THE REPUBLIC OF UGANDA

Ministry of Education and Sports

Lower Secondary Curriculum

NUTRITION AND FOOD TECHNOLOGY SYLLABUS

NCDC
NATIONAL CURRICULUM DEVELOPMENT CENTRE

CONTENTS

INTRODUCTION

Nutrition and Food Technology

The UNESCO Education Strategy (2014 – 2021) advocates for a humanistic and holistic vision of education as a fundamental human right that is essential to personal and socio-economic development. UNESCO further recommends, societies that are just, inclusive, peaceful and sustainable by 2030. The Uganda Vision 2040 aims to transform Uganda into a modern and prosperous country, while the NDP recognises the existing weaknesses in education, including the low efficiency and variable quality at the secondary level. The Sustainable Development Goal 4 advocates for inclusive and quality education, while the National Development Plan II focuses on enhancement of human capital, development, strengthening mechanisms for quality, effective efficient service delivery and improvement of quality and relevance of skills development. The NRM Manifesto (2016-2021), emphasises continuous assessment examination systems , strengthening soft skills, which promote self-esteem, conscientiousness and a generally positive attitude to work, promoting e-learning and computer literacy in order to enhance learning outcomes. All these are lacking and where they exist it is at a minimum level.

In alignment with the above, the Education and Sports Sector Strategic plan (2017/20) advocates for delivery of equitable, relevant and quality education for all. The current secondary school curriculum of Uganda, although highly regarded by some, is focused on the needs of a tiny academically oriented elite yet the needs of the majority of learners need to be the focus. The Ministry of Education and Sports (MoES) through the National Curriculum Development Centre (NCDC) therefore, undertook a review of the Lower Secondary Curriculum, aimed at providing a learning environment, opportunities, interactions, tasks and instructions that foster deep learning by putting the learner at the centre of the learning experience. This is in line with aims of secondary education in Uganda as outlined opposite.

The aims of secondary education in Uganda are to:

- Instill and promote national unity, an understanding of the social and civic responsibilities, strong love and care for others and respect for public property, as well as an appreciation of international relations and beneficial international co-operation;
- Promote an appreciation and understanding of the cultural heritage of Uganda including its languages;
- Impart and promote a sense of self discipline, ethical and spiritual values, personal and collective responsibility and initiative;

- Enable individuals to acquire and develop knowledge and an understanding of emerging needs of society and the economy;
- Provide up-date and comprehensive knowledge in theoretical and practical aspects of innovative production, modern management methods in the field of commerce and industry and their application in the context of socio-economic development of Uganda;
- Enable individuals to develop basic scientific, technological, technical, agricultural and commercial skills required for self-employment;
- Enable individuals to develop personal skills of problem solving, information gathering and interpretation, independent reading and writing, self improvement through learning and development of social, physical and leadership skills such as are obtained through games, sports, societies and clubs;
- Lay the foundation for further education;
- Enable the individual to apply acquired skills in solving problems of community, and to develop a strong sense of constructive and beneficial belonging to that community;
- Instill positive attitudes towards productive work and strong respect for the dignity of labour and those who engage in productive labour activities;
- Develop a positive attitude towards learning as a lifelong process.

BACKGROUND TO THE NEW CURRICULUM

The reform was based on the Education Sector Strategic Plan (ESSP), 2009 – 2018) which set out strategies to improve the quality and relevance of secondary education. The ESSP's sub-objective 2.2 was to ensure that "Post-primary students [are] prepared to enter the workforce and higher education". This is also in line with the current strategic plan of 2017-2020. To achieve this objective, one of the Ministry's strategies was to revise the curriculum and improve instruction and assessment by eliminating the short comings in the current curriculum.

The review focused on: producing a secondary school graduate who has the competences that are required in the 21st century; promoting values and attitudes; effective learning and acquisition of skills in order to reduce unemployment among school graduates.

The reform also aimed at reducing the content overload and contact hours in the classroom so as to create time for: research and project work; talent development and creativity; allowing for emerging fields of knowledge across all subjects and doing away with obsolete information. There was a need to address the social and economic needs of the country like the mining sector, tourism, services provision, science and technology development and to ensure rigorous career guidance programme to expose learners to the related subjects. This will enable learners to make informed choices as they transit and to equip them with knowledge and skills that will enhance their competitiveness in the global value chain.

To meet these requirements, the reforms are based on:

- The development of a holistic education for personal and national development based on clear shared values
- A commitment to higher standards, deeper understanding and greater opportunities for learners to succeed
- A focus on the key skills that are essential to work, to learning, and to life, and which will promote life-long learning
- An integrated and inclusive approach that will develop the ability to apply learning in practical situations.

The ESSP further outlines what the reforms imply:

"This reform will necessitate a sweeping revision of the general secondary curriculum, away from strictly academic learning objectives that are thought to prepare students for erudite higher education and towards a set of competencies that serve both those who continue their education after S4 and those who choose to enter the workforce. The new curriculum will enable learners to acquire specific vocational skills that they can use once they enter the world of work. The new curriculum will help learners make informed decisions as citizens and family members, and it will give those who continue with their education, either immediately in S5 or later in life, the learning skills they need to think critically and study efficiently."

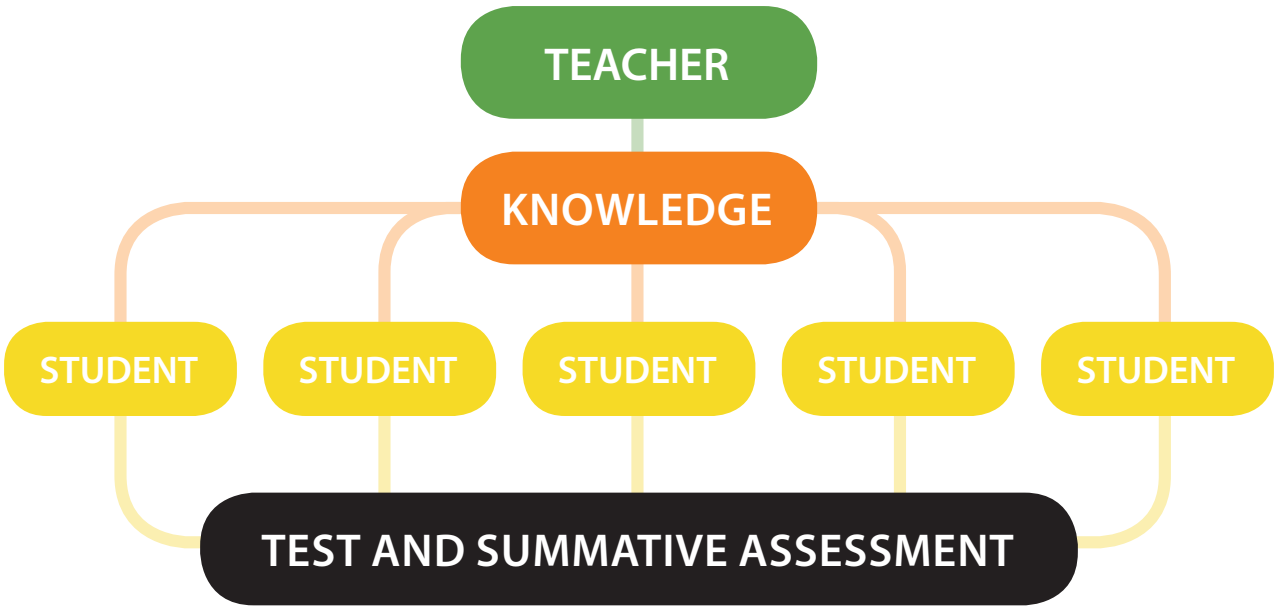
KEY CHANGES

The key change in the new curriculum is a move from a knowledge-based curriculum to a competence and skill-based curriculum. It is no longer sufficient to accumulate large amounts of knowledge. Young people need to develop the ability to apply their learning with confidence in a range of situations. They need to be able to use knowledge creatively. A level of competence is the ability to use knowledge rather than just to acquire it. This requires an active, learner-centred rather than passive, teacher-centred approach.

This approach to teaching and learning is in support of the Sustainable Development Goals (SDG's), otherwise known as the Global Goals. These are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. The key changes in the curriculum will ensure that Uganda is making good progress towards SDG 4 in particular which aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

