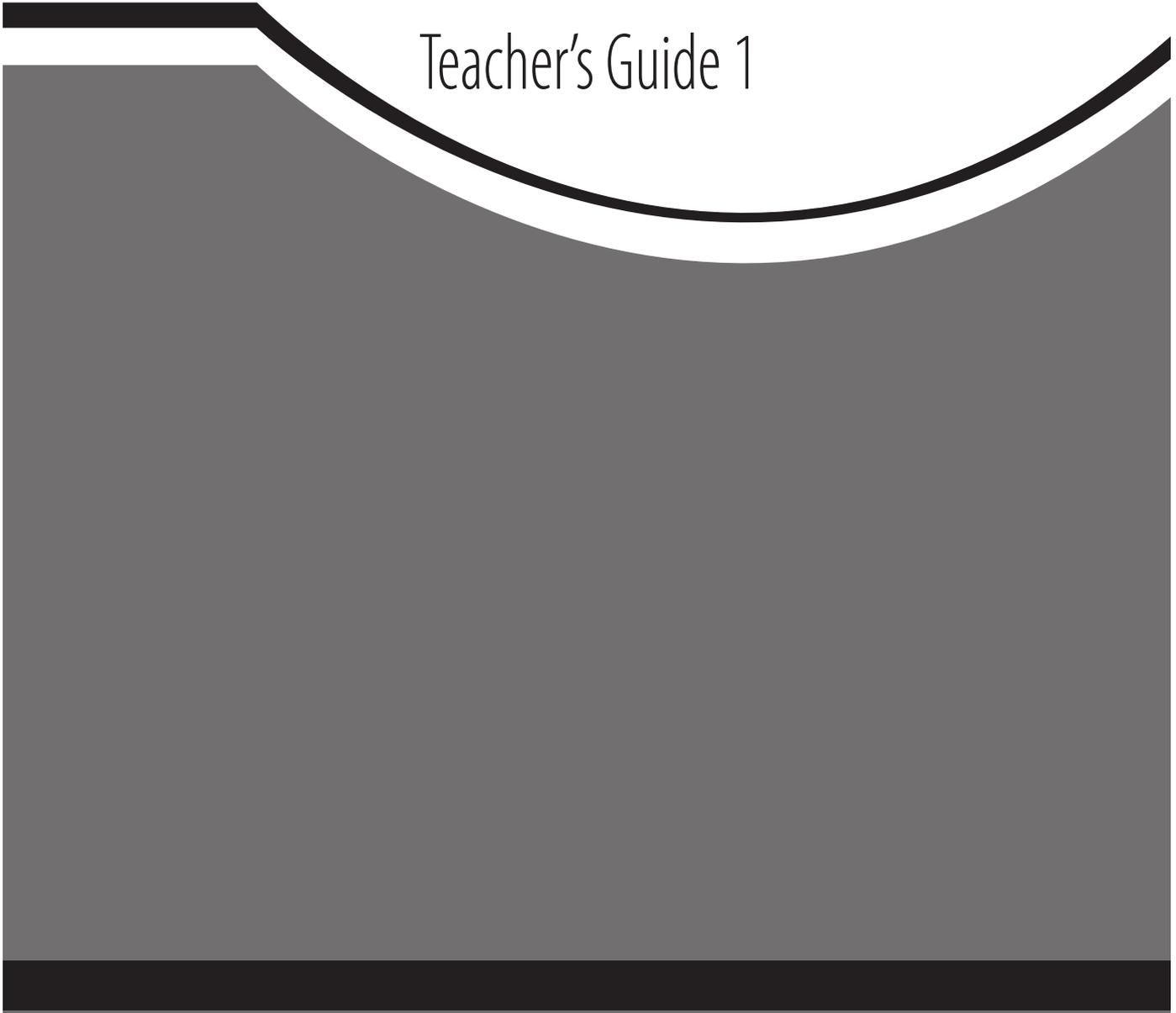


ORDINARY LEVEL

HOME SCIENCE

for Rwandan Schools

Teacher's Guide 1



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PREFACE

Dear teacher,

Teaching is the process by which someone causes other people to learn. It is important because it makes people acquire knowledge and attitudes they need to be responsible citizens, earn a living and lead a useful, rewarding life. It also provides the chief means of passing knowledge to the next generation.

Guide to reading:

1. What are the main duties of a teacher?
2. Why does a teacher give tests and exercises?
3. What are the characteristics of a good teacher?

Have it in mind that much teaching takes place informally, that is, outside school. In the home for example, parents teach their children everyday skills as well as values and habits. Businesses and industries often teach their employees necessary job skills. But when we speak of teaching, we usually mean formal teaching that is provided in schools by professional teachers.

Teaching is an interaction between a teacher and a learner which in turn modifies a learner's perspective. Learning is a process resulting in some modifications of the perspective on the ability to think about problems and decisions in a reasonable way.

Duties of a Home Science teacher

A job of a Home Science teacher revolves on four main areas that is;

- preparing his or her classes.
- guiding or causing the learning of learners.
- checking learners' progress.
- setting a good example for his or her learners.

(a) Preparing for his or her classes

Before each class session, a teacher must review the subject matter, prepare learning activities and plan special projects. This preparation is known as daily lesson plan.

(b) Guiding or causing the learning of learners

Most teachers use a variety of methods to guide their learners in the learning process.

A good teacher's basic concern is the individual development of each learner.

The teacher should therefore, guide the learners to learn to solve problems by themselves. It is the teacher's responsibility to see that a learner must master each step before going onto the next.

(c) Checking learners' progress

The learner's books contain learner's investigations, guiding questions, study questions, assessment exercises and projects in addition to notes. These guide the teacher to evaluate the progress of a learner. Besides that, a teacher can set his or her own tests within the same scope of learning. By evaluating the performance of the group, the teacher can judge the effectiveness of the teaching methods used.

(d) Setting a good example for the learners

By showing qualities of patience, understanding, trustworthiness and attention to work, learners who see these qualities in their teacher may be encouraged to develop similar qualities in themselves. In carrying out these activities, a teacher tries to identify and respond to needs of individual learners.

The teacher's main duties also involve a number of related tasks from keeping attendance records to marking books and papers. Although learners' books and technological advances cause a learning process, they have not greatly changed the above teacher's basic roles.

Reward of teaching

One of the greatest rewards of teaching is seeing learners succeed at their studies and develop into productive, responsible citizens, every teacher has this opportunity!

Variety is the spice of life

One way of making fun in teaching is varying the teaching methods. There are many teaching methods as there are many things to be taught, though they cannot be exhausted.

Suggested teaching methods

The following is a list of teaching methods that are applicable in teaching home science. The teacher will choose whatever method that is appropriate for that particular lesson depending on factors like; availability of resources, time, topic, nature of the learners and other considerations.

1. Discussion method

A discussion is having a talk about something with others. In this method, the teacher states a problem to the class and in groups, learners are allowed time to give their opinion and views or through reflective thinking and exchange of ideas. Mixed grouping (sex, ability and age) should be encouraged to share

their experiences or knowledge and learn from each other. Random selection of group members by the teacher is however, the best way of ensuring that the learners do not keep in the same group all the time. The discussion must have a definite objective in view of what the teacher uses to correct the view of the learners.

Group discussions are very good at stimulating interest and helping learners learn from each other.

Advantages of a group discussion

- Learners' involvement in the activity can be high and less dependent on the teacher.
- It keeps learners interested and involved.
- Learners' knowledge and resourcefulness can be identified and shared.
- It allows for reinforcement and clarification of activities through discussion.

Disadvantages of a group discussion

- Discussions require a great deal of time. Learners will take long to form groups and settle down.
- Passive learners may not learn much unless the discussion is well moderated by the teacher.
- Discussions require a lot of supervision by the teacher; he or she should ensure that all the learners participate in the discussion by visiting each group to encourage all members to actively engage in the activity.
- It may lead to development of complex behaviour among the learners based on group performance. When learners are grouped, the high achievers or the group that complete tasks fast may develop superiority complex.
- It may lead to discrimination and unhealthy competitions. When learners are grouped, there may be tendency of groups trying to outcompete one another.

Guidelines for using a group discussion

- Clear instructions should be given to learners to clearly indicate what the group is supposed to do. The discussion should be free and should not have a structured plan
- If learners are to answer questions, clearly write them on the chalkboard or give them printed copies.
- Explain the task clearly and show how the activity relates to the topic of interest.

- Each group should have a secretary who records all the group discussion results and reports the result of the discussion to the entire class or to the teacher depending on the arrangement.
- Use an easy way to divide the learners into groups for example, by pre-selection, as learners enter class, by counting off and so on. This should not take a lot of time.
- Keep the groups small for effective participation. Large groups are difficult to manage. Keep the group to about four people each. A group of fifteen learners would not be effective.
- The teacher moves around checking on the work and progress of each group. They should therefore, not sit very far from each other. During the inspection, the teacher should make sure that the group is on the right track and if not, the teacher should help them get back on track.
- Remind the group about time left especially five minutes. This enables the group wrap up their discussion in time for the plenary presentation of the whole class or for submission of findings.
- If the task is difficult, allow the groups more time to complete the activity. The time allowed should therefore, allow the teacher to reflect the level of difficulty of the assignment.
- One or two learners should prepare a written report of the total activity.

2. Group method

Group method is a method in which the class is divided into small groups for a particular activity. It is a modification of the class teaching. You can use it to simplify the problem of teaching big classes with a wide range of abilities.

When the class is divided into small groups, you can attend to each group in turn while you give individual help to learners experiencing difficulty. In grouping the class, different criteria or measures could be used. For instance, age, sitting arrangement or serial numbers in the register. However, the aim for grouping determines the criterion to be used.

When to use the group methods

You can use this method, when there is the need to examine in greater detail the various aspects of a larger issue. You can also use this method when you want to take a serious stand on matters that require in-depth study, resolution or decision making.

Types of groups

1. **Ability groups:** These are useful where the work provided is of levels to suit the stage of development of the learner in each group. Learners might

be in the fast group in some topics or subtopics, and in the average or slow group in the others. Avoid referring to the group in such a way that it suggests ability rating.

2. **Mixed ability groups:** These are carefully chosen so that brighter learners can aid slower learners. They are very useful in learning Home Science.
3. **Age groups:** These are sometimes used where a class consists of learners of different ages. The young learners could be placed in one group and the old ones in another group or mixed the young and old in the same group.
4. **Friendship groups:** These are chosen by learners themselves. The learners are allowed to form their own groups and naturally, they will be formed along friendship lines. These however can, if not handled carefully, result in all girls or all boys which may not be desirable. Also, there is always a problem of some learners not falling in any particular groups.
5. **Random groups:** These are chosen by the teacher on the spot. Probably the best method is to have a variety of different types of groups for different situations. This also helps to create interest for the learners rather than keeping them in the same group throughout. Once learners are grouped, there are different ways in which group work can proceed.

How to use the group method

- Divide the class into small groups of five, depending on the class size. Group them based on the types of groups above. Each group should have a guide. You should ensure that no learners are inhibited.
- All groups might do the same thing but produce their own group findings themselves. Results or solutions from all groups can then be merged during plenary discussions to come with a class solution or results.
- Each group might carry out a different activity related to a common topic.
- Each group might do activities chosen for different ability levels in the same topic or subtopic.
- Each group might be working on something totally different, not linked by topic. For example, during their free time.
- Occasionally, the teacher will introduce competitions between groups. However, this use of competition as motivation should be controlled since it should be remembered that it often stifles the cooperative spirit.

