AGRICULTURAL SCIENCES

Dear Grade 12 Agricultural Sciences learner

Agricultural Sciences seeks to develop your scientific knowledge and approach to relevant agricultural concepts. In Grade 12 the main content topics are Animal Studies, Agricultural Management and Basic Agricultural Genetics.

Subject requirements

- Make sure that you have a textbook, exercise books, calculator, ruler, eraser, pen and pencil.

Content Checklist

Below is a checklist you should use to ensure that you have covered the Grade 12 content in full.

1. Animal Studies:

Animal Nutrition

- The alimentary canals of farm animals: General structures
- Digestion and absorption of feeds in farm animals
- Components of a feed
- Digestibility of feeds
- Biological value of feeds
- Energy value of feeds
- Supplements
- Types of feeds
- Planning a feeding programme

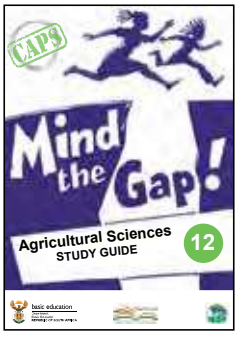
Animal Production, Protection and Control

- Increasing production
- Shelter
- Handling of farm animals
- Behaviour of farm animals
- Diseases (viral, bacterial, protozoan and fungal)
- Internal and external parasites
- Plant and heavy metal poisoning
- The role of the state in animal protection

Animal Reproduction

- Reproductive organs (male and female)
- Synchronisation of oestrus
- Artificial mating and breeding
- Pregnancy and birth
- Milk production

2. Agricultural Management:



Agricultural Management and Marketing

- Agricultural marketing
- Market equilibrium
- Marketing systems
- Entrepreneurship and business planning

Production Factors

- Land and labour
- Capital and management

3. Basic Agricultural Genetics:

- Monohybrid and dihybrid crossings
- Heredity
- Variation and mutations
- Selection
- Genetic modification and engineering

Assessment

Formal assessment tasks: 25%	**100 marks**
Final external examination 75%	**300 marks**

During the year you will complete different formal assessment tasks. All assessment tasks are extremely important and you need to complete them to the best of your ability to ensure a good year mark.

The following **formal assessment tasks are compulsory**:

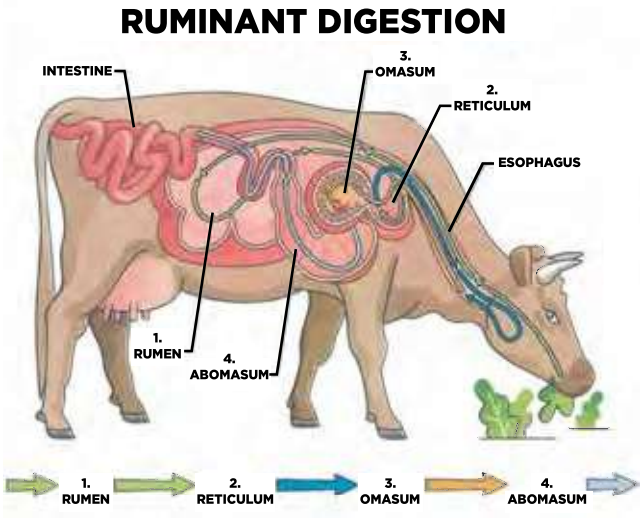
- One practical investigation or research task
- One control test
- Trial examination. This examination consists of two papers which have exactly the same content distribution and format as the final examination papers.

The external examination papers are structured as follows:

NSC Exam

Paper 1: Animal Sciences	**150 marks**
Animal Nutrition	**50 marks**
Animal Production, Protection and Control	**50 marks**
Animal Reproduction	**50 marks**
Paper 2: Agricultural Management and Genetics	**150 marks**
Agricultural Marketing and Management	**50 marks**
Production Factors and Management	**50 marks**
Basic Agricultural Genetics	**50 marks**

Tips for success

- Ask your teacher for the content framework for Grade 12. This will give you the detailed content. Paste it in your exercise book. Tick off every topic as it is taught in class and write the relevant textbook page numbers next to the topic.
- Make sure that you prepare the relevant and correct content topics for each of the Agricultural Sciences papers on the day of the examination.
- Prepare yourself to draw and interpret graphs, do calculations (e.g. the coefficient of digestibility or nutritive ratio), read case studies or scenarios very carefully, interpret diagrams (also the labeling) and apply your knowledge.
- Work through as many past Agricultural Sciences papers as possible to prepare you for the examinations.

SCAN ME!
Agricultural Sciences Overview