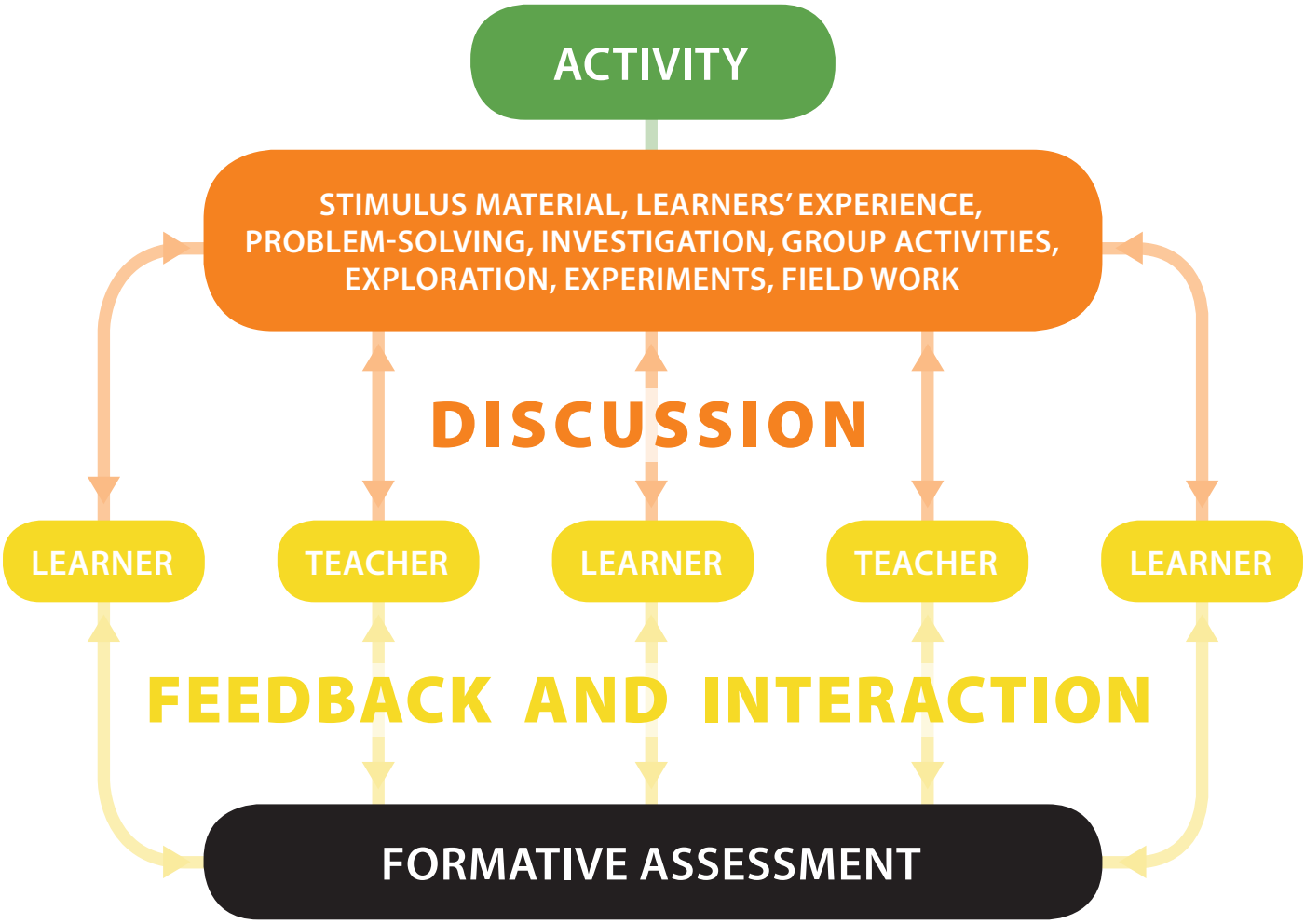
The change can be summarised in the following diagrams.

PREVIOUS KNOWLEDGE-BASED CURRICULUM



Knowledge-based teaching was based on transferring knowledge from the teacher to the students. The teacher had knowledge and transferred this knowledge to the students by lecturing, talking, asking them to read the text book or writing notes on the board for the students to copy and learn. Students acquired the knowledge, often without fully understanding it, and were tested at the end of a unit, term or school course to see if they had remembered it. The knowledge was based mainly on the knowledge in the subjects traditionally taught at University, and little attempt was made to make it relevant to young people's own lives. The whole education system was seen by many people as a preparation for University, but the vast majority of learners never reach university. The new curriculum will cater for this majority as well as those who later go on to University.

NEW COMPETENCE BASED CURRICULUM



In the new competence-based approach, the "student" becomes a "learner". The new Learning Outcomes can only be achieved through active engagement in the learning process rather than simply absorbing knowledge given by the teacher.

The teacher needs to build on the learners' own knowledge and experience and create Learning Activities through which learners can explore the meaning of what is being learned and understand how it is applied in practical situations.

Teaching and learning becomes a two way process of dialogue between the Teacher and Learners. Learners also learn from each other through discussion. Assessment also becomes a two way process of formative assessment; not just to give grades but to find out problems the learners may be having and help to solve them.

THE NEW CURRICULUM

The new curriculum focuses on four "Key Learning Outcomes" of: self – assured individuals; responsible and patriotic citizens; lifelong learners; positive contributors to society. The curriculum emphasises knowledge, application and behavioural change. It is based on a clear set of values which must be imparted to learners during the learning process.

At the heart of every subject there are generic skills that allow development into life-long learners. Besides, there are also cross cutting challenges that are embedded across subjects to enable learners understand the connections between the subjects and complexities of life.

Key Learning Outcomes

The new curriculum sets out 'Key Learning Outcomes' that sum up the expectations of the curriculum as a whole, and set out clearly the qualities that young people will develop.

By the end of the educational process, young people will become:

Self-assured individuals who:

- Demonstrate self- motivation, self-management and self-esteem
- Know their own preferences, strengths and limitations
- Adjust their behaviour and language appropriately to different social situations
- Relate well to a range of personality types

Responsible and patriotic citizens who:

- Cherish the values promoted in the curriculum
- Promote the development of indigenous cultures and languages and appreciate diversity, equity and inclusiveness
- Apply environmental and health awareness when making decisions for themselves and their community
- Are positive in their own identity as individuals and global citizens
- Are motivated to contribute to the well-being of themselves, their community and the nation

Lifelong learners who:

- Can plan, reflect and direct their own learning
- Actively seek lifelong learning opportunities for personal and professional development

Positive contributors to society who:

- Have acquired and can apply the Generic Skills
- Demonstrate knowledge and understanding of the emerging needs of society and the economy
- Understand how to design, make and critically evaluate products and processes to address needs
- Appreciate the physical, biological and technological world and make informed decisions about sustainable development and its impact on people and the environment.

Values

The new curriculum is based on a clear set of values. These values underpin the whole curriculum and the work of schools. They are also the values on which learners need to base their lives as citizens of Uganda.

- Peace and harmony
- Integrity and honesty
- Patriotism
- Positive attitude towards work
- Respect for human rights
- Self-Control

These values are not taught directly in lessons, nor will they be assessed, but they will inform and shape all teaching and learning.

Generic Skills

The generic skills lie at the heart of every Subject. They are the skills that enable the learner to access and deepen learning across the whole curriculum. They are the same skills that are sought by employers and which will unlock the world of work. They are the skills that allow young people to develop into lifelong learners who can adapt to change and cope with the challenges of life in the 21st Century.

Young people need to be able to think critically and solve problems, both at school and at work. They need to be creative and innovative in their approach to learning and life. They need to be able to communicate well in all forms, co-operate with others and also work independently. They need to be able to use functional mathematics and ICT effectively.

Critical thinking and problem-solving

- Plan and carry out investigations
- Sort and analyse information
- Identify problems and ways forward
- Predict outcomes and make reasoned decisions
- Evaluate different solutions

Creativity and innovation

- Use imaginations to explore possibilities
- Work with others to generate ideas
- Suggest and develop new solutions
- Try out innovative alternatives
- Look for patterns and make generalisations

Communication

- Listen attentively and with comprehension
- Talk confidently and explain things clearly
- Read accurately and fluently
- Write and present coherently
- Use a range of media to communicate idea

Co-operation and Learning

- Work effectively in diverse teams
- Interact effectively with others
- Take responsibility for own learning
- Work independently with persistence
- Manage goals and time

Calculation and ICT

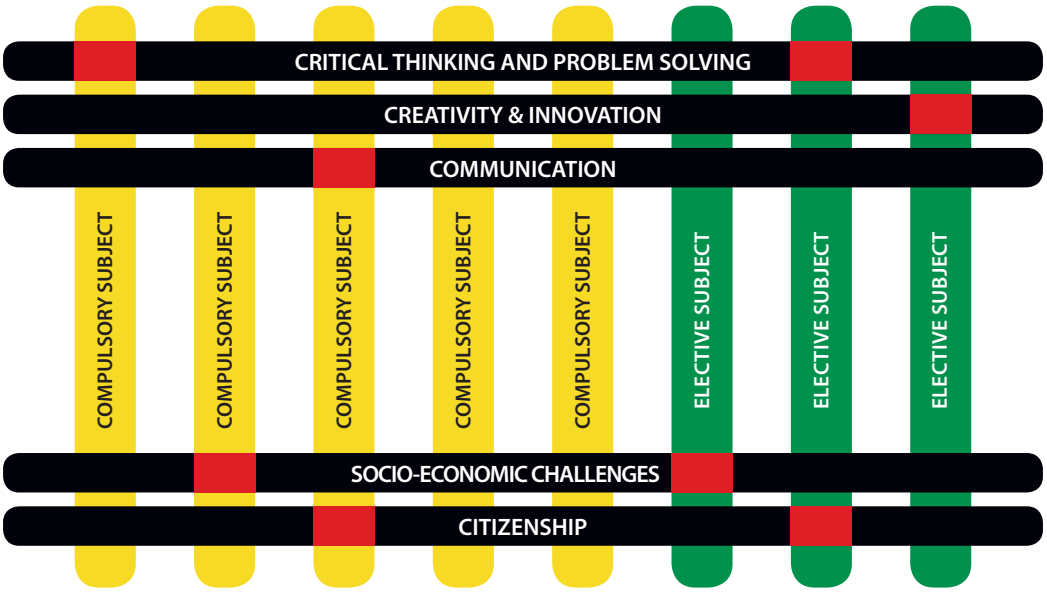
- Use numbers and measurements accurately
- Interpret and interrogate mathematical data
- Use mathematics to justify and support decisions
- Use technology to create, manipulate and process information
- Use technology to collaborate, communicate and refine their work

GENERIC SKILLS WITHIN NUTRITION AND FOOD TECHNOLOGY

These skills are not separate subjects in themselves; they are developed within the subjects of the curriculum. They also help learning within those subjects. It is when these generic skills are deployed that learning is most effective.

The generic skills are a key part of the new curriculum. They have been built into the syllabuses for each of the Subjects, and these Subjects provide the context for the skill development. Nutrition and Food Technology provides a rich context for learners to communicate, co-operate, and to think critically about how the world works and to understand the world from a scientific point of view.

The Subjects also provide the contexts for progression within the skills. The same skill definitions apply to all year groups, and skills progression is provided by the increasing complexity of the subject matter within each Subject. For example, within 'critical thinking', learners begin thinking critically about the relatively simple subject matter in Senior 1 and then progress to thinking about the much more complex matters in Senior 4. Thus the progression is in the increasing complexity of the matters being thought about.



Cross-cutting Challenges

There are some issues that young people need to learn about, but which are not confined to one Subject. These are the 'Cross-cutting Challenges' and they need to be studied across the Subjects. These issues develop learners' understanding of the connections between the Subjects, and so of the complexities of life.