Advantages of the group method

- Learners are given an opportunity to learn on their own.
- It helps the learners to perform various functions and roles.

- It increases the learners' participation in learning. This is because learners are subdivided into groups.
- It increases interpersonal relations among the learners. When learners work together, they understand themselves better.
- It may encourage healthy competitions since grouping enhances inter-group and intra-group competitions.

Points to note about a discussion

1. The learners should talk more than the teacher. As a teacher, you should not dominate the discussion.
2. A discussion is only effective if there is discipline in the class. As a teacher, ensure that discipline is emphasised before you can use the discussion method.
3. Learners should be taught to talk one at a time.
4. Learners should be taught to listen to each other and allow each member to give their opinions.
5. The teacher should make sure that the learners learn the message in the discussion.
6. A summary should be made at the end of each discussion session so that the key points and ideals coming from the discussion are noted.
7. It may be necessary to divide the learners in smaller groups. In such a case, the teacher should appoint or get the group a chairperson who will report back to the whole class later.

A discussion can be started in the following ways:

- using a picture.
- describing a situation.
- asking learners to describe situations they have experienced

A discussion can be held:

- after an activity.
- after a demonstration, role play or drama.

3. Role play

As teaching or learning method, role play is a simulation exercise by which the learners assume the role or act different personalities in order to act out a scenario in an arranged setting.

The learners act out the given characters and roles in order to discover and explore or apply skills or even demonstrate knowledge. Role play helps to make sense of the theory and gathers together the concepts into a particular experience.

This is a method of teaching whereby the learners are presented with a situation they are expected to explore by acting out the roles of those represented in this situation. While using this method, learners should be carefully selected and properly prepared for their roles.

The remaining learners should be equally prepared for the role play by briefing them on how they are to act during the presentation. The role players should try to behave naturally during the role play presentation.

⇒ **Constructing role play**

Role plays can be simple or complex, short or long and can be adapted to suit the needs of what is being taught or explored. If it is a simple skill being practised, we can set the scene quickly and let the participants practice.

Advantages of role play

- Role playing makes learning more memorable than simple explanations. Learners will not easily forget a concept developed through a role play in which they participated.
- Role play appeals to a wide variety of learners' types namely the visual, auditory and kinesthetic styles of learning which help a broad range of learners. It is therefore, more effective in engaging the entire class.
- In adults, the tool respects their prior knowledge, experience and the reality they bring to a concept. It helps to make the concept being taught to be constructed and then be reflected on.
- It helps to move beyond any comfort zones and helps bring on attitude change through different viewpoints too. It helps to develop all domains of learning, cognitive (knowledge), psychomotor (skills) and affective (emotional).
- Role playing is also a lot of fun and it also helps shake off classroom monotony.
- There is plenty of evidence that confirms the retention from participation and is far higher than any other modes of learning. It enables learners to see the consequences of their actions among others.
- It promotes development of interactive knowledge and skills.
- It stimulates learners and generates their interest in the subject.
- It encourages active participation by the learners.

- It allows for change or modification of attitudes.
- It is an exercise where emotions might become the predominant features.
- Role plays provide a living example of the situation being taught.

Disadvantages of role play

- Role players usually learn more than the observers.
- Observers may be passive until the exercise is discussed.
- The success of role play depends mainly on the imagination of the players.

4. Think - Pair - Share

Think pair share is a collective learning strategy in which learners work together to solve a problem or answer a question about an assigned reading. The technique requires learners to think individually about a topic or answer to a question and share ideas with the classmates. Discussing an answer with a partner serves to maximize participation, focus attention and engage learners in comprehending the reading material.

Think; teachers begin by asking a specific question about a text, learners think about what they know or have learned about the topic.

Pair; each learner should be paired with another learner or a small group.

Share; learners share their thoughts with their partners. The teacher expands the 'share' into a whole class discussion.

How can you use think pair share?

- individually.
- with small groups.
- in a whole class setting.

When to use think pair share

- After reading.
- During reading.
- Before reading.

Why use think pair share

- It helps learners to think individually about a topic or answer to a question.
- It teaches learners to share ideas with classmates and builds oral communication skills.
- It helps focus attention and engage learners in comprehending the reading material.

How do you use think pair share?

- Decide upon the text to be read and develop the set of questions or prompts that target key content concepts.
- Describe the purpose of the strategy and provide guidelines for discussion.
- Model the procedure to ensure that learners understand how to use the strategy.
- Monitor and support the learners as they work through.

5. Brainstorming

Brainstorming is a learning process that involves people being able to express their ideas freely towards finding a solution to a problem or task. This is a teaching technique where learners suggest ideas on given issues, which are later discussed.

The teacher normally engages the learners in a brainstorming activity by asking a general question and then has the learners respond to the question. Participants then list as many solutions as possible in a short period of time. All the ideas offered should be accepted and written down. No criticism should be made of any idea as this may discourage participants. The emphasis should be on quality not quantity.

Brainstorming is an important part of learning or teaching creative thinking. It allows learners to work together to create ideas. It also has a place in decision making as it helps to increase the range of factors taken into account in reaching a decision. It is best with groups of between 5-20 learners.

These are some of the rules to be followed during brainstorming:

- There should be no criticism of any idea suggested by the learner.
- All kinds of ideas should be listed before they are evaluated. Do not evaluate each idea as it comes up, first compile the entire list.
- Ideas that seem to be wild or outrageous should not be discussed.
- New ideas may result from combining or building on previous ideas.

Steps in brainstorming

Introduction: define the problem for which solutions are required. All members of the brainstorming group must be clear about the ideas that they are trying to put forward.

Brainstorming: the teacher or group leader invites ideas or suggestions. Ideas are recorded as quickly as possible, as soon as they are mentioned.

All ideas are recorded together with whoever makes them. It does not matter whether they are considered outrageous or completely off-topic. The ideas

should be recorded even if they have been recorded previously.

No discussion or clarification of any kind is allowed at this stage, just list the ideas.

Presentation of ideas continues until all the ideas are exhausted. Do not deny any one a chance to present their ideas.

The chairperson or teacher should have some ideas to suggest when the flow of ideas from group members slows down. This is done to start the flow again.

Review: each of the suggestions is reviewed so that it is clear to everyone what the suggestion is, if it is not clear at all, the person who suggested it may be asked to elaborate more.

A decision is made about each idea to keep the suggestion on the list for future discussion or throw it out. The aim is not to decide whether the idea is good or not but simply to decide whether it is worth discussing further. This narrows down the options.

Repeated ideas are removed or merged.

Discussion: the remaining ideas are discussed to decide what the suggestions will be or to develop the idea further.

The rules for brainstorming

- Criticism of ideas is not allowed or acceptable by the teacher.
- All ideas, no matter how wild are encouraged.
- Every learner should try to build on or combine ideas with others with guidance from the teacher.

Advantages of brainstorming

- The method stimulates learner's interest.
- Active participation in the learning process allows for enhancement and clarification of issues through discussion and help learners to learn basing on their own experiences.
- Brainstorming helps to develop the creative thinking, critical thinking and effective communication of the learners which are very important life skills.

Disadvantages of brainstorming

- Learners can easily go beyond the scope of the topic and discuss non relevant issues. This does not only divert them but also wastes time.
- The method is not appropriate to a large class as some members may not be given a chance to participate. This is particularly so for shy learners who may not want to emphasise their demand to contribute.

- It requires more time to implement and when time is scarce, it becomes inappropriate.

6. Field Trip or Education Tour

Field trip or education tour is any activity carried out by a group of learners outside the classroom under the supervision of the teacher. It involves taking learners outside the classroom-setting to have firsthand experience of what happens in our environment or real life situation.

Field trips provide outdoor experiences and observations from which the learners learn. It could cover a few hours and could last as long as a couple of weeks. Field trips could take the form of a mere walk from the school to public places of interest such as, the food processing plant, hotel, factory all within the neighbourhood. Experiences acquired during a field trip are usually longlasting and cannot be easily forgotten by the learners.

In preparing for a field trip, the purpose must be very clearly stated; permission must be obtained from the school authority, parents and the place of visit. If a trip will last more than one day, adequate preparation must be made for accommodation, feeding and other facilities. It is also essential to take along a first aid box. The teacher must carefully supervise the learners during the field trip. The assistance of a guide is also important.

After the trip, learners should discuss and report their findings. Field trips provide opportunities for direct observations and develop the skill for keen observation in the learners.

However, it is time consuming; it could be expensive and disruptive especially when the field trip lasts several days.

Advantages of using field trips

- Field trips provide the learner with the opportunity of having firsthand knowledge of what is happening around our society.
- It helps to generate and sustain the learner's interest in the subject.
- It aids retention of information since the experiences are longlasting.
- It can help the learner to develop interest in certain professions.

Disadvantages of field trips

- It may be a waste of time and resources if not well-planned.
- It is externally difficult to carry out field trips especially when it requires travelling very long distances.
- Accidents may occur in the course of the field trip.
- Discipline among learners may be eroded if care is not taken.

- It results in extra financial expenses on the part of the school, parents and even the learners.

7. Survey method

This is most times integrated in the field trips. Learners go out to collect information about one or more topics. The information may be from a primary source especially from the environment and people or from a secondary source like libraries, newspapers, textbooks.

Through surveys, learners have a chance to develop a number of skills like collection, recording, and analysing information and come up with recommendations, conclusions and solutions from their findings.

Topics to research about should be relevant and applicable to learners' environment and topic of study. For example, a visit to the market will yield a lot of information for the learners about meal planning, food choices and how to make a shopping list.

A teacher is required to be creative and innovative to use any other methods they can devise. Teaching aids make learning more effective and interesting. The most important teaching aids in food and nutrition are real objects or real food stuffs, text book, pictures and others.

The teacher is also required to prepare himself or herself adequately well before the learning and teaching process. This can be aided well with the use of scheme of work which is prepared to serve for quite a long period of time like a year or a term to avoid missing out important aspects. Lesson planning is also very important for the teacher to make the teaching learning process a success.

8. Question and Answer

In this method, the teacher poses a series of carefully chosen questions around a subtopic. The learners draw their answers using knowledge acquired from previous lessons and experiences from their environment. This method works well with discovery method. In this method, the teacher and the learners are equally active in teaching- learning situations. This method is a primary means of developing a lesson.

9. Discovery / inquiry method

This involves the identification of tasks from the study. The learners use the knowledge or experiences they have acquired in previous lessons to find solutions to the problems and draw conclusions.

10. Review method

This method is important in that it helps the learners recall whatever was taught/ learnt during the previous lesson with that of the current one, the linkages create a sense of continuity in the learning process.

11. Displaying method

This is done by the teacher putting up visible teaching aids for learners' reference. These may include; pictures, foodstuffs, equipment, utensils and so on. For newspapers and pictures, they can be displayed on the noticeboard or projected onto a screen during the teaching period.

12. Explanation method

The teacher explains or gives detailed information about the key concept in respective chapters for learners to get the clear meaning of the various concepts. This is useful where the learners are not easily involved and where the learners may not have a lot of background information on which to build.

13. Gallery walk method

Gallery walk is a discussion technique for active engagement. Gallery walk gets learners out of their chairs and actively involves them in synthesising important concepts, on consensus building, writing and public speaking. In gallery walk, teams rotate around the classroom, composing answers to questions as well as reflecting upon the answers given by other groups. Questions are posted on charts or just pieces of paper located in different parts of the classroom. Each chart or station has its own question that relates to an important class concept. The technique closes with an oral presentation or report in which each group synthesises comments to a particular question.

Why use the gallery walk method?

