
FOOD AND NUTRITION

COMPREHENSIVE TEACHING NOTES

Competence-Based Curriculum (CBC)

Level	Ordinary Level Secondary Education
Forms	Form 1
Curriculum	Zambia Ministry of Education CBC 2023
Subject Code	Food and Nutrition
Document Type	Teacher Reference – Teaching Notes

Topics Covered in These Notes

1.1 Kitchen and Food Laboratory	1.2 Nutrition
1.3 Digestion and Absorption of Nutrients	1.4 Cooking Food

Prepared in accordance with the Zambia MoE Competence-Based Curriculum Framework

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INTRODUCTION TO THESE TEACHING NOTES

These comprehensive teaching notes are designed to support teachers of Food and Nutrition at Ordinary Level Secondary Education (Forms 1–4) in Zambia. They are fully aligned to the 2023 Competence-Based Curriculum (CBC) as prescribed by the Ministry of Education.

The notes follow the CBC principle that learners must be active participants in their own education. Rather than simply transmitting facts, these notes are structured to help teachers facilitate competence development — ensuring learners can apply knowledge to real situations, analyse problems, and create solutions.

How to Use These Notes

Each sub-topic is structured as follows:

- Specific Competence — the skill or understanding being developed
- Learning Outcomes — what learners will know, do, and value
- Teacher Background Notes — content knowledge to support delivery
- Starter Activity — to activate prior knowledge (5–10 minutes)
- Main Learning Activities — learner-centred tasks with facilitation prompts
- Worked Examples — where applicable, to model processes or calculations
- Real-Life Context — connecting content to Zambian daily life
- Cross-Cutting Issues — highlighting life skills, gender, health, or environment
- Formative Assessment — quick checks to gauge understanding
- Extension & Differentiation — support and stretch tasks

Key Competences in Food and Nutrition CBC

COMPETENCE	FOCUS IN FOOD AND NUTRITION
Analytical Thinking	Analysing nutrients, evaluating recipes, assessing kitchen safety
Collaboration	Group food preparation tasks, team investigations
Communication	Using correct cookery/nutrition terms, presenting findings
Creativity & Innovation	Designing menus, improving recipes, improvising equipment
Critical Thinking	Solving kitchen problems, evaluating food choices, safety decisions
Environmental Sustainability	Waste disposal, sustainable cooking fuel, food storage
Financial Literacy	Food budgeting, cost comparison, value for money
Problem Solving	First aid responses, food preservation, nutritional deficiencies

TOPIC 1.1: KITCHEN AND FOOD LABORATORY

The Kitchen and Food Laboratory topic introduces learners to the spaces in which food is prepared and experiments are conducted. Learners examine different types of kitchens, the equipment and utensils used, safety measures, and first aid procedures. This topic lays the practical foundation for all other Food and Nutrition topics.

Sub-Topic 1.1.1: Types of Kitchens

Specific Competence 1.1.1.1 — Design different types of kitchens

Item	Detail
Learning Outcomes	Learners will be able to compare types of kitchens, identify their features, and design a basic kitchen layout
Key Vocabulary	Home kitchen, industrial kitchen, mobile kitchen, L-shaped, U-shaped, work triangle, meal preparation area, storage area, cleaning area
Resources	Textbook diagrams, printed kitchen layout images, rulers, graph paper, pens
Cross-Cutting Issue	Environmental Sustainability (energy-efficient kitchen design); Financial Literacy (cost of fitting a kitchen)

Teacher Background Notes

A kitchen is a room or area equipped for preparing and cooking food. Kitchens are classified by their purpose and setting:

- **Home Kitchen:** Found in private residences. Designed for the needs of a family. May be traditional (cooking over an open fire) or modern (gas/electric cooker).
- **Industrial Kitchen:** Found in restaurants, schools, hospitals, and hotels. Designed to prepare large quantities of food for many people. Must meet strict health and hygiene standards.
- **Mobile Kitchen:** A portable food preparation unit (e.g., market stalls, food trucks, outdoor catering). Designed for flexibility.