The Cross-cutting Challenges identified in the curriculum are:

- Environmental awareness
- Health awareness
- Diversity and inclusion
- Socio-economic challenges
- Citizenship

These have been built into the syllabuses of each Subject. The way in which they operate within the Subject is very similar to the generic skills. Nutrition and Food Technology provides a very good context for considering environmental and health awareness, and to understand the complex and diverse world in which we live.

NUTRITION AND FOOD TECHNOLOGY WITHIN THE NEW CURRICULUM

Nutrition and Food Technology is an elective subject from Senior 1 to Senior 4

Time allocation

NUTRITION AND FOOD TECHNOLOGY	SENIOR 1 & 2	SENIOR 3 & 4
	2 periods a week	4 periods a week

Rationale

Learning Nutrition and Food Technology will enable learners to:

- Apply and use the principles of the scientific method/ process and the application of experimental techniques to solve specific problems
- Write, communicate and report on biological concepts
- Apply biological concepts to better understand other fields of science in order to readily accomplish day to day tasks
- Understand, address and successfully manage health, environmental and sustainability challenges facing society

Teaching and Learning Nutrition and Food Technology

The thrust of the new syllabuses is experiential and towards deeper understanding. The focus in Nutrition and Food Technology is on the development of understanding through scientific enquiry and rational thought.

The new syllabuses provide learners with a wide range of contexts in which to develop this understanding, and these contexts are designed to engage the interest of the learner and to provide opportunities to build life-related knowledge, experience and skills. Teachers are encouraged to go beyond the textbooks and provide as many meaningful contexts as possible. The generic skills have been integrated throughout the curriculum and can only be acquired through active approaches.

The role of the teacher is to build on learners' existing knowledge and experience, but to extend that by posing problems to the learners. This makes them think about their own ideas and experiences as well as adding new knowledge and skills to it.

Learners need to interact with real situations inside and outside the classroom. They need to look at pictures or diagrams, examine statistics, or read texts from a range of sources. They need to find out knowledge and ideas for themselves. They should then be expected to express these in their own words, not those of the teacher, and so demonstrate that they have understood what they have learnt.

In this approach, learners are encouraged to:

- Be responsible for their own learning
- Think for themselves and form their own ideas and opinions
- Become critical thinkers, ready to face new challenges and situations for themselves

THE NUTRITION AND FOOD TECHNOLOGY SYLLABUS

Programme Planner

SENIOR 1	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Introduction to nutrition and food technology	8
	Kitchen equipment and planning	6
	Safety in the home	10
Term 2	Proteins	14
	Carbohydrates	10
Term 3	Mineral elements	10
	Processing and preservation of vegetables`	14
	Total	**72**

SENIOR 2	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Lipids	8
	Vitamins	10
	Water	6
Term 2	Processing foods from vegetable seeds	14
	Processing and preservation of fruits	10
Term 3	Common Foods	8
	Meal planning	16
	Total	**72**

SENIOR 3	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Stocks, soups, sauces and gravy	14
	Sweets and puddings	14
	Food Preparation: Basic Meals	20
Term 2	Meals for special occasions	24
	Milk and Milk Products	24
Term 3	Yeast Cookery	18
	Confectioneries and Pastries	30
	Total	**144**

SENIOR 4	TOPIC	DURATION (NUMBER OF PERIODS)
Term 1	Nutrition and meal planning	20
	Management of nutritional related diseases & disorders	28
Term 2	Processing meat, fish and poultry products	30
	Importance of rechauffe and convenience foods in the diet	18
Term 3	Table setting and food service	12
	Total	**136**

The syllabus details for all subjects are set out in three columns:

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT ACTIVITIES
The knowledge, understanding or skills expected top be learned by the end of the topic	The sort of learning activities that include the generic skills and that will help learners achieve the Learning Outcomes.	Opportunities for assessment within the learning

Teachers should base their lesson plans on the Learning Outcomes using the Suggested Learning Activities as a guide. These are not the only possible learning activities, and teachers are encouraged to extend these and devise their own that are appropriate to the needs of their class.

DETAILED SYLLABUS FOR NUTRITION AND FOOD TECHNOLOGY

SENIOR 1: TERM 1

TOPIC 1: INTRODUCTION TO NUTRITION AND FOOD TECHNOLOGY — 8 PERIODS

Competency: The learner is able to plan meals that show understanding of cultural differences, the link between nutrition and health and the need for hygiene in the preparation, storage and disposal of food.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) appreciate the foods of different cultures (k, v) b) understand the factors that influence feeding habits and practices of people (u) c) develop a general understanding of key terms used in Nutrition and Food Technology and appreciate the importance of healthy living (k, u)	• Learners should be introduced to some foods from different countries and cultures and discuss the differences and the reasons why they vary. They should be shown the different methods of preparation and cooking and try some of these themselves. They should discuss why foods vary around the world. They could plan meals for a visitor from another culture. • They should be introduced to the impact of food on health and work in groups to devise healthy diets. During these activities, they should be introduced to the key terms of food technology such as: diet, nutrition & nutrients, malnutrition, over and under-nutrition, food processing and preservation.	• Observation of learners discussing healthy diets. Conversation about key terms and reasons for cultural differences. Look at the meal plans. (product)
d) understand the need for personal hygiene (u, s) e) understand the use of different types of cleaning agents and how these are applied to different surfaces and areas of food handling (u, s) f) know how to control household pests (k) g) understand the need for personal, food and kitchen hygiene during meal preparation (u, s)	• Guide the learners to explain the importance of working and living in a clean environment – (food hygiene and kitchen hygiene). Demonstrate the right procedures for observing hygiene, and guide the learners to clean the food handling areas i.e. food store, work table, refrigerator, kitchen & dining areas, and identify the dangers of unhygienic practices in food handling. Learners could make a poster to illustrate hygienic and unhygienic practice in the kitchen. • Use demonstration to guide the learners to follow the right steps to clean different surfaces in a home. Learners could make a chart to show what steps to use where. • Practically, guide the learners to follow the right steps to control household pests. Use whole class discussion to enable the learners to identify the various pests in the home, their effects and how to eradicate them.	• Observe the demonstration of the various methods of maintaining hygiene. • Discuss the reasons for hygiene and dangers of unhygienic practices. • Analyse the charts and posters. (products) • Ask the learner to describe the different ways of eradicating household pest.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
h) understand how to dispose of different types of household refuse (u, s) i) make a compost pit (u, s) j) understand the importance of observing hygiene when using disposal facilities (u)	• Guide the learners to discuss and identify the different types of refuse in the immediate and wider environment, and how these are disposed of. • Guide the learners to carry out a project in making a compost pit and use it for refuse disposal at their school. • Guide the learners to examine the importance of observing hygiene when using facilities such as: a rubbish pit, toilet or pit latrine and drainage. • Let learners conduct a community cleaning exercise to ensure premises are hygienic, and make a report on it. ***Project: Learners set up a disposal unit in the school for easy waste management and write a report. (compulsory project)***	• Conversation about the different methods of disposing of refuse, and the importance of observing hygiene at a processing unit. • Learners write a report on the cleaning exercise. • Observe the construction and use of a waste disposal unit in the school.

SENIOR 1: TERM 1

TOPIC 2: KITCHEN EQUIPMENT AND PLANNING — 6 PERIODS

Competency: The learner is able to use different types of kitchen equipment and utensils appropriately and safely, and understand the different types of kitchen design and the factors that need to be taken into consideration when planning a kitchen.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) use kitchen equipment appropriately and safely (s) b) know how to care for and store kitchen equipment appropriately (k,u) c) use appropriate technology for carrying out specific tasks (u, s)	• Learners should be shown a range of kitchen equipment and the ways in which it can be used. They should try out a range of kitchen equipment and utensils, using different foods. They should be guided to discuss and to classify kitchen equipment according to its function. Learners could produce a poster to illustrate this. • Guide the learners to think about and discuss what it is important to consider when choosing kitchen equipment. For example, equipment used for measuring, cutting, mixing, cooking/warming, cooling, sterilising and cleaning. Learners could make a leaflet of guidance which illustrates the factors to take account of when choosing kitchen equipment. • Guide the learners to examine and discuss the importance of using kitchen equipment correctly and safely, and for storing and keeping it clean and in good working order. • Guide the learners to compare and contrast kitchen equipment in terms of its usage and give reasons why one might be better in some circumstances than another. For example, a charcoal/wood oven compared to an electric oven.	• Observe learners as they handle and use kitchen utensils. Are they doing so appropriately and safely? • Analyse the poster illustrating how kitchen equipment can be classified. (product). • Analyse the leaflet which shows the factors to consider when buying kitchen equipment. (product) • Observe learners as they examine and discuss factors to take into account when caring for kitchen equipment. • Conversation with learners about kitchen equipment, and its usage. Why would they choose one piece of equipment rather than another?
a) understand the factors that need to be taken into account when planning a kitchen planning (k, u, s) b) plan a kitchen taking account od the necessary factors(u,s) c) take account of safety aspects when planning a kitchen (u,s)	• Guide the learners to discuss what needs to be considered when planning a kitchen. • Explain to learners the different types of kitchen plans. This should include: L -kitchen, U-kitchen, straight-line kitchen, parallel kitchen. • Use whole class discussion to guide thelearners to state the advantages and disadvantages of the different kitchen plans. • In groups, the learners could plan a kitchen and explain the reasons for their choices.	• Ask learners about the advantages and disadvantages of each type of kitchen plan. (conversation) • Observe learners as they work together to plan a kitchen (product). Engagement of the learner in discussion about the different kitchen plans, the reasons for their choice, suitability of plan.