It promotes higher order thinking, oral or written presentation skills, and team building. Gallery walk is flexible and has many benefits. Gallery walk can be organised for a simple 15 minute ice-breaker or for a week long project involving graded oral and written reports. The technique encourages learners to speak and write the food and nutrition language rather than just hearing it from the teacher or the guest speaker. In addition to addressing a variety of cognitive skills involving analysing, evaluation and synthesising, gallery walk has the additional advantage of promoting cooperation, listening skills and team building.

How to use gallery walk

In gallery walk, learners' team rotate to provide bulleted answers to questions posted on charts arranged around the classroom. After three to five minutes at a chart or station, the team rotates to the next question. Gallery walk works best with open ended questions when a problem, concept or issue can be analysed from several different perspectives. In this section, you must find a variety of instructional resources while preparing learners for this technique, a step by step guide for using gallery walk, evaluating rubrics and challenges in implementing the technique.

Developing questions for gallery

Gallery walk involves preparing questions based around a topic's central concept, issue, or debate. The wording of the question depends on the desired learning skill or level of abstraction. A variety of questions can be used but the technique seems to work best with higher order questions relating to analysing, evaluation and synthesis. A good way to frame questions for gallery walk is to use blooms hierarchy, blooms taxonomy and critical thinking which provide a guide for wording questions at various levels of abstraction.

14. Internal and External Seminars

A seminar is any meeting for exchanging information and holding discussions. Such seminars can be carried out within the school by learners (internal seminar) or learners from another school may be invited to exchange knowledge and information (external).

External seminars are particularly important because they help learners get a comparative view as they relate with colleagues from other schools and enhance their knowledge and communication skills as they play particular roles. They build confidence in themselves, learn presentation skills, learn how to develop arguments and answer questions.

The teacher is however invited to adopt other creative methods of delivering the concept to the learners and integratively facilitate the learning procedure.

15. Guest Speaker

Guest speakers are a key method of teaching food and nutrition. They can be drawn from individuals within the community who have good knowledge or adequate information on particular topics either as professionals or through practical experience. Guest speakers provide a variety of information relevant to the study of Home Economics.

Guest speakers could be nutritionists, dieticians, teachers, caterers, Food Scientists from whom the learners can learn a lot and gain real life practical application of Home Science.

They provide information concerning challenges and benefits of studying Home Economics. Using the guest speaker makes the subject more interesting and realistic and it removes the monotony of the same face.

Advantages of using a guest speaker

- Guest speakers add a unique perspective and life experience to the learner's way of looking at things. It breaks the monotony and the interest in the new face creates interest in that particular topic.

- Guest speakers provide an expert opinion in the teaching/ learning environment. They reinforce what the teachers have already taught during the normal teaching process.
- Guest speakers share their real life experiences in addition to sharing information about the subject; they interest the learners in the profession.
- They provide the teachers an opportunity to observe the learners and their reaction to the speaker.
- They add another dimension to the learning process by having an outside expert speak to the learners.
- Guest speakers stimulate both the teacher and learners. Even the teacher will learn a lot from the guest speakers.
- They give the teacher a break from presenting and as said break the monotony of routine teaching.
- Information from resource persons are usually more current and authentic than those contained in text books.

Disadvantages of using a guest speaker

- The time may not be sufficient for the resource person to exhaust the information that he or she has for the learners. The time allocated to him / her may encroach on another and create problems.
- Sometimes getting an appropriate resource person can be difficult.
- The resource person may disappoint the school by not turning up.
- The teacher puts in so much to get the resource person to agree to come.
- The resource person might not have the requisite pedagogical skills for handling enthusiastic children and this could mess him or her.

It is important to note the following when deciding to use the guest speaker as part of the teaching process:

- The selection of the guest speaker should be taken with care to ensure they are knowledgeable in the topic they will present.
- A good guest speaker should be one who will be able to leave a lasting memory with the learners so that they are able to remember what the guest has presented.
- The guest speaker should be given enough time to prepare. The topic to be presented should be well noted and explained. This will enable the guest speaker to do research and tailor the presentation.

- The speaker should be informed of the nature of learners so that he or she does not present at a level too complicated for the learners.
- The guest speaker should be told beforehand the required outcomes, that is, what the learners need to learn so that the presentation is not off topic.
- Learners should be given an opportunity to ask the guest speaker questions which are relevant to the presentation.

➤ **Basic requirements for effective teaching**

Teacher preparation

It is important that the teacher must have sound knowledge of what the learners must know and be able to relate content with methods and sequences to the needs of the learners using the environment and other appropriate resources. Effective teaching therefore, requires efficient and adequate preparation on the part of the teacher. It demands a teacher to structure his or her preparation and work in relation to his or her learners, the curriculum, resources, and teaching methods.

In order to achieve this, sound understanding of the learners' development and teaching skills is essential. The process of preparation to teach normally begins with developing a scheme of work followed by planning of instructional materials and short term preparation of lessons respectively.

Home science Teaching Syllabus for Senior 1

Targets

This senior 1 Home Science syllabus is intended for teachers trained in the methodology of Home Science as a subject. These teachers are entirely responsible for implementing the teaching and learning process using this syllabus.

Scope and Depth

The syllabus covers the course content in a logical sequence and the topics are allocated to form 1 according to the cognitive level of the learners.

Structure and Organisation of the Teaching Syllabus for Home Science Senior 1.

The structure and organisation of the teaching syllabus of Home Science consists of:

- overview of the topic.
- specific outcomes.
- learning and teaching resources.

- teaching or learning strategies.
- learner's activity and unit assessment.

1: Over view of the topic:

The general overview shows the content that is supposed to be covered under that topic.

2: Specific outcomes.

There are specific objectives suggested for every content in the syllabus. The teacher is free to formulate others as long as the concepts or principles are not changed. These are benchmarks upon which the teacher targets to tailor his or her instructions to enable learners to meet the prescribed knowledge and skills spelt out in each outcome.

The specific outcomes are instrumental objectives that the teacher should use to operationalise the teaching and learning process for the respective content in the syllabus.

The specific outcomes also provide a basis for assessment of a learner's achievement.

Teaching and learning methods

This includes the methods of teaching to be used to help in the teaching and learning process.

3: Teaching and learning resources.

They include; nonconsumable teaching aids and materials, as well as consumable materials. The teaching and learning resources are those that are to be used during the teaching process for each respective concept.

Teachers can improvise teaching and learning resources other than those suggested in this syllabus, where need arises.

4: Teaching and learning strategies

They are activities of teachers and learners during the teaching and learning process of a particular content. The teaching and learning strategies are focused to ensure achievement of the respective specific outcomes under each concept.

However, caution is given to teachers that they should not adopt wholly all the teaching and learning strategies. They can formulate others in addition or replace some according to existing realities in their environment.

Teachers are also advised to use participatory teaching and learning strategies (with hands on and mind on) as much as possible to stimulate learners, to demonstrate self-esteem, confidence and assertiveness.

5: Learner's activity and unit assessment

It shows what and how to assess learners with regard to the required knowledge, skills and attitudes to be developed for each specific outcome and respective set of the teaching or learning.

The teacher is advised to use the available time to cover the subject content. Learners can be assigned to make drawings and other features outside class time.

However, for practical lessons, learners are to do them during classtime so as to manipulate their skills, observe and record there and then.

⇒ Basic Principles to Enhance Teaching and Learning

Seize the moment: Learning moods change. A learner may be in the mood of learning something and may approach you with a question. Seize the moment and teach.

Involve the learners: Just presenting information to the learner does not ensure learning. For learning to occur, you need to get the learners involved in identifying their learning needs and outcomes. Help the learners to develop and achieve attainable objectives.

Begin with what the learner knows: You will find that learning moves faster when it builds on what the learners already know. Teaching that begins by comparing the old, known information or process and the new, unknown one allows the learners to grasp new information more quickly.

Move from simple to complex: The learners will find learning more rewarding and interesting if they have the opportunity to master simple concepts first and then apply these concepts to understand more complex ones.

Accommodate the learner's preferred learning style. How quickly and well a learner learns depends not only on his or her intelligence and prior education, but also on the learner's learning style preference. Visual learners gain knowledge best by seeing or reading what you are trying to teach; auditory learners by listening; and tactile or psychomotor learners by doing.

Help learners with learning disabilities: The teacher should try as much as possible to give assistance to learners with learning disabilities so that they also gain from whatever lesson the teacher is teaching. The teacher should also be gender sensitive otherwise some learners especially girls will be left behind.

Appropriately handle mixed ability classes: The teacher should be aware that the classes are not homogeneous with regard to the learning abilities of the learners. Some learners are more able than others. Some are more eager to answer questions than others. The teacher must be careful with the way he

or she may handle classes of mixed abilities otherwise he or she leaves some learners behind.

Be gender sensitive: Gender balance refers to balancing of social roles of males and females so that responsibilities between genders is fairly distributed. It is when we achieve this as a nation that we shall maximise the productivity of all citizens.

Effectively assess learner's learning: Constant assessment of learner's learning forms an important part of a teacher's work. Only by assessing, can teachers decide what learners should do next and give them tasks that are appropriate. Assessment is the process of finding out how much each learner knows or can do. Assessment includes all sorts of less formal methods of testing as well as the formal examinations.

Some of the methods which the teacher can use are:

Oral questioning	The teacher should carefully plan questions to ask learners. These should include recall type as well as higher level of thinking questions.
Project work	Should be marked by the teacher and marks awarded to groups or individuals.

To be effective, assessment should be continuous and diagnostic.

(i) Continuous Assessment

The teacher should not wait until the end of term or year before testing the learners. This will obviously be too late to guide either the teachers or learners since learners who perform poorly will have no opportunity to correct their weaknesses. It will also be too late for the teacher to identify weaknesses and problems and find remedies.

Frequent assessment also provides regular motivation throughout the course. This is clearly preferable to single end of term or year examinations where learners can sometimes not bother much for the first part of the term or year and then become over anxious when they realise that the end of term or year examination are approaching. Therefore, the assessment should take place regularly throughout the teaching. This does not mean that there should be regular examinations; what is required is that learners should be given questions about the content of what they have been taught on a frequent and regular basis. The questions should be marked and the marked answers handed back to the pupils and discussed.

(ii) Diagnostic Assessment

Frequent assessments should aim at providing the learners with information about what still needs to be learnt, and to the teachers, about what still needs to be taught. Therefore, there is little point in telling the learner that he or she scored 70% in that test. This does not tell the learner which parts were done well and where additional learning is needed. To do this, the overall figure of 70% is useless. It is far better to say things like: your knowledge of is good but you failed to explain and You need to study and

This may be rather labourious but can be done quite simply by handing back to the learners their own marked answers for written assessment and going over the marked work with the learners.

Handling Learners with Special Needs

Since you may be handling a class of mixed abilities, it is inevitable that some of the learners in your class have special learning abilities. You may need to make accommodations for some and modifications for others. Providing for the needs of learners with special learning abilities will certainly be one of your greatest challenges as a professional educator.

Learners with learning disabilities

Disabled learners are those who demonstrate a significant discrepancy, which is not a result of some other handicap, between academic achievement and intellectual abilities in one or more of the areas of oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematical calculation, reasoning, or spelling.

The following is a list of some of the common indicators of learning disabled learners. These traits are usually not isolated ones; rather, they appear in varying degrees and amounts in most learning disabled learners. A learning disabled learner:

- Has poor auditory memory; both short term and long term.
- Has a low tolerance level and a high frustration level.
- Has a weak or poor self-esteem.
- Is easily distractible.
- Finds it difficult, if not impossible, to stay on a task for extended periods of time.
- Is spontaneous in expression; often cannot control emotions.
- Is easily confused.

