blooded horses, riding/light horse breeds, draught horse breeds	Classification of the main game animals based on their purposes, importance of game farming
<b>Requisite Pre-Knowledge</b>	Link with Grade 9 NS										
<b>Resources (other than textbook) to enhance learning</b>	Own developed Power Point slides and videos , past examination papers										
<b>Informal Assessment</b>	Past examination papers, practical work										
<b>SBA (Formal Assessment)</b>	<b>TASK 5 : TERM TEST – 100% of TERM : TERM 3 Content :75-100 marks</b>										



## 2021 Annual Teaching Plan – Term 4: AGRICULTURAL SCIENCES: Grade 10

Term 4 47 days	Week 1 05 – 08 October (4 days)	Week 2 11 – 15 October (5 days)	Week 3 18 – 22 October (5 days)	Week 4 25 – 29 October (5 days)	Week 5 01 – 05 November (4 days)	Week 6 08 – 12 November (5 days)	Week 7 15 – 19 November (5 days)	Week 8 22 – 26 November (5 days)	Week 9 29 Nov – 03 Dec (5 days)	Week 10 06 – 08 Dec (3 days)										
<b>CAPS Topic</b>	<b>(CAPS pg. 23) Plant studies</b>	<b>(CAPS pg. 23) Horticulture crops</b>	<b>(CAPS pg. 23) Horticulture crops</b>	<b>(CAPS pg. 24) Fodder crops and forests</b>	<b>(CAPS pg. 24) Biological concepts and cell division</b>		<b>End of the year examination</b>													
<b>Core Concepts, Skills and Values</b>	The average volumes of production of economically important crops/plants, the main production areas of crops in South Africa, the general economic importance and utilization of crops, criteria for successful crop production, Field crops, grain crops, oil seed crops, industrial crops	Horticulture crops, vegetables, fruit	Flower crops, shrubs and indigenous crops	Legume fodder crops, grass fodder crops – climate and soil requirements, <i>The concept</i> . forests, the classification of the main groups of forests crops/trees, the distinction between indigenous and exotic forests, reasons for promoting and growing protected trees/plant and eradicating invasive tree/plant	<i>The basic concept</i> : cell, tissue and organs in living organism (organisational levels of a multi-cellular organism), plant and animal cells including the labelled diagrams of plant and animal cells, identification of the main cell structures and organelles and their functions in both plant and animal cells, differences between an animal cell and a plant cell, The cell division process and its application, <i>the concept</i> : cell division, the types of cell division in plants and animals (mitosis and meiosis), the description of process of both mitosis and meiosis cell division, the identification/description of the phases of mitosis and meiosis, how cell division (mitosis and meiosis) takes place, the differences between mitosis and meiosis		<table border="1" style="width: 100%;"> <thead> <tr> <th style="background-color: #e1eef6;">PAPER 1</th> <th style="background-color: #e1efce;">PAPER 2</th> </tr> </thead> <tbody> <tr> <td style="background-color: #e1eef6;"><b>Marks: 150</b> <b>Time: 2½ hours</b> <i>Learners must answer all 4 questions.</i></td> <td style="background-color: #e1efce;"><b>Marks: 150</b> <b>Time: 2½ hours</b> <i>Learners must answer all 4 questions.</i></td> </tr> <tr> <td style="background-color: #e1eef6;"><b>Topics:</b> <i>Agri-ecology</i> <i>Agri-industry</i> <i>Animal Studies</i></td> <td style="background-color: #e1efce;"><b>Topics:</b> <b><i>Soil Science</i></b> <b><i>Plant Studies</i></b> <b><i>Optimal Resource Utilisation</i></b> <b><i>Biological concepts</i></b></td> </tr> <tr> <td colspan="2"><b>Section A:</b> <b>Question 1</b> • Short questions, objective questions e.g. MCQ, terminology, columns/statements and items (45 marks)</td> </tr> <tr> <td colspan="2"><b>Section B:</b> <b>Question 2 – 4</b> • Variety of question types. • 3 questions of 35 marks divided into subsections</td> </tr> </tbody> </table>				PAPER 1	PAPER 2	<b>Marks: 150</b> <b>Time: 2½ hours</b> <i>Learners must answer all 4 questions.</i>	<b>Marks: 150</b> <b>Time: 2½ hours</b> <i>Learners must answer all 4 questions.</i>	<b>Topics:</b> <i>Agri-ecology</i> <i>Agri-industry</i> <i>Animal Studies</i>	<b>Topics:</b> <b><i>Soil Science</i></b> <b><i>Plant Studies</i></b> <b><i>Optimal Resource Utilisation</i></b> <b><i>Biological concepts</i></b>	<b>Section A:</b> <b>Question 1</b> • Short questions, objective questions e.g. MCQ, terminology, columns/statements and items (45 marks)		<b>Section B:</b> <b>Question 2 – 4</b> • Variety of question types. • 3 questions of 35 marks divided into subsections	
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