SENIOR 1: TERM 1

TOPIC 3: SAFETY IN THE HOME — 10 PERIODS

Competency: The learner is able to understand the potential causes of accidents in the home and how to prevent and treat them, and understand the importance of lighting, ventilation and clean water in the promotion of a safe and healthy working environment.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand how to prevent accidents in the home (u) b) know how to administer first aid for accidents likely to occur in the home (k)	• Guide the learners to discuss the potential causes of accidents in the home and how to prevent them. This should include cuts, choking, falls, fractures and sprains, electric shocks, burns and scalds, food poisoning, fires. • Guide the learners to brainstorm the different ways of arranging a home to prevent accidents. • Show the learners the contents of a first aid kit/box and guide them to discuss the contents and their use. • Learners should put together a First Aid kit/box for the classroom and explain why they have chosen the contents. • Learners could, in groups, role play common accidents in the home and their treatment. • Learners should make a chart showing how to carry out first aid for different sorts of accidents.	• Discuss with learners the causes of accidents in the home and how they might be prevented. (conversation) • Talk to learners about the First Aid box that they have put together. Is it comprehensive and fit for purpose. (conversation, product) • Observe the role play. Is it evident that learners know about common accidents in the home and how they should be treated? (observation) • Analyse learners' first aid charts. (product)
c) choose suitable lighting for a home (u, s) d) understand the importance of good ventilation in the home (u) e) choose suitable work surfaces for the kitchen (u, s) planning a kitchen (u,s)	• Guide the learners to discuss the importance of lighting in the home and the reasons why different rooms may need different lighting. • Guide the learners to discuss the importance of adequate ventilation in the home. Learners could design a pamphlet for mothers of young children, to help them understand the importance of good ventilation. • Explain to the learners the different materials used for kitchen work surfaces. • In small groups, guide the learners to discuss the factors that need to be taken into consideration when choosing a work surface for a home. Learners could make a flow chart to help someone to choose the right work surface for their home.	• Observe learners as they discuss the importance of lighting in the home and the requirements for different rooms. • Look at the pamphlet. (product) • Discuss with learners the choices to be made when choosing a work service. Look at the flow chart. (product) • Discuss with learners the factors to consider when choosing a work surface (conversation). Analyse the flow chart. (product)

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
f) understand the sources of water in the home (k, u) g) purify water at home using basic methods (such as a sand filter) (u, s)	• Guide the learners to discuss the sources of water in the home, the community and in the wider community. • In groups, learners could discuss the use of water in the home. Guide the learners, in a brainstorming activity, to explain how water can be contaminated at home and in the community. • Discuss with learners the dangers of drinking contaminated water. • Explain to the learners the ways in which water can be purified. This should include boiling, filtration, natural purification, and the use of chemicals. • Learners should carry out a purification process using a homemade filter. They could make a display to include this, as well as charts showing sources of water, and design a poster about safe water. • Learners should carry out research on potential water contaminants in their community and carry out a practical activity, of their choice, to purify water. They should explain the reasons for their choice. • Guide the learners in a discussion about the advantages and disadvantages of the different methods of water purification. ***Project: Learners set up a project on water purification to ensure clean supply of water in the school and at home. Write a report. (compulsory project)***	• Observe learners as they: assemble the purification equipment; carry out the purification process using a homemade filter; design a sensitisation poster on water safety; and demonstrate water treatment by using a method of their choice. (Observation, Product) • Talk with learners about the different ways of purifying water; the advantages and disadvantages of the different methods and the consequences of drinking contaminated water. (conversation) • Check the homemade water filter, and charts showing sources of water and a research report on water contaminants. (product)

SENIOR 1: TERM 2

TOPIC 4: PROTEINS — 14 PERIODS

Competency: The learner is able to use proteins as part of a healthy diet, and manage protein deficiency in the diet.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the sources and functions of proteins (u) b) understand how proteins need to be prepared and cooked so that they form part of a healthy diet (u) c) manage the effects of an imbalanced intake of proteins in the body (u, s) d) understand the characteristics of protein foods (u)	• Guide the learners to discuss the constituents of a healthy diet and the role of proteins as part of a healthy diet. • Guide the learners to discuss the sources of protein in the diet, and how these need to be prepared and cooked to aid digestion. • If learners have access to the Internet they could research the functions of protein in the body and the impact of protein deficiency in the diet. If this is not available, guide the learners in a discussion of this. Learners could present their findings to the class. • Guide the learners in discussion about the different ways of managing protein imbalances in the body. • Learners could make a protein-rich dish and explain their choice.	• Listen to learners as they categorise protein foods. (observation). • Learners present their research on the importance of proteins in the body and the impact of protein deficiency in the diet. (product) • Conversation about the protein dish and reason for their choice. (product)

SENIOR 1: TERM 2

TOPIC 5: CARBOHYDRATES — 10 PERIODS

Competency: The learner is able to manage the effects of carbohydrate imbalance in the body using their understanding of the role of carbohydrates in the diet.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the sources and functions of carbohydrates (k, u) b) manage the effects of an imbalanced intake of carbohydrates in the body (u, s) c) understand the characteristics of carbohydrate foods (u, k)	• Guide the learners to discuss the constituents of a heathy diet and the role of carbohydrates as part of a heathy diet. • Explain to learners that carbohydrates are classified as monosaccharides, disaccharides and polysaccharides. Explain their function and in which foods they are found. • Guide the learners to discuss the impact of carbohydrates imbalance in the diet. • Guide the learners to discuss in groups the reasons for a carbohydrate imbalance in the diet and ways of managing it. • Guide the learners to investigate the impact of heat on carbohydrate foods and record their findings, e.g. caramelisation, gelatinisation and dextrinisation. • They should discuss the reasons why heat might be applied to carbohydrates. • Learners could plan and make a dish of their choice, designed for someone with a carbohydrate imbalance.	• Talk with learners about what role carbohydrates have as part of a normal healthy diet. (conversation) • Talk with learners about the signs of and reasons for carbohydrate imbalance and how this should be addressed. (conversation) • Observe learners as they investigate the effect of heat on carbohydrates and analyse their findings. (product) • Talk with learners about the dish they have made and how it is intended to address a carbohydrate imbalance. (conversation and product)

SENIOR 1: TERM 3

TOPIC 6: MINERAL ELEMENTS — 10 PERIODS

Competency: The learner is able to manage the effects of mineral salt imbalances in the body using their understanding of mineral elements as essential nutrients.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the sources and functions of mineral elements in the body (k, u) b) adjust the diet to cater for common mineral intake imbalances in the body (k, u, s) c) understand the factors that affect the absorption of mineral elements (k, u)	• Guide the learners to discuss the role of minerals in the diet. Explain the macro elements: calcium, phosphorus, potassium, sodium & chlorine, and the trace elements: iron, iodine, zinc & fluoride. • Discuss with learners where minerals are found and the sources of minerals in food. • Guide the learners to discuss how minerals are used by the body. • Guide the learners, in groups, to discuss the likely impact of an imbalance of minerals in the diet and how this might be avoided. They should ask questions of one another about this. • Guide the learners to discuss the factors that affect the absorption of the different mineral elements. • Learners could design a leaflet for parents or carers which explains the importance of minerals in the diet and foods that are rich in minerals.	• Ask the learners to reflect on the functions of mineral elements in the body and consider how these can be met by nutrition. (conversation). • Observe learners as they ask questions of one another. • Engage learners in discussion about managing the effects of mineral deficiency in the body. (conversation) • Talk with learners about the factors that affect mineral absorption. (conversation) • Look at the leaflet for parents and carers. (product)

SENIOR 1: TERM 3

TOPIC 6: PROCESSING AND PRESERVATION OF VEGETABLES — 14 PERIODS

Competency: The learner is able to process and preserve vegetables using a variety of methods.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) know the reasons for preserving vegetables and the various ways in which they can be preserved (k) b) understand how vegetables are affected by processing (u) c) sort and blanch vegetables, herbs and spices (as applicable) in preparation for drying (u, s) d) use a solar drier or a low temperature oven to preserve vegetables/herbs/spices (u, s,) e) use different methods for reducing vegetables, herbs and spices to powder (u,s) f) package, label and sell processed vegetables (k, u, s)	• Guide the learners to discuss the impact of processing on vegetables and why foods should be preserved. • Guide the learners in a brainstorming activity to suggest ways in which vegetables can be processed and the different ways in which vegetables can be preserved e.g. bottling, canning, drying, freezing. • Demonstrate to learners the correct steps to follow when processing dried vegetables into powder. • Learners should work in small groups to make a poster which describes the steps taken to dry vegetables and to process them into a powder. • Guide the learners to discuss appropriate packing and labelling for preserved vegetables. • Learners should write instructions for preparing and using dried vegetables.	• Discuss with learners why we preserve food. (conversation) • Analyse the poster about drying and processing vegetables. (product) • Talk to learners about the ways in which vegetables, herbs and spices can be reduced to a powder. (conversation) • Analyse instructions for preparing and using dried vegetables. (product)
g) follow recipes to prepare pickles, chutney and sauces (u, s)	• Guide the learners to discuss the difference between a pickle, chutney and sauce. Guide them to discuss why vegetables might be preserved in this way, and the principles of preservation	• Observe learners as they carry out the correct procedures in processing and preservation of vegetables, using chemicals.
h) package, label and sell the processed vegetables (k, u, s) i) develop recipes for processing vegetables (u, s)	• Show learners how to make a simple sauce e.g. a tomato sauce, and then let them make their own. • Learners should make a pickle, chutney or sauce to their own recipe and bottle and label it. ***Project: processing vegetable pickles, chutney and sauces. Learners write a project report***	• Ask learners to present and market the preserved vegetable product. (e.g. pickles, sauces) • Learners write a simple but effective recipe for a pickle, chutney or sauce and present it in its finished form. (product) • Project report. (product)

SENIOR 2: TERM 1

TOPIC 8: LIPIDS — 8 PERIODS

Competency: The learner is able to manage the effects of lipid imbalance in the body using their understanding of lipids as essential to health and therefore a vital constituent of a healthy diet.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the sources and functions of lipids (k, u) b) manage the effects of lipid imbalances in the body (u. s) c) analyse the culinary characteristics of lipids (u, s)	• If possible, the learner should research using the Internet the function of lipids in the body and present their findings to the class. If this is not possible, explain this to the learners and ask them to make a presentation. • Discuss with learners the reasons why lipids are important in the diet and explain the way in which lipids are classified e.g. oils and fats. • Discuss with learners which foods contain lipids, and then guide the learners to discuss the way in which lipids enhance the diet. • Learners should work in groups to devise a simple questionnaire about fats and oils and use this to determine the levels of fat and oil consumption in the local community. • Discuss with learners the current debate about saturated and unsaturated fats and the impact these have on health. • In groups, learners should discuss the other likely effects of an imbalance of lipids in the diet and how this can be managed. • Guide the learners to discuss the impact of melting, smoke point and flash point on lipids. They could make a chart that explains this.	• Analyse the questionnaire. (product) NB It is not the result of the questionnaire that is important. The assessment is of how far the questions show an understanding of the sources and functions of lipids. • Observe learners when they discuss lipid imbalance. • Talk to learners about the role of lipids in the diet (conversation) and analyse the chart. (product)