- Is verbally demanding.
- Has some difficulty in working with others in small or large group settings.
- Has difficulty in following complicated directions or remembering directions for extended periods of time.
- Has coordination problems with both large and small muscle groups.
- Has inflexibility of thought; is difficult to persuade otherwise.
- Has a poor concept of time.

Teaching-learning disabled youngsters will present you with some unique challenges. Not only will these learners demand more of your time and patience; they will also require specialised instructional strategies in a structured environment that supports and enhances their learning potential. It is important to remember that learning disabled learners are not learners who are incapacitated or unable to learn; rather, they need differentiated instruction tailored to their distinctive learning abilities. Use these appropriate strategies with learning disabled learners:

- Provide oral instructions for learners with reading disabilities. Present tests and reading materials in an oral format so the assessment is not unduly influenced by lack of reading ability.
- Provide learning disabled learners with frequent progress checks. Let them know how well they are progressing towards an individual or class goal.
- Give immediate feedback to learning disabled learners. They need to see quickly the relationship between what was taught and what was learnt.
- Make activities concise and short, whenever possible. Long, drawn-out projects are particularly frustrating for a learning disabled learner.
- Learning disabled learners have difficulty in learning abstract terms and concepts. Whenever possible, provide them with concrete objects and events/items they can touch, hear, smell, and others.
- Disabled learners need and should get lots of specific praises. Instead of just saying, "You did well," or "I like your work," be sure you provide specific praising comments that link the activity directly with the recognition; for example, "I was particularly pleased by the way in which you organised the rock collection for"
- When necessary, plan to repeat instructions or offer information in both written and verbal formats. Again, it is vitally necessary that learning disabled learners utilise as many of their sensory modalities as possible.
- Encourage cooperative learning activities (see Teaching with Cooperative Learning) when possible. Invite learners of varying abilities to work together on a specific project or towards a common goal. Create an atmosphere in which a true "community of learners" is facilitated and enhanced.

- Offer to learning disabled learners a multi-sensory approach to learning. Take advantage of all the senses in helping these learners enjoy, appreciate, and learn.

Learners with higher ability

Learners with high ability often referred to as gifted learners, present a unique challenge to teachers. They are often the first ones to finish an assignment or those who continually ask for more creative and interesting work. They need exciting activities and energising projects that offer a creative curriculum within the framework of the regular classroom program.

Characteristics of gifted learners

Gifted learners exhibit several common characteristics, as outlined in the following list. As in the case of learning disabled learners, giftedness usually means a combination of factors in varying degrees and amounts. A gifted learner:

- Has a high level of curiosity.
- Has a well-developed imagination.
- Often gives uncommon responses to common queries.
- Can remember and retain a great deal of information.
- Can not only pose original solutions to common problems, but can also pose original problems too.
- Has the ability to concentrate on a problem or issue for extended periods of time.
- Is capable of comprehending complex concepts.
- Is well-organised.
- Is excited about learning new facts and concepts.
- Is often an independent learner.

Teaching gifted learners

If there's one constant about gifted learners, it is the fact that they're full of questions (and full of answers). They're also imbued with a sense of inquisitiveness. Providing for their instructional needs is not an easy task and will certainly extend you to the full limits of your own creativity and inventiveness. Keep some of these instructional strategies in mind:

- Allow gifted learners to design and follow through self-initiated projects. Have them pursue questions of their own choice.

- Provide gifted learners with lots of open-ended activities - activities for which there are no right or wrong answers or any preconceived notions.
- Keep the emphasis on divergent thinking-helping gifted learners focus on many possibilities rather than any set of predetermined answers.
- Provide opportunities for gifted youngsters to engage in active problem-solving. Be sure the problems assigned are not those for which you have already established appropriate answers but rather those that will allow them to arrive at their own conclusions.
- Encourage them to take on leadership roles that enhance portions of the classroom program (Note: gifted learners are often socially immature.)
- Provide numerous opportunities for gifted learners to read extensively about subjects that interest them. Work closely with the school librarian and public libraries to select and provide trade books in line with the learners' interests.
- Provide numerous long-term and extended activities that allow gifted learners the opportunity to engage in a learning project over an extended period of time.

Learners who have hearing impairments

- Other learners can be responsible for taking notes (on a rotating basis) for a hearing impaired learner.
- Hearing impairment may range from mildly impaired to total deafness. Although it is unlikely that you will have any deaf learners in your classroom, it is quite possible that you will have one or more who will need to wear one or two hearing aids.
- Here are some teaching strategies for learners with hearing impairments:
- Provide written or pictorial directions.
- Physically act out the steps for an activity. You or one of the other learners in the class can do this.
- Seat a hearing impaired learner in front of the classroom and in a place where he or she has a good field of vision of both you and the chalkboard.
- Many hearing impaired learners have been taught to read lips. When addressing the class, be sure to enunciate your words (but don't overdo it) and look directly at the hearing impaired learner or in his or her general direction.
- Provide a variety of multi-sensory experiences for learners. Allow learners to capitalise on their other learning modalities.
- It may be necessary to wait longer than usual for a response from a hearing impaired learner. Be patient.

- Whenever possible, use lots of concrete objects such as models, diagrams, real samples, and the like. Try to demonstrate what you are saying by using touchable items.

Handling learners with visual impairment

All learners exhibit different levels of visual acuity. However, it is quite likely that you will have learners whose vision is severely hampered or restricted. These learners may need to wear special glasses and require the use of special equipment. Although it is unlikely that you will have a blind learner in your classroom, it is conceivable that you will need to provide a modified instructional plan for visually limited learners. Consider these tips:

- Tape-record portions of textbooks, trade books, and other printed materials so that learners can listen (with earphones) to an oral presentation of necessary material.
- When using the chalkboard, use whitechalk and bold lines. Also, be sure to say out loud whatever you write on the chalkboard.
- As with hearing impaired learners, it is important to seat the visually impaired learner close to the main instructional area.
- Provide clear oral instructions.
- Be aware of any terminology you may use that would demand visual acuity the learner is not capable of. For example, phrases such as “over there” and “like that one” would be inappropriate. Partner the learner with others who can assist or help.

Handling learners with physical impairments

Physically challenged learners include those who require the aid of a wheelchair, canes, walkers, braces, crutches, or other physical aids for getting around. As with other impairments, their exceptional differences may range from severe to mild and may be the result of one or more factors. What is of primary importance is the fact that these learners are no different intellectually from more mobile learners in your classroom. Here are some techniques to remember:

- Be sure there is adequate access to all parts of the classroom. Keep aisles between desks clear, and provide sufficient space around demonstration tables and other apparatus for physically disabled learners to maneuver.
- Encourage learners to participate in all activities to the fullest extent possible.
- Establish a rotating series of “helpers” to assist any physically disabled learners in moving about the room. Learners often enjoy this responsibility, give the opportunity to assist whenever necessary.

- Focus on the intellectual investment in an activity. That is, help the learner use his or her problem-solving abilities and thinking skills in completing an assignment without regard to his or her ability to get to an area that requires object manipulation.
- When designing an activity or constructing necessary equipment, be on the lookout for alternative methods of display, manipulation, or presentation.
- Physically impaired learners will, quite naturally, be frustrated at not being able to do everything the other learners can accomplish. Be sure to take some time periodically to talk with those learners and help them get their feelings and frustrations out in the open. Help them understand that those feelings are natural but also need to be discussed periodically.

Handling learners with emotional problems

Learners with emotional problems are those who demonstrate an inability to build or maintain satisfactory interpersonal relationships, develop physical symptoms or fears associated with personal or school problems, exhibit a pervasive mood of unhappiness under normal circumstances, or show inappropriate types of behaviours under normal circumstances.

Although you are not expected to remedy all the emotional difficulties of learners, you need to understand that you can and do have a positive impact on learners' abilities to seek solutions and work in concert with those trying to help them. Here are some guidelines for your classroom:

- Whenever possible, give the learner a sense of responsibility. Put the learner in charge of something (operating an overhead projector, cleaning the classroom aquarium, repotting a plant), and be sure to recognise the effort the learner puts into completing the assigned task.
- Provide opportunities for the learners to self-select an activity or two he or she would like to pursue independently. Invite the learner to share his or her findings or discoveries with the rest of the class.
- Get the learner involved in activities with other learners particularly those who can serve as good role models for the learner. It is important that the emotionally disturbed learner has opportunities to interact with fellow learners who can provide appropriate behavioural guidelines through their actions.
- Discuss appropriate classroom behaviour at frequent intervals. Don't expect learners to remember in May all the classroom rules that were established in September. Provide "refresher courses" on expected behaviours throughout the year.
- Emotionally disabled learners benefit from a highly structured programme one in which the sequence of activities and procedures is constant and

stable. You will certainly want to consider a varied academic program for all your learners, but you will also want to think about an internal structure that provides the support emotionally impaired youngsters need.

- Be sure to seat an emotionally impaired learner away from any distractions (highly verbal learners, equipment, tools, and others).
- Whenever possible, keep the activities short and quick. Provide immediate feedback, reinforcement, and a sufficient amount of praise.

Handling learners with attention-deficit hyperactivity disorder (ADHD)

Learners with ADHD offer significant and often perplexing challenges for many teachers. These learners are characterised by:

- having difficulty to follow directions.
- having difficulty in playing quietly.
- talking excessively.
- fidgeting or squirming when sitting.
- blurting out things.
- being easily distracted.
- often engaging in dangerous plays without thinking about the consequences.
- having difficulty awaiting turns.
- interrupting or intruding.
- not seeming to listen.
- having difficulty paying attention.
- having difficulty remaining seated.
- often shifting from one activity to another.

When working with ADHD learners in your classroom, keep the following in mind:

- Make your instructions brief and clear, and teach one step at a time.
- Be sure to make behavioural expectations clear.
- Carefully monitor work, especially when learners move from one activity to another.
- Make frequent eye contact. Interestingly, learners in the second row are more focused than those in the first.
- Adjust work time so it matches attention spans. Provide frequent breaks as necessary.
- Provide a quiet work area where learners can move for better concentration.

- Establish and use a secret signal to let learners know when they are off task or misbehaving.
- Use physical contact (a hand on the shoulder) to focus attention.
- Combine both visual and auditory information when giving directions.
- Ease transitions by providing cues and warnings.
- Teach relaxation techniques for longer work periods or tests.
- Each day, make sure learners have one task they can complete successfully.
- Limit the amount of homework.
- Whenever possible, break an assignment into manageable segments.

Basic requirements for effective teaching

Teacher Preparation

It is important that the teacher has sound knowledge of what the learners should know and be able to relate content with methods and sequences to the needs of the learners using the environment and other appropriate resources. Effective teaching therefore, requires efficient and adequate preparation on the part of the teacher. It demands a teacher to structure his or her preparation and work in relation to his or her learners, curriculum, resources and teaching methods. In order to achieve this, sound understanding of the learners' development and teaching skills is essential. The process of preparing to teach normally begins with developing a scheme of work followed by planning of instructions and short-term preparation of daily lessons.

☞ Scheme of work

A scheme of work is a guideline that contains what is taught or learnt and why, when and how the teaching or learning should take place. It also contains information about the necessary learning aids including relevant text and reference books.

Preparation of the scheme of work for this course should begin by a breakdown of the content of the syllabus into meaningful parts and arranging them in steps which follow each other. This should be followed by writing down the breakdown in the recommended format. Below is a brief description of the functions and components which you should include in your scheme of work.