Kitchen layouts — the physical arrangement of work areas — affect efficiency and safety. Common layouts include:

- **L-Shaped Kitchen:** Two adjacent walls are used. Allows an open floor plan. Common in Zambian homes.
- **U-Shaped Kitchen:** Three walls used. Maximises workspace and storage. Common in larger homes.
- **Galley (Corridor) Kitchen:** Two parallel walls. Very space-efficient; common in small homes.
- **Island Kitchen:** Has a central free-standing work surface. Found in larger, modern homes.

The Kitchen Work Triangle: The three key work zones in any kitchen are the preparation/cooking area, the cleaning/washing area, and the storage area (refrigerator/pantry). The 'work triangle' connects these three zones — the shorter and more efficient the triangle, the easier and safer it is to work in the kitchen.

Starter Activity (10 minutes)**THINK-PAIR-SHARE**

Ask learners: 'Think of the kitchen in your home. What does it look like? What areas do you use most often?' Learners discuss in pairs, then share with the class. Teacher lists responses on the board and introduces the vocabulary: preparation area, storage area, cleaning area.

Main Learning Activities**Activity 1: Comparing Kitchen Types**

Learners examine images of a home kitchen, an industrial kitchen (e.g., a school kitchen), and a market food stall. They complete a comparison table:

Feature	Home Kitchen Industrial Kitchen Mobile Kitchen
Purpose	Family meals Large-scale catering Portable food service
Size	Small Large Compact/portable
Equipment used	Basic cooker, pots Commercial ovens, industrial mixers Portable gas, basic utensils
Number of workers	1–3 Many 1–3
Examples in Zambia	Domestic kitchen School canteen, hotel Roadside food stall

Activity 2: Kitchen Layout Design Task

Learners are given a blank grid (graph paper) representing a 4m x 4m room. Their task is to design a simple home kitchen layout showing:

- A cooking/preparation area (stove and worktop)
- A cleaning/washing area (sink)
- A storage area (cupboards or refrigerator)
- Windows and a door
- The work triangle drawn in

Learners label their design, choose a layout type (L-shaped, U-shaped, etc.), and justify their choice in two sentences.

WORKED EXAMPLE: Designing a Kitchen Layout

1. Start by identifying the three zones: preparation/cooking, cleaning, and storage.
2. Place the sink near a window (for ventilation and natural light).
3. Place the stove adjacent to the preparation worktop (for easy transfer of food).
4. Place the refrigerator/storage near the entrance (to offload groceries easily).
5. Draw lines between the three zones to form the work triangle.
6. Check that the triangle sides are each less than 3 metres for efficiency.
7. Label all areas clearly and write the layout type (e.g., 'L-Shaped Kitchen').

Real-Life Context

In Zambia, many home kitchens are separated from the main house (detached kitchens), especially in rural and peri-urban areas, to reduce fire risk and smoke in the living space. This is a traditional and practical feature of Zambian domestic design. Learners should be encouraged to design layouts appropriate to local conditions.

ASSESSMENT / REVIEW QUESTIONS

8. What are the three main areas found in any kitchen? Briefly describe the purpose of each.
9. Draw a simple L-shaped kitchen layout and label the work triangle.
10. Compare a home kitchen and an industrial kitchen. Give TWO differences.
11. Why is the arrangement of the kitchen important for safety and efficiency?
12. A family in a small home in Lusaka wants to fit a kitchen into a narrow room (2m x 5m). Which layout would you recommend and why?

Sub-Topic 1.1.2: Kitchen Utensils and Equipment

Specific Competence 1.1.2.1 — Use utensils and equipment in the kitchen

Item	Detail
Learning Outcomes	Learners will classify kitchen utensils, demonstrate correct use, and explain care and maintenance
Key Vocabulary	Cutting utensils, serving utensils, baking equipment, cooker, refrigerator, blender, modern utensils, traditional utensils
Resources	Actual kitchen utensils (if available), photos/diagrams, classification chart
Cross-Cutting Issue	Safety (correct handling prevents injury); Financial Literacy (choosing value-for-money equipment)

Teacher Background Notes

Kitchen utensils and equipment are the tools used to prepare, cook, serve, and store food. They are classified by function:

- Cutting Utensils: Knives (cook's knife, bread knife, paring knife), scissors, peeler, grater, chopping board
- Preparation Utensils: Mixing bowls, measuring cups, measuring spoons, sieve, colander, rolling pin, mortar and pestle
- Cooking Utensils: Pots, saucepans, frying pans, woks, baking trays, casserole dishes
- Serving Utensils: Spoons, ladles, tongs, serving bowls, plates
- Storage Equipment: Containers with lids, refrigerators, freezers, food storage bags, cling film
- Large Equipment (Appliances): Cooker/stove, oven, refrigerator, blender, food processor, microwave

Traditional vs Modern Utensils: Zambian kitchens often use a combination of both. Traditional utensils include the wooden spoon (mwiko), clay pots, pestle and mortar (insakulo), and woven mats. Modern utensils include electric blenders, non-stick pans, and digital scales.

Care and maintenance of utensils: Proper care extends the life of equipment, maintains hygiene, and ensures food safety. Key principles:

- Wash and dry all utensils after use
- Store knives safely (in a knife block or sheath) to prevent injury
- Defrost refrigerators regularly to maintain efficiency
- Check electrical appliances for damage before use
- Oil wooden utensils periodically to prevent cracking

Main Learning Activities

Activity 1: Classification Task

Learners are given a list of 20 kitchen items (or actual items if available) and must classify each into the correct category. They draw and complete the following classification table:

Category	Examples
Cutting utensils	Cook's knife, grater, peeler, scissors
Preparation utensils	Mixing bowl, sieve, measuring cup, mortar and pestle
Cooking utensils	Saucepan, frying pan, baking tray, clay pot
Serving utensils	Ladle, serving spoon, tongs, serving dish
Large equipment / appliances	Cooker, refrigerator, blender, oven
Storage equipment	Lidded containers, food bags, refrigerator, pantry shelf

Activity 2: Correct Use Demonstration

Teacher demonstrates the correct use of three utensils (e.g., knife, sieve, measuring cup). Learners then practise in pairs and observe each other, providing peer feedback using a simple checklist:

- Was the utensil held correctly?
- Was it used safely?
- Was the correct utensil chosen for the task?

Activity 3: Modern vs Traditional Utensil Comparison

Traditional Utensil	Modern Equivalent
Mortar and pestle (insakulo)	Electric blender or food processor
Clay pot	Saucepan or slow cooker
Open fire (three-stone fire)	Gas or electric cooker
Wooden stirring spoon (mwiko)	Silicone spatula or electric mixer
Woven basket (for washing/storing)	Colander or sealed food container

Discussion question: What are the advantages and disadvantages of using traditional utensils compared to modern ones? Consider cost, availability, and cultural significance.

ASSESSMENT / REVIEW QUESTIONS

13. Name and classify FIVE kitchen utensils you would find in a typical Zambian kitchen.
14. Explain why it is important to use the correct utensil for each kitchen task.
15. A learner uses a metal spoon in a non-stick frying pan. What problem could this cause?
16. Describe how you would safely store kitchen knives at home.
17. Give TWO reasons why a traditional clay pot may still be preferred over a modern saucepan in some Zambian homes.

Sub-Topic 1.1.3: Improvisation of Kitchen Utensils

Specific Competence 1.1.3.1 — Make kitchen utensils

Item	Detail
Learning Outcomes	Learners will define improvisation, identify situations requiring it, and demonstrate improvised utensils
Key Vocabulary	Improvisation, substitute, alternative, resourcefulness, household items
Resources	Everyday household items (tins, bottles, wire, cloth), demonstration materials
Cross-Cutting Issue	Creativity and Innovation; Financial Literacy (reducing costs); Environmental Sustainability (reusing materials)

Teacher Background Notes

Improvisation in the kitchen means finding creative alternatives when standard utensils or equipment are not available. In Zambia and many parts of Africa, improvisation is a valued skill — it enables cooking to continue even when ideal tools are absent.

Situations requiring improvisation include:

- When a kitchen utensil is not available (e.g., no sieve — use a piece of clean muslin cloth over a bowl)
- During power outages (no electric blender — use a mortar and pestle)
- Outdoor cooking or camping
- Emergency situations or communities with limited resources

Examples of improvised utensils:

- Grater: Use a clean tin can with holes punched through it
- Sieve: Stretch muslin or gauze over a bowl
- Rolling pin: Use a clean glass bottle or smooth cylinder