SENIOR 1: TERM 3

TOPIC 9: VITAMINS — 10 PERIODS

Competency: The learner is able to apply knowledge of vitamins as essential nutrients and use this in meal planning, and in managing the effect of vitamin imbalance in the body.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the sources and functions of vitamins (u) b) manage the effects of vitamin imbalances in the body (k) c) manage the effects of vitamin deficiency in the body (k) d) understand the characteristics of water-soluble and fat-soluble vitamins (u) e) know how to conserve different vitamins during preparation and service (k, s)	• Guide the learners to discuss the constituents of a healthy diet and the role of vitamins in this. Explain that vitamins are classified into two major groups; that is, water-soluble and fat-soluble, and what this means. • Learners could make a table or poster which shows fat-soluble and water-soluble vitamins and their characteristics. • Guide the learners to discuss the role of each of the vitamins in the body. • Guide the learners, working in groups, to discuss the possible impact on the body of an imbalance of each of the vitamins. • Guide the learners in a discussion about which foods contain which vitamins. • Guide the learners using whole class discussion to describe the ways of managing vitamin deficiencies in the body. Learners could ask questions of one another about this. • Explain to learners the impact of processing and storage on vitamins. • Guide the learners, in small groups, to discuss the ways in which vitamins can be preserved during processing and storage. • Learners could make a meal plan and explain which foods contain which vitamins and why they are important as part of a healthy diet.	• Ask the learners to reflect on the functions of the different vitamins in the body. Analyse the meal plan. (conversation, product) • Observe learners asking questions of one another about the effects of vitamin deficiencies in the body and how they can be managed. (observation) • Engage learners in discussion about preserving vitamins during food preparation. (conversation)

SENIOR 1: TERM 3

TOPIC 10: WATER — 6 PERIODS

Competency: The learner is able to apply knowledge and understanding of the way in which water is used by the body to manage dehydration.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the sources and functions of water in the body (k, u) b) understand the effects of water deficiency in the body (u) c) manage the effects of water deficiency in the body (u, s) d) prepare a hot and a cold non-alcoholic drink (u, s)	• Whole class brainstorm about the sources of water (remind learners about work done in S1). • Explain to learners how water is used by the body. • In small groups, learners should discuss how water is lost by the body, the signs of dehydration and how this can be avoided and managed. • Learners should work together in small groups to make a poster designed to encourage people to take sufficient fluids. • Learners should prepare a drink that would be suitable for someone who is dehydrated.	• Engage learners in a conversation on the importance to the body of ensuring sufficient intake of water. • Use product exemplars to allow learners to prepare hot and cold beverages. (observation) • Analyse the posters in terms of the understanding they reflect of the key points. (product)

SENIOR 2: TERM 2

TOPIC 11: PROCESSING FOODS FROM VEGETABLE SEEDS — 14 PERIODS

Competency: The learner is able to process and preserve seeds and use their entrepreneurial skills to sell the products they have made.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) select suitable seeds and the right equipment for processing vegetable seeds (u,s) b) understand the processing procedures applied, and safety measures taken in processing vegetable seeds (u) c) make food products from vegetable seeds (s) d) package, label, market and sell processed vegetable seed products (u,s) e) apply recipes to use the processed products to make dishes (u,s)	• Explain to learners the different types of vegetable seeds and the ways in which vegetable seeds can be processed. • Guide the learners to discuss, the ways in which vegetable seeds can be processed safely. • Demonstrate the way in which one vegetable seed can be processed. • In small groups, learners work together to choose seeds and equipment to produce a product; for example, peanut butter, simsim balls, soya butter, soya sausages, roasted bean and cowpeas powder, instant bean powder, soya beverage. • Learners package and label the product above. ***Project – Learners process, cost and sell products made from vegetable seeds***.	• Observe and talk with learners as they process the seeds. (observation, conversation, product) • Analyse the products for sale. (product)

SENIOR 2: TERM 2

TOPIC 12: PROCESSING AND PRESERVATION OF FRUITS — 10 PERIODS

Competency: The learner is able to process and preserve fruits using understanding of the basic principles of food preservation.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) prevent food spoilage (u,s) b) prevent food poisoning (u,s)	• Guide the learners to discuss the causes of food spoilage and how it can be prevented. • Learners could make a poster to display in a health or community centre about the safe preparation and storage of food. • Guide learners in discussion about the impact of food spoilage, e.g. food poisoning. • Learners could present an article on safe storage of food to prevent spoilage. • In small groups, guide learners in discussion about the causes of food poisoning and ways of preventing it.	• Analyse the poster about the safe preparation and storage of food. (product) • Listen to learners in guided discussion. (observation)
c) understand the principles and methods of food preservation (u)	• Brainstorm with learners why food might be preserved. • Explain to learners the different ways of preserving food. Demonstrate the various methods of processing and preserving fruits. • Learners should choose one method of processing and preserving fruit and write instructions for how this should be done.	• Discuss with learners the principles of food processing and preservation. (conversation) • Analyse the processing and preserving instructions. (product)
d) understand how nutrients are retained during fruit preservation by drying (u) e) preserve fruits by drying (s)	• Guide the learners to discuss the benefits and disadvantages of preserving fruits by drying. • Guide the learners in the importance of preserving vitamins during preservation and how this can be achieved. • Guide the learners to explore the different methods of drying fruit. • Guide the learners in the principals of design, construction, and use of a simple solar dryer. In groups, learners should make their own simple solar dryer, which they could then use to produce their own product. The product should be labelled and package appropriately.	• Observe learners conserving nutrients during processing of fruits, and listen to learners describing the different methods of drying fruits (observation)

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
f) preserve fruit juice and pulp (u, s)	• Guide the learners to identify the benefits and disadvantages of using chemicals to preserve fruit. Guide the learners to discuss good manufacturing practices; that is, for example, using only approved chemical preservatives, not using expired chemicals. • Learners should do one of the following: • design a poster showing recommended chemicals for fruit processing. • create a list of health standards in fruit preservation and develop sensitisation messages. • design advocacy messages on the use of chemicals in fruit processing. • Guide the learners to discuss the potential risk to health from poor practice.	• Observe learners conserving nutrients during processing of fruits, and listen to learners describing the different methods of drying fruits (observation)
g) extract juice and pulp for processing and preservation (k, s)	• Remind learners of the importance of strict hygiene practice during the process of juice or pulp extraction. • Demonstrate to learners the methods for ensuring that equipment used in processing is clean and sterilized. • Explain to learners how juice or pulp can be extracted from fruit. • Guide learners to discuss the ways in which fruit juice and pulp can be preserved. • Learners should apply at least two methods of fruit juice and pulp preservation to produce a product. • Show the learners how to pasteurize, process and preserve the fruit juice and give them opportunities to carry out these processes. • Guide the learners to package, label, advertise and sell the fruit products.	• Observe learners preparing materials for fruit juice and pulp preservation, and appraise the outcome. (product, observation) • Observe learners making, packaging and labeling fruit juice. (observation) • Analyse poster which advertises the fruit products. (product)
h) process and preserve fruit products (u, s)	• Guide the learners to understand that fruit can be preserved in different ways: e.g. jam, jelly, marmalades and pickles. • In groups, learners should discuss what to look for in fruit that would make it suitable for preserving. • Using a range of fruits, demonstrate the ways in which these can be prepared for the above processing methods. Learners should make one or more of the above fruit products themselves.	• Observe learners preparing some of the products and ask them why the methods are effective. (observation, product). • Analyse the flowchart to show how one fruit product is processed. (product)

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
	• Explain to learners how to test when the fruit product is ready and is of the correct consistency. • Learners should draw a flow chart to show the steps for processing one fruit product. • Learners should choose their own packaging, label and price to sell the fruit product. ***Project: fruit processing – products will include: dried fruit, pickles, chutneys, jam, marmalade and squashes (fruit juices and drinks). Write a project report.***	

Essential Items: Kitchen towels, filter/muslin cloth, thermometer, fruits, chemicals preservatives (sodium benzoate, pectin acid, citric acid, potassium sorbate), sugar, salt, yeast, ginger, stirrer, polythene, solar dryer, sugar, fruits jam bottles.