Components of a scheme of work

- Time allotment: To do this properly, one needs to know the number of periods allocated for the subject in a week. One needs to know the number of single and double periods during the week to plan different kinds of activities.
- Topics and subtopics: These have been given in this Teacher's Guide. They should be put, under the topic or subtopic in the scheme of work.

➤ Objectives

These are also given in the Teacher's Guide. There are three main types of objectives:

1. Cognitive domain objectives - deal with factual knowledge, ideas and concepts.
2. Psychomotor domain objectives - deal with skills such as handling of apparatus or equipment.
3. Affective domain objectives - deal with attitudes, values, beliefs, interest, tolerance, and many others.

Objectives are included in the scheme of work under the heading 'objectives'.

Methodology: Methods that expose knowledge or information to learners and encourage learners' participation to find out information by themselves have been suggested in this Teacher's Guide. Feel free to adjust them to suit the situation you find yourself in. These fall under methodology in the scheme of work.

Teaching or learning resources: All materials that can be obtained and might be helpful to make teaching or learning effective and interesting, should be included in the scheme of work under teaching or learning resources. The materials could include apparatus, equipment, chemicals, and others or specimens such as plants and animals.

Learner's activities: Include in the scheme of work, learner's activities that may take place during the lesson.

- **Teacher's activities:** Also include in the scheme of work, activities the teacher will be involved in during the lesson.
- **References:** List the important sources of information that are relevant to the current topic under references in the scheme of work. These can be reference text or textbooks for learners.
- **Assessment:** Suggest in the scheme of work, the different techniques of assessing learners' performance during or at the end of the lesson. You could use written exercises, oral questions or practical exercises.
- **Evaluation:** Make provisions in the scheme of work for your own evaluation of the lesson taught. The evaluation comments can cover the materials used, the methods employed and the timing of the lesson. This is for the purpose of future improvement. If the lesson was not taught, mention it and give the reason for missing the lesson

Below is a sample scheme of work for Senior One Home Science

SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE

Academic year: 2016 Term: 1 School: INEZA SECONDARY SCHOOL
 Subject: HOME SCIENCE Teacher's Name: KEITESI ESTHER
 Class and combination: SENIOR I Number of periods per week: 4

Dates	Unit title	Lesson title and evaluation	Learning objectives and key competences	Teaching methods and techniques and Evaluation procedures	Resources and References	Observations
From January 5th to 10 th January 2016	Personal health and etiquettes	Lesson 1 Hygiene maintenance	<p>Learning objectives</p> <p>Knowledge and understanding</p> <p>Having materials that are used to maintain personal hygiene, the learner will be able to describe correctly the maintenance of personal hygiene</p> <p>Skills</p> <p>Having personal hygiene materials, the learner will be able to apply and perform good personal hygienic principles</p> <p>Attitudes and values</p> <p>Having materials used to maintain personal hygiene, the learner will be able to appreciate and comply correctly with good personal hygienic principles</p>	<p>Teaching methods</p> <ul style="list-style-type: none"> - Observation - Group discussion - Practical work - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Oral question to be asked during teaching. - Written exercise to be given to the learner at the end of the lesson. 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Tooth brush - Bathing soap - Bathing sponge - Razor blade <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>

SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

		<p>Lesson 2 Good health practices</p>	<p>Knowledge and understanding Having materials and tools that facilitate good health, learners will be able to state and describe correctly at least four practices of good health</p> <p>Skills Having materials and tools that are used to promote good health, learners will be able to correctly demonstrate and apply good health practices.</p> <p>Attitudes and values Having materials and tools that facilitate good health, learners will be able to appreciate and pay attention to good health practices.</p>	<p>Teaching methods</p> <ul style="list-style-type: none"> - Observation - Practical work - Demonstration - Brainstorming - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Activities to be given to learners on the use of materials and tools that promote good health practices. - Oral questions to be asked learners using question-answer approach and brainstorming during teaching. <p>End of lesson exercise to be given to learners to assess their competence level.</p>	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Soaps - Hand towels - Basins <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>
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SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

<p>From January 12th to January 16th 2016</p>	<p>Lesson 3 Performing physical exercises</p>	<p>Knowledge and understanding Having pictures and manuals on physical exercises, learners will be able to describe correctly the contribution of physical exercises to the body.</p> <p>Skills Having pictures and manuals on physical exercises, learners will be able to demonstrate and practice correctly at least four types of physical exercises</p> <p>Attitudes and values Having pictures, manuals and other related instructional materials, learners will be able to pay attention and appreciate the value of physical exercises.</p>	<p>Teaching methods and techniques</p> <ul style="list-style-type: none"> - Observation - Practical work - Role playing - Demonstration - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Practical work to be given on performing physical exercises - Oral questions to be asked during teaching and learning process. - Students will be asked to demonstrate what they have learnt. 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Manuals on physical exercises <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>
<p>Lesson 4 Periodic medical checkups and sleeping</p>	<p>Knowledge and understanding Having pictures and magazines on medical check-ups and sleeping, learners will be able to explain correctly the benefits of periodic medical check-ups and having enough sleep.</p>	<p>Teaching methods</p> <ul style="list-style-type: none"> - Observation - Demonstration - Guided class discussion - Brainstorming 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Magazines 		

SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

			<p>Skills Having pictures and magazines on medical check-ups and sleeping, learners will be able to demonstrate sleeping and conduct periodic medical check ups</p> <p>Attitudes and values Having pictures and magazines on medical check-ups and sleeping, learners will be able to pay attention and appreciate the importance of sleeping and having periodic medical check ups</p>	<p>Evaluation procedure</p> <ul style="list-style-type: none"> - Oral questions to be asked learners using the question and answer approach and brainstorming during teaching and learning process. - Written exercises to be given to learners at the end of the lesson to assess their competences 	<p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>
<p>From January 19th to January 23rd 2016</p>		<p>Lesson 5 Eating a balanced diet</p>	<p>Knowledge and understanding Having pictures and magazines on food and nutrition, learners will be able to correctly state different foods that make up a balanced diet and explain its importance to the body.</p>	<p>Teaching methods and techniques</p> <ul style="list-style-type: none"> - Observation - Guided class discussion - Brainstorming - Question and answer 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Different foods - Charts - Magazines 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>

SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

			<p>Skills Having pictures and magazines on food and nutrition, learners will be able to choose correctly the different foods that make up a balanced diet. Attitudes and values Having pictures and magazines on food and nutrition, learners will appreciate and embrace a positive attitude towards having a balanced diet.</p>	<p>Evaluation procedure Learners asked to select foods that make up a balanced diet. Written exercise to be given to learners at the end of the lesson.</p>	<p>References - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1</p>	
	<p>Lesson 6 Communication and language etiquettes</p>	<p>Knowledge and understanding Having charts on communication and language etiquettes, learners will be able to describe correctly at least two different communication and language etiquettes Skills Having charts on communication and language etiquettes, learner will be able to practice correctly the different communication and language etiquettes.</p>	<p>Teaching method - Observation - Demonstration - Guided class discussion - Question and answer - Role playing Evaluation procedure -Oral questions to be asked learners using the question and answer approach</p>	<p>Resources - Flip chart - Markers - Pictures - Internet access - Audio visual - Charts - Magazines References - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1</p>	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>	

SAMPLE UNIT PLANS/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

<p>From January 26th to January 30th 2016</p>		<p>Lesson 7 Values and ethics</p>	<p>Attitudes and values Having charts on communication and language etiquettes, learner will be able to appreciate different communication and language etiquettes.</p>	<p>and brainstorming during the teaching and learning process. Written exercise to be given to learners at the end of the lesson.</p>		
		<p>Knowledge and understanding Having a manual/magazine on values and ethics, learners will be able to list and describe correctly at least four values and ethics</p> <p>Skills Having a manual/magazine on values and ethics, learners will be able to correctly apply and practice values and ethics.</p> <p>Attitudes and values Having a manual/magazine on values and ethics, learners will be able to appreciate and comply with values and ethics.</p>	<p>Teaching methods</p> <ul style="list-style-type: none"> - Observation - Guided class discussion - Role playing - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Oral questions to be asked learners using the question and answer approach and brainstorming during the teaching and learning process. - Written exercise to be given to learners at the end of the lesson 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Manuals - Magazines <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 		<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>

SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

<p>Lesson 8 Body language, facial expression and body posture</p>	<p>Knowledge and understanding Having a manual/chart on Body language and facial expression, learners will be able to describe correctly body language, facial expression and body posture</p> <p>Skills Having a manual/chart on Body language and facial expression, learners will be able to practice and apply correctly the body language, facial expression and body posture</p> <p>Attitudes and values Having a manual/chart on Body language and facial expression, learners will be able to appreciate body language, facial expression and body posture</p>	<p>Teaching methods</p> <ul style="list-style-type: none"> - Demonstration - Observation - Practical work - Guided class discussion - Role playing - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Practical work to be given on performing body language, facial expression and body posture. - Written exercise to be given to learners at the end of the lesson. 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Manuals - Charts <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>
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SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

<p>From February 2nd to February 6th 2016</p>	<p>Lesson 9 Gestures and handshakes</p>	<p>Knowledge and understanding Having a manual/chart on gestures and handshakes, the learner will be able to correctly describe different gestures and handshakes. Skills Having a manual/chart on gestures and handshakes, the learner will be able to practice correctly at least two different gestures and handshakes Attitudes and values Having a manual/chart on gestures and handshakes, the learner will be able to appreciate and pay attention to different gestures and handshakes.</p>	<p>Teaching methods and techniques</p> <ul style="list-style-type: none"> - Observation - Demonstration - Practical work - Guided class discussion - Role playing - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Oral questions to be asked learners using the question and answer approach and brainstorming during the teaching and learning process. 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Manuals - Magazines <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	<p>The lesson were successfully taught. The learners actively participated in the teaching and learning process.</p>
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SAMPLE UNIT PLAN/SCHEME OF WORK FOR HOME SCIENCE CONTINUED

		<p>Lesson 10 Eating habits</p>	<p>Knowledge and understanding Having manuals/charts on eating habits, learners will be able to explain correctly the different eating habits.</p> <p>Skills Having manuals/charts on eating habits, learners will be able to apply and practice correctly the different eating habits.</p> <p>Attitudes and values Having manuals/charts on eating habits, learners will be able to appreciate and comply to good eating habits.</p>	<p>- Written exercise to be given to learners at the end of the lesson.</p> <p>Teaching methods and technique</p> <ul style="list-style-type: none"> - Observation - Presentation - Group discussion - Brainstorming - Question and answer <p>Evaluation procedure</p> <ul style="list-style-type: none"> - Oral questions to be asked learners using question-answer approach and brainstorming during teaching. - End of lesson exercise to be given to learners to assess their competence level. 	<p>Resources</p> <ul style="list-style-type: none"> - Flip chart - Markers - Pictures - Internet access - Audio visual - Manuals - Charts <p>References</p> <ul style="list-style-type: none"> - Home Science Learner's Book 1 - Home Science Teachers Guide, Learner's Book 1 - Rwanda National Curriculum, Home Science 1 	
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Functions of the scheme of work

It helps the teacher to:

- ensure orderliness and consistency of topics or concepts that are to be learnt.
- organise in advance the materials required for the week or lesson.
- plan a variety of methods of teaching or learning.
- plan different activities for the learners.
- change or improve the teacher's lessons the following year if this becomes necessary.

Format of the teacher's record of work for a subject with 2 lessons a week

After implementation of the scheme of work, the teacher should evaluate the extent to which the intended objectives of the lesson have been achieved and also find out whether the follow up has been done by the school administration through the director of studies and the Head teacher has been done.

Lesson plan

A lesson plan is a written document that shows what you intend to do in any teaching session.

In developing a lesson plan, a teacher makes a closer consideration of each topic, his or her objectives, the learning experiences the learner is supposed to acquire and the learning aids or resources he or she hopes to use for teaching. He or she thinks and practises what he or she hopes to teach. So he or she does pre-teaching and this adequately prepares him or her for effective classroom interaction. Planning and developing a daily lesson is part of pre-teaching and involves considering what subject matter to teach, characteristics of the learner for whom the lesson is meant, the desirable changes in behaviour on the part of the learner and how the lesson is expected to be presented. The stages or steps of a lesson will largely depend on the nature of the lesson and conditions under which it is to be taught.

It is important and common to identify distinct phases for planning and developing a lesson. Every lesson must have an in built system that ensures that things work well and that remedial measures may be taken when things do not work as expected.

Your lesson should have the following:

- Objectives for the lesson.
- You should show what the learners will learn.
- Learning experiences and activities including their sequence.

You should show how the learning will be achieved; the activities you will provide for the learners. You should also show a detailed pathway through the lesson, including the management of time available that is, how you provide a structure for the learning experiences.

The teacher's role in the learning:

- You should show the actions which you will take to ensure that learning takes place that is, what you will do.
- Resources for learning: You should indicate the materials and equipment which will be needed for the whole lesson that is, what you will need for yourself and for the learners.
- Assessment to be used; you should show at what point in the lesson the type of assessment you will be using. You should show what evidence you will be looking for from the learners and how you will gather that evidence that is, how you will know that learning has occurred.

Outline of a lesson plan process

The following is an outline of what is involved in lesson planning.

- Plan what information you will put at the start of your lesson plan.
- Define the objectives.
- Plan the introduction.
- Plan the teaching and learning strategies that is, the learning experience or the learner's activities (skills to be learnt).
- The teacher's role/activities (teaching strategy).
- The resources.
- Activities within the lesson and outside lesson period.

Write out the lesson procedure sequence

- Plan the conclusion.
- Plan the follow-up.
- Plan the assessment.

SAMPLE COMPETENCE BASED LESSON PLAN FOR S1 HOME SCIENCE

School Name: INEZA SECONDARY SCHOOL

Teacher's name: KEITESI ESTHER

Term	Date	Subject	Class	Unit number	Lesson number	Duration	Class size
1	5 th / Jan/2016	Home Science	S.1	1	1 of 10	40 minutes	35
Type of special educational needs to be catered for in this lesson and number of learners in each category		- Hearing impairment (3) Learners with hearing impairment should sit at the front - Visual impairment (2) Learners with visual impairment should sit at the front. Arrange for the braille book if the learner is completely blind.					
Unit title		Personal health and etiquettes					
Title of the lesson		Personal hygiene maintenance					
Instructional objective		Having personal hygiene materials, the learner will be able to apply and perform correctly good personal hygiene practices					
Plan for the class (Location: In/Outside)		Inside the classroom					
Learning materials (For all learners)		- Pens and learners books - Personal hygiene materials for example tooth brush, bathing sponge, razor blade, bathing soap etc. - Braille learner books if there are blind students in the class. <i>Note: Teacher will remind learners with hearing impairment to wear their hearing aids</i>					
References		-Home science learners' book one - Home science teachers' guide book one - Rwanda national curriculum, home science - English dictionary					

Steps/timing	Description of teaching and learning activity		Generic competences and cross cutting issues to be addressed
	Teacher brings materials used to maintain personal hygiene, learners observe, discuss, ask questions and practice the use of these materials		
	Teacher's activities	Learner's activities	
Introduction 5 minutes	-Ask questions which guide learners to discuss how to maintain good personal hygiene Possible questions 1. <i>What are common ways of maintaining personal hygiene?</i> 2. <i>What are the common materials that are used in maintenance of good personal hygiene?</i> -Announce the new lesson title i.e. good health practices	-Answers to the questions Possible answers 1. <i>Bathing, cutting finger nails, trimming off hair, brushing teeth every after meals.....</i> 2. <i>Soap, bathing sponge, tooth brush.....</i>	a)Competences Critical thinking Learner will think about different ways of maintaining good personal hygiene.
Development of the lesson 30 minutes	- Having a razor blade, bathing sponge, soap and toothbrush which are used in maintaining personal hygiene, the teacher brings them to class. - Let the learners observe and discuss the use of razor blade, bathing sponge, soap and toothbrush in maintenance of personal hygiene. - Ask questions related to the use of a razor blade, bathing sponge, soap and toothbrush in maintenance of personal hygiene.	-Observe materials used in maintaining personal hygiene which include razor blade, bathing sponge, soap and toothbrush. - Observe and discuss the use razor blade, bathing sponge, soap and toothbrush in maintenance of personal hygiene and later present a report on findings. - Answer the questions related the use of razor blade, bathing sponge, soap and toothbrush in maintenance of personal hygiene.	Critical thinking Learners observe and think about the different uses of materials used in maintaining personal hygiene. Communication The working group of classmates provide an open environment to group members which facilitate communication

	<p>Possible questions</p> <ol style="list-style-type: none"> 1. How do you use a razor blade, bathing sponge, soap and a toothbrush during maintenance of personal hygiene? 2. Group materials according to their specific task: a razor blade, bathing sponge, soap and a toothbrush 3. Ask them to discuss in their groups how razor blade, bathing sponge, soap and toothbrush are used. 4. Ask them to demonstrate carefully and correctly how razor blade, bathing sponge, soap and toothbrush are used in the maintenance of personal hygiene. 	<p>Possible answers</p> <ol style="list-style-type: none"> 1. They are used to cut finger nails, bathing, washing hands and brushing teeth. 2. They can be grouped according to specific tasks as follows: tooth brush is used for maintaining oral hygiene, bathing sponge, soap and razor blade for body hygiene. 3. Different groups are discussing different materials. For example; Group 1: Razor blade Group 2: Toothbrush Group 3: Soap Group 4: Bathing sponge 4. Under supervision of the teacher, learners demonstrate the use of razor blade, bathing sponge, soap and toothbrush in the maintenance of personal hygiene. 	<p>b) Cross cutting issues</p> <p>PEACE AND VALUES</p> <p>When using materials used in maintaining personal hygiene, there is need to pay attention to safety precautions in order to prevent accidents.</p>
<p>Conclusion and lesson assessment</p> <p>5 minutes</p>	<p>Summary</p> <p>-Ask the learners what they have learned in today's lesson and also what they have learned from each other.</p>	<p>Learners summarize what they have learned in today's class.</p> <p>Some learners also present what they learnt from their fellow learners during the lesson</p>	

	<p>Assessment</p> <p>-Ask questions to review common materials used in maintenance of personal hygiene</p> <p>Possible questions:</p> <ol style="list-style-type: none"> 1. What are the common practices in personal hygiene maintenance? 2. What are the common materials used in maintenance of personal hygiene? 3. How can you safely use materials used in maintaining personal hygiene? 	<p>-Answers to the question</p> <p>Possible answers:</p> <ol style="list-style-type: none"> 1. Bathing, cutting finger nails, brushing teeth..... 2. Tooth brush, razor blade, bathing sponge..... 3. Cleaning and hanging the tooth brush after use, rinsing and hanging bathing sponge, putting a razor blade back in its wrapping paper..... 	
<p>Teacher's self-evaluation</p>	<ol style="list-style-type: none"> 1. Were all the learners able to select, and demonstrate safely the use of materials used in maintaining personal hygiene? 2. Were the lesson objectives satisfactorily met? 3. Are there any changes needed in the teaching approach? 		

Things to write at the beginning of the lesson plan

Indicate the name of the subject and the class for which the plan is made. The date and time should be indicated in the plan to remind you when the lesson will be held. The number of learners in the class to help you gauge the required quantity of materials must also be recorded. Additional preliminary information to be included in the lesson plan is:

- The topic or subtopic for the lesson.
- General or specific objectives.
- Activities or Method(s).
- Resources.

Defining objectives of the lesson

These will indicate the content of learning and what you intend the learners to learn in terms of:

- Knowledge and understanding.
- Skills.
- Attitudes.

The difficulty in defining the objective is related to time. The objective must be something which can be learnt within the period allocated for the lesson. Think about the objectives and the time which has been suggested. If you think the particular objective should be covered in several lessons, then break the objective into components. The objectives are important in showing you and the learners where you are going and so you must define the objectives for every lesson.

Plan the introduction

Refer to previous work or experience or lessons. Remind the learners by asking them open questions about their experience or what they remember from the previous lesson. Introduce the objective in some way. Explain the direction and goal and meaning of the lesson. Emphasise relevance. This may be done by:

- Telling a story.
- Explaining problems which the lesson may solve.
- Giving examples of application of the new learning and
- Asking questions which bring out relevance. Indicate how and when the lesson will be assessed.

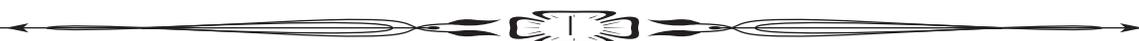
Planning the teaching or learning strategy

The teaching or learning process must be executed in the most effective way. After defining the objective to be achieved within the lesson, a teacher should decide which type of teaching method he or she is going to use in order to achieve the objective. He or she should note down the skills which the learners will develop as a consequence of using selected teaching methods and how he or she will check for the learning of the skill. Next, the teacher should think of the resources needed to support the strategy. The teacher should then divide the activities those which can be done within the lesson and those which will be done outside the lesson as homework or those which are to be continued. Finally, the teacher should write out the lesson procedure in sequence indicating what has been discussed above.

Plan the conclusion of the lesson

The following are ways by which a teacher can summarise a lesson:

- Asking the class to say what they have learnt.
- Reviewing the main points;
- Summarising by giving notes.



Plan the follow-up

Most lessons need to be followed up by the learners to consolidate their learning by doing exercises or project work.

Plan the assessment

Assessment during the lesson;

Methods of assessment during the lesson are:

- Observation when demonstrations are going on.
- Listening to presentations.
- Questioning from the learners and the teacher.
- Examining or analysing: written outcomes; drawings; models and others during the lesson on content.
- Give exercises to be handed back.
- Observe while an activity is taking place.
- Assess group work and discussion.
- Ask a number of appropriate questions.

Assessment later

At the end of every lesson, prepare an assessment to test that particular objective. They might be:

- Short answer questions; projects; structured questions.
- Keep these to be used in a weekly or monthly test, a continuous assessment programme or an end of term examination.
- Resources

List down the following

- Resources for the teacher.
- Resources for the learners.
- Space needed.
- Time needed.

To sum up, you should write brief notes on the points or questions given below when writing a lesson plan.

- Introduction of lesson.
- Review of previous lesson.
- Stimulus.
- Teaching approach or style.
- How to integrate a topic with the learner's experience

➤ Teaching Sequence

- The teaching of topics should follow the order in which the topics have been arranged in this teacher's guide which is also in harmony with the syllabus arrangement. Different topics lay a foundation for other topics and as such, some topics cannot be effectively taught unless the foundation topics have been taught.

The teaching sequence for Grade Ten is as follows:-

- Home Science
- Production
- Industry
- Contracts
- Home trade
- Buying and selling on credit.