SENIOR 2: TERM 3

TOPIC 13: COMMON FOODS — 8 PERIODS

Competency: The learner is able to use available foods in the community to prepare a range of dishes suitable for a family.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the nutritional value of locally available foods and their uses in cookery (u) b) store foods appropriately (u,s)	• In small groups, learners should write a list of food available in the community and categorise them into their food groups. These may include eggs, milk and milk products, fruits and vegetables, fish, meat, cereals. • Using whole class discussion, guide the learners to examine the nutritive value of the foods and discuss the uses of the community foods in cookery. • Learners could make posters or tables showing different categories of foods and their uses, with photographs, if possible. • Guide the learners to research and make a report on the factors to consider when using the each of the foods above (this should include storage considerations).	• Observe learners as they categorise and examine the foods and ask for their reasons (observation, conversation) • Analyse the chart illustrating nutritional value. (product) • Analyse the learners' reports. (product) • Discuss the points to consider in the selection/buying of food item from the market. (conversation)

SENIOR 2: TERM 3

TOPIC 14: MEAL PLANNING — 16 PERIODS

Competency: The learner is able to understand how to shop wisely and plan meals suitable for a family, and for individuals with specific dietary requirements.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) make wise choices when shopping for food (u, s) b) make a budget when planning for a meal (u, s) c) develop menus of nutritious and attractive meals for different groups (u, s) d) plan breakfast and lunch for a family (u, s)	• Learners work in small groups to research and plan meals for a family, taking account of differing needs, and to make simple budgets. • Guide the learners to understand how they can ensure wise food selection by making shopping lists from their menus and considering factors such as fresh and packaged foods and the importance of consumer information, e.g. unit pricing, labelling, nutritional information, quality indicators. • Learners should present designed charts and posters showing the different meal plans for the various individuals; sample menu cards; sample budgets for family meals. • Learners should choose one of the above categories and plan and cook a meal.	• Converse with learners to discuss why foods are grouped together to make the specific types of meals. (conversation) • Analyse the charts and posters showing different meal plans to check understanding. (product)

SENIOR 3: TERM 1

TOPIC 15: STOCKS, SOUPS, SAUCES AND GRAVY — 14 PERIODS

Competency: The learner is able to prepare and serve soups, sauces and gravy.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the importance of soups, sauces and gravies in the diet (k, u) b) understand the rules and procedure to be followed when making soups, sauces and gravies (k, u) c) prepare soups, sauces and gravies (u, s, gs)	• Guide the learners to discuss the importance of soups, sauces and gravies in the diet, and help them identify the different types of soups, sauces and gravies. • Guide the learners to discuss what needs to be taken into account when making soups, sauces and gravies, and use illustrations to describe the different procedures to be followed when preparing soups, sauces and gravies. • Use demonstration to guide the learners to follow the right steps in preparing soups, sauces and gravies. • Learners should choose a soup, sauce or gravy to make themselves and explain their choice. • Learners should create their own recipe for a soup or sauce.	• Talk to learners about the factors to take into account when making sauces and soups. (conversation) • Observe learners as they make a sauce etc to ensure they understand the process. (observation) • Analyse learners' own recipes to ensure they understand the key factors in the process. (product)

SENIOR 3: TERM 1

TOPIC 16: SWEETS AND PUDDINGS — 14 PERIODS

Competency: The learner is able to prepare and use sweet dishes and puddings (desserts) as part of a meal.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the types and uses of sweet dishes and puddings in the diet (u) b) prepare sweet dishes and puddings (u, s) c) present sweet dishes and puddings (u, s)	• In small groups, learners should discuss the different sweet dishes and puddings used in the diet. • Guide the learners to discuss the role of sweet dishes in the diet and their advantages and disadvantages. • Through demonstration, guide the learners to follow the recommended procedure for making sweet dishes and puddings and how to present them. • Learners should make a sweet dish or pudding and explain their choice.	• Observe learners as they carry out measurements and use ingredients; observe them mixing the ingredients to make the sweets and puddings; observe the cooking and presentation of the dishes. (observation) • Talk with learners on the choice of ingredients; importance of sweets and puddings in a meal; how to present attractively. (conversation) • Appraise the sample sweets and puddings. (product)

SENIOR 3: TERM 1

TOPIC 17: FOOD PREPARATION: A BASIC MEALS — 20 PERIODS

Competency: The learner is able to use different methods of cooking to prepare a suitable nourishing meal for different people and occasions.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) follow the principles involved in the application of the different methods of cooking (u, s) b) select suitable dishes cooked using each method of cooking (u, s) c) understand the uses of cereal based dishes in the diet (u) d) use available cereals to prepare breakfast dishes (u, s) e) prepare nutritious meals for different categories of people (u, s) f) prepare various traditional dishes of drinks, vegetables, proteins and carbohydrates (u, s) g) present meals attractively (u, s	• Guide the learners to discuss how to present a meal and to set a table. • Demonstrate to learners, and then let them follow the steps for preparing foods such as: appetizers, protein, carbohydrate and vegetable dishes, puddings and desserts. • Guide the learners in whole class discussion on the key points to remember when using different methods of cooking. • In small groups, learners identify different dishes cooked with each method of cooking. • In groups, learners in choose, prepare and make a basic meal for a family and a dish suitable for young children. Learners present their meal and set a table. They explain their choices. • Guide the learners to discuss traditional meals, and to modify a recipe to make a traditional dish of their choice. • Learners should carry out research and report on the importance of cereal-based dishes in the diet. • Through demonstration, guide the learners to prepare breakfast cereals (millet, maize, wheat, oats and rice). • Learners should choose a dish to prepare and present it to the class. They should explain their choice of dish and presentation.	• Observe learners when they are cooking meals. Do they understand the different cooking methods? (observation) • Talk to learners about their presentation. What did they consider when deciding what to cook? Did their use of various cooking methods demonstrate understanding? Did they present the food attractively and set the table appropriately? (conversation, product)

SENIOR 3: TERM 2

TOPIC 18: MEALS FOR SPECIAL OCCASIONS — 24 PERIODS

Competency: The learner is able to plan and prepare meals for a special occasions.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY

a) plan meals for special occasions (u,s)
b) prepare special meals (u, s)
c) serve the prepared meals for special occasions (u, s)
d) pack meals to be eaten away from home (u, s)
	• Guide the learners to discuss the points to consider when planning meals for special occasions.
	• Use demonstration to guide the learners to plan, prepare and serve meals for special occasions.
	• These will include: buffets, cocktails, barbecues, high tea, packed meals and luncheon.
	• Learners could choose a special occasion and cook a dish.
	• Guide the learners to discuss what needs to be taken into account when deciding on packing and presentation for food that is to be eaten outside the home.
		• Talk to learners about what needs to be taken into account when planning for a special occasion. (conversation)
		• Observe learners as they carry out the correct application of the recipes: right measurement of ingredients, correct procedure, time and temperature control and presentation. (Observation)
		• Talk to learners about:
		  • the use of the different ingredients
		  • methods of preparation used
		  • duration of cooking
		  • proper presentation
		  • quality control (conversation)
		• Appraise the special dishes prepared by learners. (product)

SENIOR 3: TERM 2

TOPIC 19: MILK AND MILK PRODUCTS — 24 PERIODS

Competency: The learner is able to process milk and milk-based products using the key principles and practices of milk processing.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) understand the importance of safe production and processing of milk (u) b) select the right equipment for processing milk (k,s) c) follow the procedure when pasteurizing milk, making ice cream, making yoghurt and making ghee (u,s) d) process milk and milk products (u, s) e) package, market and sell the milk products (u, s)	• Guide the learners to discuss how milk can be prepared safely in the home and during production, and to choose the appropriate equipment for processing milk; this may include a double pan, thermometer, spatula/spoon. • Learners should research and report on pasteurising milk and making ice cream, yoghurt and cheese. • Guide the learners to process milk products for themselves; this should include ice cream, yoghurt, cheese and ghee. • Learners should package, label, market and sell the processed milk products. ***Project: Process, cost and sell milk products and write a report***	• Talk to learners about the conditions necessary for ensuring safety of milk in a home. (conversation) • Observe learners and converse with learners as they make milk products. Do they understand the correct procedures? (observation, conversation, product) • Appraise the packaged and labelled products.

SENIOR 3: TERM 3

TOPIC 20: YEAST COOKERY — 18 PERIODS

Competency: The learner is able to understand the principles of yeast cookery and apply this to make bread, buns, doughnuts, and a cereal based fermented drink.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) ensure suitable conditions during the preparation of yeast mixtures (u,s) b) understand the procedure followed and the difficulties associated with yeast cookery (u) c) make different products using the bread dough (s) d) make a non-alcoholic fermented drink from cereals (s)	• Explain to learners the ingredients used in yeast cookery and the conditions required for yeast growth. • Guide the learners to carry out research and report on the procedure for making each of the following yeast mixtures: bread, fancy rolls and doughnuts. • Use demonstration to show learners the correct procedure for making bread loaves, buns, rolls and doughnuts. • Learners should make and package some of these for themselves. • Guide learners to make a fermented cereal drink. ***Project: Making bread products and bushera. Cost and sell the products and write a project report***	• Observe the learners in the selection, mixing and modification of ingredients used in making bread dough. (observation) • Converse with learners on the uses of the different ingredients in bread making and the process of bread making. (conversation) • Observe learners making bread products. Do they understand the principles of yeast cookery? (observation) • Appraise the non-alcoholic fermented drink. (product)

SENIOR 3: TERM 3

TOPIC 21: CONFECTIONERIES AND PASTRIES — 30 PERIODS

Competency: The learner is able to prepare a variety of confectionery and pastry dishes, and decorate cakes using appropriate type of icing.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) use several recipes to demonstrate skills in making different confectioneries (u, s) b) understand the procedure followed and faults likely to occur during cake making (u) c) decorate cakes for various occasions using butter icing and royal icing (u, s) d) package, market and sell the confectioneries produced (u, s)	• Explain to learners the ingredients used in making confectioneries such as cakes, biscuits and cookies and scones. • Demonstrate the different procedures used in confectionery making. To include butter and royal icing. • Learners should make and present some of these confectioneries for themselves, and decorate cakes using butter icing and royal icing. • In small groups, learners should discuss the common problems associated with cake making and decorating. • Use guided discovery to enable learners to package, market and sell confectioneries.	• Observe learners in making and presenting their confectioneries. Do they demonstrate necessary skills and an understanding of the basic processes? (observation) • Converse with learners about how to use the products made; arrive at a quality product; importance of time and temperature control. (conversation) • Appraise the finished articles. (product)
e) understand the importance of the basic ingredients used in making pastries (k, u) f) follow the right procedure to make chapattis and samosas (u,s) g) prepare short crust and rough puff pastries (u, s, gs) h) demonstrate skills in preparing items using short crust and rough puff pastries (u, s, gs) i) package, market and sell the pastry products (u, s, gs)	• Explain to learners the ingredients used in pastry making and demonstrate how to make basic pastries such as chapatti, samosas and short crust and puff pastry. • Guide the learners to prepare some of these dishes by themselves. • Learners package, label and market their pastry products. ***Project – making and selling confectioneries and pastry products. Write a project report***	• Observe learners making their pastries and appraise the finished product. • Analyse the project report. (product)