Time allocation

- The teacher should study the school timetable to determine the total number of periods allocated to the subject and from that point, determine what amount of time to allocate each topic. This is to eliminate spending too much time on one topic and then fail to complete all topics within the one year.
- The teacher should also plan for time to engage in other teaching activities especially debates, field visits and evaluation exercises. The time allocated against each topic or unit in this teacher's guide is therefore, indicative and may be adjusted to suit specific needs and unique situations in the school.
- Breakdown and time allocation.
- This teacher's guide is based on a minimum of five lessons per week. As said, the teacher should put into consideration time for non-lesson activities and evaluation activities.
- The teacher should plan to break down all the available time in a schedule as below:

The 8 lessons provided for activities may be allocated as follows:

4 lessons for field visits

2 lessons for a guest speaker

2 lessons for group activities

The 8 lessons provided for evaluation may be allocated to have a test or examination at the end of each topic or in other way fit and appropriate:

Evaluation

Assessment is a key tool that every teacher should use to measure the teaching and learning process. Assessment involves collecting information about the learner's progress in relation to the targets set by the curriculum and the teacher.

Evaluation creates a reliable picture of how individual learners are progressing in relation to the desired knowledge and competencies. Without assessment, it is difficult to know how much is being done by the teacher.

Assessment of the learners by the teacher can be done in the following forms:

- Continuous assessment
- Summative assessment

Continuous assessment can be formal or informal but both will help the teacher gather the needed information on learner's progress. The teacher should use the results of the assessment process to adjust the teaching process if it is discovered that the learners are not progressing as required.

The teacher should conduct some assessment for every unit and every lesson.

Informal assessment can be done during the teaching process. This is a quick method that involves observation and oral questions and answers. It may also involve short tests and quizzes. From the answers and responses, the teacher should be able to know the rate of progress on a particular topic.

More formal assessment can be done using any of the following methods:

- Tests and examinations
- Learner projects
- Presentations
- Debates

The teacher should use the results of the assessment to adjust the teaching methods for effective learning.

Summative assessment will be done by the teacher at the end of the month, term or year. The teacher may also do assessment on completion of each individual topic.

Examination format for national examinations

While undertaking evaluation, the teacher should get the learners used to national examination format questions. End of term and end of year exams should as much as possible follow the national examinations format, question structure and time allowance.

CONTENT MAP

Item	Unit 1: PERSONAL HEALTH AND ETIQUETTES
Number of periods	10
Introduction	Definition of personal hygiene. This unit covers aspects and principles of maintaining good personal health which include; importance of maintaining good personal hygiene, indices of good health, physical exercise, sleep, periodical medical check-up. It also looks at personal and professional etiquettes and these include communication and language, values and ethics, body language and eating habits.
Classroom organisation	Using the group work method so that quick learners can support the slow learners. Classroom sitting arrangement, pair work, individual, group presentations, notes taking.
Equipment required	Flip charts, markers, flip chart stand, audio visual, internet access, pictures, water, soaps, hand wash basin, hand towels, equipped wash rooms.
Activities	<p>Individual observation and photo interpretation to identify practices of personal hygiene and indices of good health. Demonstrating some physical exercises.</p> <p>Group work discussions should be made to understand the use of periodic medical checkups, Listening or watching video clips to understand the importance of eating a balanced diet, the proper personal etiquettes like communication, body language, eating habits. Carrying out research or reading about personal and professional etiquettes, role playing, sharing experiences, some etiquettes and writing the findings in note books.</p>
Competencies practised	<p>Observation and critical thinking using photographs.</p> <p>Skills through group works, research and problem solving using the learning activities, interpreting photographs.</p> <p>Communication and cooperation in group works and group presentations.</p>
Language practised	Speech development, English fluency, learning new vocabulary words.
Vocabulary acquisition	Learning new words like etiquettes, ethics, values, indices, personal hygiene and good health.

Numeracy	By knowing how many times a person should take bath, eat and how many hours to sleep and how often the person should visit the hospital for a medical check up.
Study skills	Communication in group works, listening using video clips and internet websites, observation of images and photographs, speaking, researching, questioning and answering.
Revision	Learner's activities and exercises at the end of lessons
Assessment	Formative assessment on the definitions of words, maintaining good personal health and questions about personal and professional etiquettes.
Learning outcomes	Learners appreciate the importance of personal health, comply with the principles of personal health and comply with good personal health and etiquette presentation.
Cross-cutting issues	Inclusion of learner with special needs in all activities especially using demonstrations and role plays for learners who do not hear properly, use of audio-visual clips and touch materials to allow the blind and deaf learners to hear or touch. In groups, encourage girl learners to participate. Sustainability of environment by encouraging learners to eat freshly harvested foods and be encouraged to plant foods that make up a balanced diet.

Item	Unit 2: DECORATION COLOURS
Number of periods	9
Introduction	Definition of colours, types of colours, principles and use of colours, types of decorative materials, tools and equipment.
Classroom organisation	Using group works so that some quick learners can support the slow learners. Classroom sitting arrangement, pair work, individual, group presentations, notes taking.
Equipment required	Decoration tools, such as threads, pins, paper, markers, pencils, paints and painting brushes, ropes, flowers, decoration textiles such as cotton, nylon, internet, pictures and audio-visual.
Activities	Individual participation in identification of colours. Group discussions should be made to understand colours, their applications and decorative materials.

Competencies practised	Observation, skills through group works, research and problem solving using the learning activities.
Language practised	English fluency, learning new vocabulary words
Vocabulary acquisition	Learning new words like hue, decorate, spectrum, primary colours, secondary colours, tints, shades, complementary colours, values, ornaments, design.
Numeracy	By counting different types of colours,
Study skills	Communication in group works, speaking, researching, questioning and answering.
Revision	Learner's activities at the end of lessons.
Assessment	Formative assessment on the definition and types of colours, principles and use of colours and types of decorative materials, tools and equipment.
Learning outcomes	Learners appreciate the different types of colours and their application at home, recognise decorative materials, tools and equipment.
Cross-cutting issues	Inclusion of learners with special needs in all activities. In groups, encourage girl learners to fully participate in all discussions.

Item	Unit 3: SOURCES OF FIBRE
Number of periods	6
Introduction	<p>Source and characteristics of fibres</p> <ul style="list-style-type: none"> ○ Natural <ul style="list-style-type: none"> ▲ Plant or vegetable fibres ▲ Animal fibres ▲ Mineral fibres ○ Artificial or Man-made <ul style="list-style-type: none"> ▲ Regenerated fibres ▲ Synthetic fibres ▲ Inorganic fibres
Classroom organisation	Using group works so that some quick learners can support the slow learners. Classroom sitting arrangement, pair work, individual, group presentations, notes taking.

Equipment required	Fibres, natural, animal and artificial internet projectors, scissors, working tables, audio and visual images , flip charts and markers
Activities	Group discussion on source and types of fibre and make a presentation. Individual practice on experimentation of characteristics of fibres.
Competencies practised	Learners should be able to identify types of fibres and explain their characteristics.
Language practised	Speech development, English language fluency, learning new vocabulary words.
Vocabulary acquisition	Polymers, elasticity, fibres, synthetic fibres, mineral fibres, natural fibres, regenerated fibres.
Numeracy	By interpreting photographs, video clips
Study skills	Communication in group works, listening using video clips and internet websites, observation, speaking, researching, questioning and answering.
Revision	Revision exercises are included in text and at the end of each unit.
Assessment	Formative and summative assessment is administered. Learners are able to identify types of fibres and explain their characteristics.
Learning outcomes	Identifying sources of fibres and their characteristics. Recognising sources of fibres and their characteristics. Paying attention to natural and artificial fibres.
Cross-cutting issues	Inclusion of learners with special needs in all activities especially using magnifying lenses for learners that do not see properly, use of audio-visual clips and touch materials to allow the blind and deaf learners to hear or touch. In groups, encouraging girl learners to participate. Analysing the environment in relation to rocks, man's activities and soils.

Item	UNITS 4: SEWING MATERIALS, TOOLS AND EQUIPMENT FOR BASIC STITCHES
Number of periods	9
Introduction	<p>Sewing materials, tools and equipment: Needle, scissors, tape measure, pins, metre rule, tracing machine sewing threads</p> <p>Pressing equipment: ▲ iron ▲ ironing board</p> <p>Identification of basic stitches and their technique. Running, back, blanket, herring bone, satin, stem, chain, faggoting, feather.</p>
Classroom organisation	Using group works so that quick learners can support the slow learners. Classroom sitting arrangement, pair work, individual, group presentations, notes taking.
Equipment required	Fabrics, sewing needles, carbon papers, pins, scissors, metre rule, paper, tape measure, sewing machine, sewing threads, pressing equipment.
Activities	<p>Group discussion and presentation on sewing materials, tools and equipment.</p> <p>Individuals practise on use of sewing materials, tools and equipment.</p> <p>Research activity and presentation on basic stitches and their techniques.</p> <p>Individuals practise on making simple objects using basic stitches.</p>
Competencies practised	<ul style="list-style-type: none"> ▲ Identifying sewing materials tools and equipment. ▲ Explaining basic stitches and their techniques. ▲ Manipulating sewing materials tools and equipment. ▲ Applying basic stitches on simple objects. ▲ Showing concern using sewing materials, tools and equipment. ▲ Ability to use basic stitches on simple objects.
Language practised	Speech development, English language fluency, learning new vocabulary words.

Vocabulary acquisition	Herring bone stitch, running, a stitch and thread. Chain stitch, faggoting, feature, metre rule,
Numeracy	By interpreting photographs, video clips
Study skills	Communication in group works, listening using video clips and internet websites, observation, speaking, researching, questioning and answering.
Revision	Revision exercises are included in text and at the end of the unit.
Assessment	Formative and summative assessment to be administered. Learners are able to identify basic sewing materials, tools, equipment and sew basic stitches.
Learning outcomes	Identifying sewing materials tools and equipment. Explaining basic stitches and their techniques.
Cross-cutting issues	Inclusion of learners with special needs in all activities especially using magnifying lenses for learners that do not see properly, use of audio-visual clips and touch materials to allow the blind and deaf learners to hear or touch. In groups, encouraging girl learners to participate. Analysings environment in relation to rocks, man's activities and soils.

Item	Unit 5: FOOD HYGIENE AND SAFETY TECHNIQUE
Number of periods	7
Introduction	In this unit, the teacher should endeavour and makes sure that learners know the importance of hygiene and sanitation at the workplace, food hygiene procedures that involve; cleaning and sanitising procedures, hygienic food handling and appropriate handling and disposal of garbage.
Classroom organisation	Using group works so that quick learners can support the slow learners. Setting clear goals for the learners to understand the unit, class orientation, pair and individual work , organised classroom sitting arrangement.
Equipment required	Utensils, fridge, cooking stoves, food shelves, food thermometer, food warmers, cupboards, stainless working tables, cleaning agents and materials kitchen sanitizer, gloves, cutting boards, hair nets, garbage bags, dust bins, containers and kitchen uniforms.