SENIOR 4: TERM 1

TOPIC 22: NUTRITION AND MEAL PLANNING — 20 PERIODS

Competency: The learner is able to apply their understanding of nutrition to plan meals for individuals with different needs.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) plan and prepare meals for people in the different phases of the life cycle (u, s) b) apply their knowledge of optimum nutrition to support a productive life (u, s) c) understand the importance of a healthy lifestyle to the community (u, s)	• Guide the learners to plan and prepare sample meals for people in the different phases of their life. • Guide the learners to discuss how they can use their knowledge of optimum nutrition to achieve a productive life. • In groups, learners should work together to raise community awareness of how to lead a healthy lifestyle. They might make charts, compose poems, songs, rhymes etc. • Learners should take these healthy lifestyle messages to a community and write a report of the visit, saying what worked well and what worked less well.	• Observe learners planning and preparing their meals. (observation) • Analyse charts showing different ways of influencing the community to live healthy lifestyles. This should include, having a healthy diet, taking regular physical exercise, having regular medical check-ups. (product) • Analyse the report of the community visit. (product)

SENIOR 4: TERM 1

TOPIC 23: MANAGEMENT OF NUTRITIONAL RELATED DISEASES & DISORDERS

28 PERIODS

Competency: The learner is able to follow the guidelines for the management of some nutritionally related conditions, and prepare a suitable meal for the management of a given nutritionally related condition.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) illustrate different nutritionally related conditions (u, s) b) understand the measures taken in the nutritional management of the above conditions (u) c) manage the nutritionally related conditions (u, s, v, a) d) design and prepare meals for persons with a nutritionally related disease (u, s, v, a, gs)	• Use whole class discussion and illustrations to guide learners to describe the signs and symptoms of nutritionally related conditions such as Protein-Energy malnutrition (PEM), obesity, anaemia, HIV/AIDS, and anorexia. • Learners could make a chart showing the signs and symptoms of the different forms of PEM. • In small groups, learners suggest the guidelines and procedure taken in the management of each of the above nutritionally related diseases. • Use demonstration to show learners how to prepare meals for the management of each of the nutritionally related conditions mentioned above. • Guide learners to plan and prepare sample meals for some of the above nutritionally related conditions. • Learners should listen to a health professional talk about the different nutritionally related conditions and write a report.	• Talk to learners about the critical nutritional needs for each condition and the correct procedures to follow in preparation of dishes. (conversation) • Analyse the charts showing comparison of the signs and symptoms of the different forms of PEM. (product) • Analyse sample dishes. (product)

SENIOR 4: TERM 2

TOPIC 24: PROCESSING MEAT, FISH AND POULTRY PRODUCTS — 30 PERIODS

Competency: The learner is able to process and preserve meat, fish and poultry products, prepare dishes using the processed foods, and package and market processed products.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) process meat by mincing, smoking, curing and grinding (u, s) b) process poultry products by filleting, mincing and curing (u, s) c) process fish by smoking, salting and filleting (u, s) d) package, market and sell meat, poultry and fish products (u, s) e) apply recipes to make different food items (s) f) package, market and sell a variety of sausages, fish powder and meat powder (u, s)	• Demonstrate the methods of processing and preserving, meats, fish and poultry. • Guide the learners to process and preserve a variety of meats, fish and poultry, using these methods. • Learners package, market and sell the meat and fish products. • Demonstrate to the learners the steps involved in processing sausages, mukene snacks and enriched food items using meat, chicken and rabbit. • Guide the learners to package, market and sell the processed food items. ***Project – processing, costing and selling meat, poultry and fish products and sausages.***	• Observe the learners processing and preserving foods (observation). Ask why they are using particular methods to check their understanding. (conversation) • Talk to learners about the choice of ingredients, preservatives and casing material for sausages. (conversation) • Analyse the market-ready foodstuffs to check understanding and skills. (product)

SENIOR 4: TERM 2

TOPIC 25: IMPORTANCE OF RECHAUFFE AND CONVENIENCE FOODS IN THE DIET

18 PERIODS

Competency: The learner is able to make attractive dishes from left-over foods to avoid wastage; use convenience foods in the preparation of meals.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) make rechauffé dishes from a variety of ingredients (u, s)	• Demonstrate to learners how to make rechauffé dishes. These could be from: left-over beans, peas, potatoes, meat, rice, fish. • Guide learners to make their own rechauffé dishes, using some of the above ingredients.	• Talk to learners about the ways in which food can be reheated. (conversation) • Observe learners as they make reheated dishes. (observation) • Appraise the finished dishes. (product)
b) understand the advantages and disadvantages of different sorts of convenience foods (u) c) use convenience foods to prepare different healthy meals (s)	• Guide learners to understand the advantages and disadvantages of different types of convenience foods. • Demonstrate the ways in which convenience foods can be used to produce healthy meals. • Guide learners to plan and produce their own healthy meals from a range of convenience foods.	• Talk to learners about the ways in which convenience foods can be used. (conversation) • Observe learners as they make meals form convenience foods. (observation) • Appraise the finished dishes. (product)

SENIOR 4: TERM 3

TOPIC 26: TABLE SETTING AND FOOD SERVICE — 12 PERIODS

Competency: The learner is able to choose appropriate food covers for different occasions, set a table ready for use for different occasions and know how to serve diners.

LEARNING OUTCOMES The learner should be able to:	SUGGESTED LEARNING ACTIVITIES	SAMPLE ASSESSMENT STRATEGY
a) know how to set tables for different food covers (k) a) creatively make a centrepiece and food tags (s)	• Show learners different table settings to enable them to adapt settings to different courses and meal types. • Visit the websites of different restaurants to look at the different sorts of table settings used. • Demonstrate the sort of cutlery and table settings used for different occasions, courses and foods. • Show learners different sorts of table centrepieces and decorations. Guide learners to make their own table centrepieces for different occasions. • Watch a video of waiters serving diners at a table. • Guide learners to plan and prepare a whole meal, lay the tables and wait on diners.	• Talk to learners about how tables should be set for different courses and meals. (conversation) • Observe learners as they plan and prepare a meal and set the table. (observation) • Appraise the finished meal. (product)

ASSESSING NUTRITION AND FOOD TECHNOLOGY

This section should be considered alongside the Assessment Guidelines.

Assessing the new expectations for learning

The new curriculum sets new expectations for learning, with a shift from Learning Outcomes that focus mainly on knowledge to those that focus on skills and deeper understanding. These new Learning Outcomes require a different approach to assessment.

The "Learning Outcomes" in the syllabuses are set out in terms of Knowledge, Understanding, Skills, and Attitudes. This is what is referred to by the letters k,u,s & a.

It is not possible to assess attitudes in the same way as knowledge, understanding and skills because they are more personal and variable and are long-term aspirations. This does not mean that attitudes are not important. It means that we must value things that we cannot easily assess.

So this guidance booklet focuses on knowledge, skills and understanding. Each has its own implications for learning and assessment.

Knowledge	The retention of information
Understanding	Putting knowledge into a framework of meaning – the development of a 'concept'.
Skill	The ability to perform a physical or mental act or operation

To assess knowledge, skills and understanding we need to look for different things. Knowledge can be assessed to some extent through written tests, but the assessment of skills and deeper understanding requires different approaches. Because of this, the role of the teacher in assessment becomes much more important.

Knowledge

Knowledge is the easiest to assess because it is fairly straightforward to find out whether or not a learner has retained some information: a simple question can usually find this out. We ask them to name something, or state something, or label a diagram.

Understanding

Assessing deeper understanding is much more difficult, so we usually ask learners to explain, compare or outline a process. This can be done orally (in conversation) or in writing, and will give us some idea of the extent of their understanding.

Skills

Skills are the ability to perform a mental or physical operation, so we have to observe the skill being performed or look at the product, or outcome, of the skill; for example a piece of writing, a picture or diagram. Some skills, such as speaking or a physical education skill do not have a product so need to be observed.

Examinations

There will no longer be examinations or tests set at the end of every year. Instead, there will be a summing up of on-going teacher assessments made in the context of learning.

The final examination at the end of Senior 4 will be very different in nature, and will focus on the learners' ability to apply their learning in new situations, rather than on the ability to recall information.

Formative Assessment

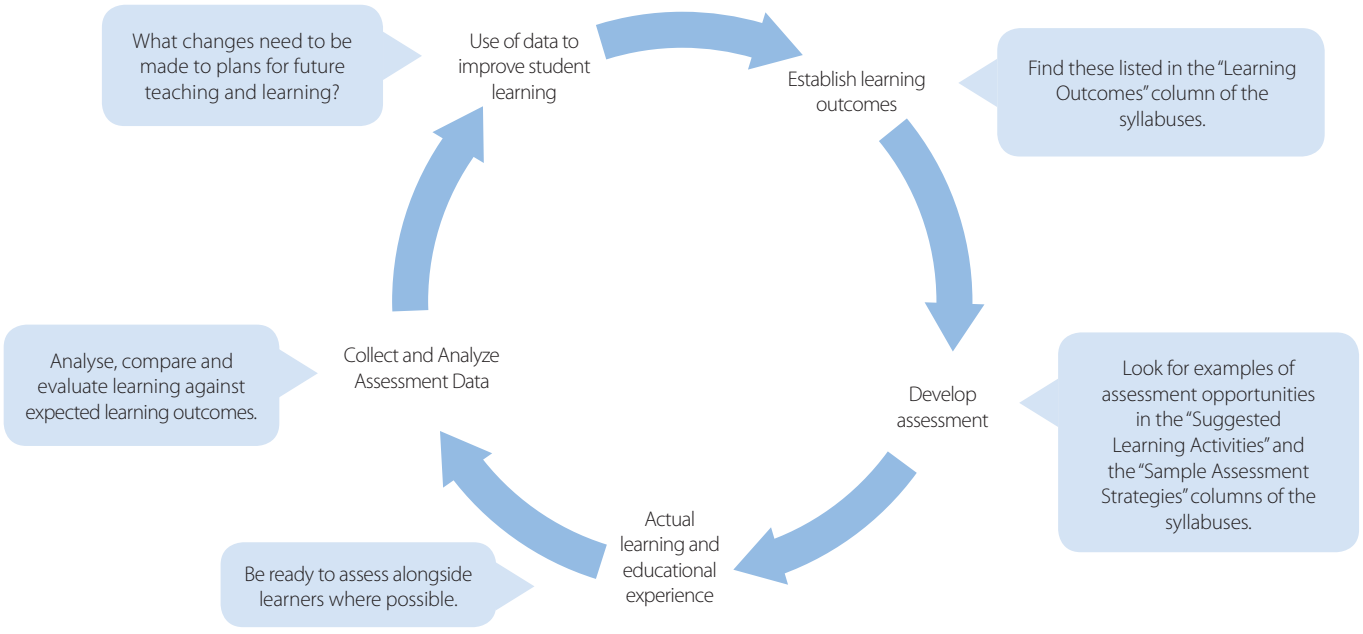
If assessment is to make a difference to teaching and learning, then teachers must use the information they gain from assessment to make some change to the teaching and learning process. This is formative assessment. If teaching and learning stay the same, there would have been no point in carrying out the assessment. The changes that can be made include decisions about:

- What needs to be learned next
- Whether an element of the syllabus needs to be taught again in a different way
- Changing teaching approaches if necessary
- Identifying learners who need more support, or who are making exceptional progress
- Enabling learners to understand what they have to do to improve

It is the use of the assessment data within this cycle to improve learning that is key to the success and impact of formative assessment.
It is this cycle that enables formative assessment to impact on learning:

- The syllabuses set out the learning outcomes
- The lessons seek to achieve these outcomes
- Assessment finds out whether or not the outcomes has been achieved
- This information guides the next steps in learning and so sets new learning outcomes

The process of teaching, making formative assessments and then changing the teaching and learning in some way can be seen as a cycle:



FORMATIVE ASSESSMENT INVOLVES USING ALL PARTS OF THE CYCLE.

ASSESSING NUTRITION AND FOOD TECHNOLOGY

How do we find the opportunity to make formative assessments?

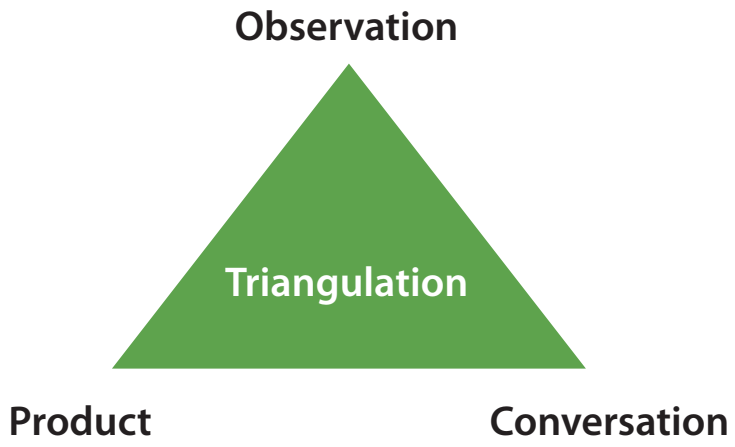
In the new curriculum, the teacher's assessment role is not to write tests for learners, but to make professional judgements about learners' learning in the course of the normal teaching and learning process. The professional judgement is about how far the learner meets the Learning Outcomes that are set out in this syllabus. To make these judgements the teacher needs to look at how well the learners are performing in terms of each Learning Outcome.

School-based formative assessment is a part of the normal teaching and learning process, and so the assessment opportunities will also occur during this normal process. It is not something that needs to be added on after learning; it is an integral part of it.

These opportunities occur in three forms and are often called:

- Observation – watching learners working (good for assessing skills)
- Conversation – asking questions and talking to learners (good for assessing knowledge and understanding)
- Product – appraising the learner's work (writing, report, translation, calculation, presentation, map, diagram, model, drawing, painting etc). In this context, a "product" is seen as something physical and permanent that the teacher can keep and look at, not something that the learner says.

When all three are used, the information from any one can be checked against the other two forms of assessment opportunity (eg evidence from "observation" can be checked against evidence from "conversation" and "product"). This is often referred to as "triangulation".



Triangulation of assessment opportunities

To find these opportunities, look at the syllabus units. These set out the learning that is expected and give 'Sample Assessment Activities", and in doing so they contain a range of opportunities for the three forms of assessment.

Generic Skills

The Generic Skills have been built into the syllabuses and are part of the Learning Outcomes. It is therefore not necessary to assess them separately. It is the increasingly complex context of the subject content that provides progression in the Generic Skills, and so they are assessed as part of the subject Learning Outcomes.

Attitudes

It is not possible to assess attitudes in the same way as knowledge, understanding and skills because they are more personal and variable and are long-term aspirations. This does not mean that attitudes are not important. It means that we must value things that we cannot easily assess.

Record keeping

Keeping detailed records of learners' individual progress is always difficult with very large numbers of pupils. For the purposes of school-based formative assessment, it is not even always necessary to keep such detailed records anyway. If feedback is give immediately and action is taken, then learning is changed and the record would soon become out of date and redundant.

Most formative class-based assessments are dynamic in that they feed straight back into the teaching and learning process. Therefore detailed records of these are not appropriate.

What is needed is record of assessments of learners' learning made in terms of each Topic or unit. This means recording the on-going summative assessments of each unit. There is no need to make separate records of each of the Learning Outcomes because this would be very time-consuming and also unnecessary. It is much more useful to make an overall assessment about whether or not each learner met the Learning Outcomes for each Topic as a whole.

Each Sub-Strand is made up of a number of Learning Outcomes. Therefore teachers need to consider all the Learning Outcomes when making an overall judgement about the Sub-Strand as a whole. It is not always necessary for every individual Learning Outcome to be achieved for the Sib-Strand as a whole to be achieved. This will vary with the Learning Area and Topic.

By looking at the Learning Outcomes within each Topic, it is possible to identify four broad groups of learners in terms of their achievements:

Descriptor
No Learning Outcome (LO) achieved
Some LOs achieved, but not sufficient for overall achievement
Most LOs achieved, enough for overall achievement
All LOs achieved – achievement with ease

ASSESSING NUTRITION AND FOOD TECHNOLOGY

There is no need to set a test to find this out.

These overall assessments should be made on the basis of the many formative assessments that the teacher has made during the course of teaching the unit. If teachers have been working with the learners over the course of the unit, they will be able to make a broad judgment about which learners have achieved or have failed to achieve the unit's overall Learning Expectation. These "Authentic Assessments" will be more valid and valuable than a test set by the school.

Recording these overall assessments will be simple, manageable and yet valuable, and can be recorded on a sheet such as the one below in which the categories are indicated with a number.

Although a very simple process, these four categories will give rich data when a comparison is made between the learners in each category for different subjects and units. They will also identify easily those learners who need extra support or who may not be ready to move on to the next grade at the end of a year.

If records are kept of the learning outcomes of each syllabus unit through the year, then there will be no need for an end of year test. Teachers will already have a record of those learners who have met the learning outcomes, and those who have not done so. Therefore teachers will know if there were any learners not ready to progress to the next grade.

An overall record should be made of the individual unit assessments by subject in terms of the 4 descriptors. If numbers (0-3) are used as identifiers, then it will be possible to arrive at an overall number for a year by aggregating the identifiers for each unit.

Descriptor	Identifier
No Learning outcome achieved	0
Some LOs achieved, but not sufficient for overall achievement	1
Most LOs achieved, enough for overall achievement	2
All LOs achieved – achievement with ease	3

In the example below, the table shows the end-of-unit assessment for six learners.

Nutrition and Food Technology										
	T1	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**	**T9**	**T10**
Learner A	3	3	2	3	3	3	3	2	3	3
Learner B	2	2	3	2	3	2	2	2	3	2
Learner C	1	1	2	1	1	2	2	3	2	3
Learner D	1	1	2	1	1	2	1	1	2	1
Learner E	0	1	2	1	0	1	0	1	1	1
Learner F	0	0	1	0	0	1	0	0	1	0

This method will give much more information than using a tick. For example, at a glance it can be seen that learners A & B are achieving much higher than learners E & F. It can be seen that Learner C has improved during the year. We can even see that more learners achieved success in Topic 9 than Topic 7.

All of this is very valuable assessment information and can be used to improve learning.

This summative teacher assessment will contribute to the final grade of the School Leaving Certificate.

The assessment of the practical or pre-vocational subjects at Lower Secondary level will take three forms:

i) Classroom based assessment which will be moderated and contribute 20% of the final mark

ii) Final examinations which will contribute 80%

iii) Assessment for the world of work or occupation which will lead to the award of a work pass at Level 1 in the Uganda Vocational Qualification Framework (UVQF. These assessments will occur at the end of Senior 3 and be carried out according to the specification of the Directorate of Industrial Training (DIT).

Glossary of Key Terms

TERM	DEFINITION
Competency Curriculum	One in which learners develop the ability to apply their learning with confidence in a range of situations.
Differentiation	The design or adaptation of learning experiences to suit an individual learner's needs, strengths, preferences, and abilities.
Formative Assessment	The process of judging a learner's performance, by interpreting the responses to tasks, in order to gauge progress and inform subsequent learning steps.
Generic skill	Skills which are deployed in all subjects, and which enhance the learning of those subjects. These skills also equip young people for work and for life.
Inclusion	An approach to planning learning experiences which allows each student to feel confident, respected and safe and equipped to learn at his or her full potential.
Learning Outcome	A statement which specifies what the learner should know, under-stand, or be able to do within a particular aspect of a subject.
Process Skill	A capability acquired by following the programme of study in a particular Learning Area; enables a learner to apply the knowledge and understanding of the Learning Area.
Sample Assessment Activity	An activity which gives a learner the opportunity to show the ex-tent to which s/he has achieved the Learning Outcomes. This is usually pat of the normal teaching and learning process, and not something extra at the end of a topic.
Suggested Learning Activity	An aspect of the normal teaching and learning process that will enable a formative assessment to be made.

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NATIONAL CURRICULUM
DEVELOPMENT CENTRE

National Curriculum Development Centre
Ministry of Education, Science, Technology and Sports,
P.O. Box 7002, Kampala, Uganda

Website: www.ncdc.go.ug