Activities	Observing the photographs/ images of people cooking in different places and interpreting them, individual practice of food handling according to food hygiene procedures, demonstrating proper ways of hygienic handling of food, observing the kitchen garbage and categorising it, practicing how to dispose of solid and liquid refuse, demonstrating how to care for the refuse bin and how to line it.
Competencies practised	<p>Knowledge and understanding through observation and critical thinking on photographs.</p> <p>Communication and cooperation skills through group works, and debates and problem solving using the learning activities.</p> <p>Photographic interpretation and analysis.</p> <p>Developing positive attitudes towards workplaces and keeping them hygienic.</p>
Language practised	Speech development through group discussion, debates and presentations, English fluency and learning new vocabulary words.
Vocabulary acquisition	Learning new words like detergents, abrasions, disinfectant, galvanised, inorganic refuse, refuse and sanitation.
Numeracy	By knowing that food should not be kept in the fridge for more than 24 hours and they should also take note of the sell by date.
Study skills	Communication in group works, research using video clips and internet websites, observation of geographical phenomena, listening, reading, researching, questioning, answering and notes writing.
Revision	Learner's must do exercises and activities in each lesson.
Assessment	Assessment on the definitions, importance of food hygiene and sanitation at workplace, on ways of cleaning and sanitising at workplace, ways of proper hygienic handling of food, examples of inorganic and organic refuse, methods of disposing solid and liquid refuse.
Learning outcomes	<p>Explaining the importance of food hygiene and sanitation at the workplace.</p> <p>Stating hygiene procedures accordingly.</p>

Cross-cutting issues	Inclusion of learner with special needs in all activities. Use of audio-visual clips and touch materials to allow the blind and deaf learners to hear or touch. In groups, encourage girl learners to participate in all activities.
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Item	Unit 6: Food nutrients selection principles
Number of periods	10
Introduction	In this unit, the teacher will ensure that learners know types of food nutrients which are proteins, vitamins, carbohydrates, fat and mineral salts then principles of food nutrients selection which include growth, physical activities level, pregnancy, adequacy balance, caloric control and vegetarian diets.
Classroom organisation	Using group works so that quick learners can support the slow learners. Setting clear goals for the lesson. Guiding and orienting learners where possible to use internet websites. Use of individual, pair work or group works.
Equipment required	Stores, fridge, containers and kitchen uniforms, aprons washing sinks ,food containers, fast internet, different types of foods, food labels, working tables and food shelves, weighing scales, charts, pictures audio and video images, gloves, and cutting boards.
Activities	Group research, discussion and presentation about different types of food nutrients, displaying foods rich in different nutrients, drawing and passing charts or internet photographs around showing deficiency diseases of vitamins and minerals, watching and listening to a video clip showing fat, its definition, functions, sources, and effects of excess and deficiency in the body.
Competencies practised	Knowledge and understanding through observation and critical thinking on photographs. Cooperation and communication skills through group works, research and problem solving during learning Photographic interpretation and analysis, team work development, ICT and internet development skills.
Language practised	Communication and cooperation in English language through discussions and group presentations. Learning of new words.

Vocabulary acquisition	Learning new words like carbohydrates, deficiency, excess, fat, food, mineral salts, nutrients, proteins, and vitamins.
Numeracy	By knowing the amount of nutrients needed in the body that is the recommended daily allowance
Study skills	Communication in group works, research using video clips and internet websites, observation of photographs and charts, listening, watching and analysing, researching, questioning and answering
Revision	Learner's activities and exercises at each lesson.
Assessment	Assessment on definitions, functions, food sources, effect of excess and deficiency and principles of food nutrient selection.
Learning outcomes	Learners will demonstrate different types of food nutrients and they apply principles of food nutrient selection.
Cross-cutting issues	<p>Inclusion of learners with special needs in all activities especially using audio-visual clips. In groups, encourage female learners to participate in all discussions and activities.</p> <p>Environmental sustainability where by some foods can be displayed in more than one lesson whereby after using them let say foods displayed during the lesson of proteins can be preserved and be used during the lesson for fats.</p>

Item	Unit 7: OCCUPATION AND KITCHEN
Number of periods	10
Introduction	Definition of occupation, working conditions, kitchen orientation, kitchen materials, tools and equipment, stock and sauces.
Classroom organisation	Using group works so that quick learners can support slow learners. Classroom sitting arrangement, pair work, individual, group presentations, notes taking.
Equipment required	Regular internet audio visual images, wall clocks, measuring tools and materials, different foods, utensils, cooking stoves, working tables, cutting boards, different ingredients, salamanders, ovens, different knives refrigerators, microwaves.

Activities	Practical lessons, group work discussion, observation of different kitchen tools and equipment, preparation of stock and sauces, doing research or reading cookery magazines and journals.
Competencies practised	Preparation of basic dishes, skills through group works, research and problem solving using the learning activities, application of kitchen maintenance procedures.
Language practised	English language fluency, learning new vocabulary words.
Vocabulary acquisition	Learning new words like sauces, stock, kitchen equipment, occupation, blender, food processor, toaster, kitchen orientation.
Numeracy	By counting different kitchen equipment
Study skills	Communication in group works, speaking, researching, questioning and answering.
Revision	Learner's activities at the end of lessons.
Assessment	Formative assessment on the definition, kitchen materials and equipment, vegetable cuts, stock and sauces.
Learning outcomes	Learners appreciate the importance of rocks and their relationship to man.
Cross-cutting issues	Inclusion of learners with special needs in all activities for example, use of audio-visual clips and touch materials to allow the blind and deaf learners to hear or touch.

Item	Unit 8: PASTRY AND BAKERY PRODUCTS
Number of periods	8
Introduction	Definition of baking, bread making, cake making, scones, biscuits, pastry making and baking ingredients.
Classroom organisation	Using group works so that quick learners support slow learners. Classroom sitting arrangement, pair work, individual, group presentations, notes taking.
Equipment required	Geographical documents, rock samples, illustrations, photographs of different rocks, video clips and Internet websites, rock samples in local or school environments, tactile and talking materials, magnifying lens.

Activities	Individual observation, group discussions to understand cakes, pastry, bread, scones, biscuits as well as baking ingredients. Practicals on baking to enable learners learn and master how to prepare different baked items.
Competencies practised	Ability to prepare different baked items. Skills through group works and problem solving using the learning activities. Communication and cooperation through group presentations and group work.
Language practised	Speech development, English fluency and use of vocabularies.
Vocabulary acquisition	Learning new words like pastry, baking, bread, scones, biscuits, cakes, pastry glazes, batter.
Numeracy	Measurement of quantities of ingredients needed during baking, calculations concerning nutritive value and counting ingredients.
Study skills	Communication in group works, researching, questioning and answering and practical competence.
Revision	Learner's activities at the end of lessons.
Assessment	Formative assessment on the definitions, qualities of different baked products and baking ingredients.
Learning outcomes	Learners appreciating the importance of bread and yeast, demonstrating dough and yeast products as well as choosing ingredients according to different pastry and bakeries.
Cross-cutting issues	Inclusion of learners with special needs in all activities especially using magnifying lenses for learners that do not see properly, use of audio-visual clips and touch materials to allow the blind and deaf learners to hear/touch. Ensuring maximum participation of both girls and boys.

Unit 1

PERSONAL HEALTH AND ETIQUETTES

	Lesson map
Lesson 1	Personal hygiene maintenance
Lesson 2	Good health practices
Lesson 3	Performing physical exercise
Lesson 4	Periodic medical checkups and sleeping
Lesson 5	Eating a balanced diet
Lesson 6	Communication and language etiquettes
Lesson 7	Values and ethics
Lesson 8	Body language, facial expressions and body posture
Lesson 9	Gestures and handshakes
Lesson 10	Eating habits

Learner's Book, page 1.

Introduction

This unit covers aspects and principles of maintaining good personal health which include; importance of maintaining good personal hygiene, indices of good health, physical exercise, sleep, periodical medical check-ups and it also looks at personal and professional etiquettes which include; communication and language, values and ethics, body language and eating habits.

Key Unit Competency:

Learners should be able to state, apply and implement the principles of personal health and etiquettes in their daily lives.

Specific Outcomes

By the end of this unit, learners should be able to;

- ▲ explain the importance of maintaining good personal hygiene.
- ▲ outline the indices of good health.
- ▲ give the importance of physical exercises, sleep and periodic medical check ups.
- ▲ state the personal and professional etiquettes that are communication and language, values and ethics, body language and eating habits.
- ▲ apply personal and professional etiquettes in their real life that is, communication and language, values and ethics, body language and eating habits.

Instructional Materials

- | | |
|-------------------|----------------------|
| ▲ Flipcharts | ▲ Hand towels |
| ▲ Markers | ▲ Equipped washrooms |
| ▲ Flipchart stand | ▲ Textbook |
| ▲ Audio visual | ▲ Workbook |
| ▲ Internet access | ▲ Handouts |
| ▲ Pictures | ▲ Tests |
| ▲ Water | ▲ Worksheets |
| ▲ Soaps | ▲ Chalkboard |
| ▲ Hand wash basin | ▲ Graphs |

Skills

- ▲ Apply good personal health principles.
- ▲ Perform personal and professional etiquettes.

Attitudes and values

- ▲ Appreciating the value of maintaining good personal health.
 - ▲ Complying with principles of good personal health.
 - ▲ Maintaining good personal health and etiquette presentation.
-

LESSON 1

PERSONAL HYGIENE MAINTENANCE

Learner's book, page 1

Instructional objective

Having personal hygiene materials, learners will be able to apply and perform good personal hygiene practices correctly.

Teaching Methods

- ▲ Group discussions on the importance of good personal health.
- ▲ Demonstrations on how to maintain good personal health.
- ▲ Displaying items used to maintain good personal health.

Competences to be developed

- ▲ Critical thinking
- ▲ Problem solving
- ▲ Appreciating good hygiene
- ▲ Communication

Teaching methodology

The teacher will guide learners to form groups of five.

In groups, learners will discuss the importance of maintaining good personal health.

Group leaders will present their work to the rest of the class.

The teacher will give clarification on learners' contributions where necessary.

Learners should bring in class the different items used in maintaining personal health.

The teacher will supervise learners as they are learning the tables and answering the questions in their books which the teacher will mark during his/her free time.

Learner's activity

- Talk about hygiene routines.
 - What needs to happen everyday?
 - What tasks do you do in the morning?
 - What tasks do you do in the evening?
 - What tasks do you do throughout the day?
 - What needs to happen about once a week?
 - What only happens occasionally?
- Show students a sample hygiene routine – what adjustments need to be made?

Calling upon learners to demonstrate different ways of maintaining good personal health.

Carrying out a class practical to do some activities involved in maintaining personal health like; brushing the teeth, bathing the body, combing the hair, washing clothes, cutting nails short and so on.

Fill in gaps using the words below this task.

Body, Cleaning, Hair, Soap, Activities, clean clothes, clothes, the nose, coughing, germs, brushing.

Good personal hygiene habits;

1. Washing theoften. If possible, everybody should have a shower or a bath everyday.
2. the teeth at least once a day. Brushing the teeth after each meal is the best way of making sure that gum disease and tooth decay are avoided. It is very important to clean teeth after breakfast and immediately before going to bed
3. Washing thewith soap or shampoo at least once a week washing hands with soap after going to the toilet
4. Washing hands withbefore preparing and/or eating food. During normal dailysuch as working and playing, disease causing germs may get onto the hands and under the nails. If the germs are not washed off before preparing food or eating, they may get onto the food
5. Changing into..... clothes. Dirty clothes should be washed with laundry soap before wearing them again
6. Hangingin the sun to dry. The sun's rays will kill some disease-causing germs and parasites
7. Turning away from other people and coveringand mouth with a tissue or the hand whenor sneezing. If this is not done, droplets of liquid containingfrom the nose and mouth will be spread in the air and other people can breathe them in, or the droplets can get onto food

Evaluation

Determine the learners' ability to maintain good personal hygiene.

Expected answer to the table given in learners book, page 3

Table number 1.1

1. Learners demonstrate perfectly how to use toothbrush, bathing soap and razerblade.
2. The practices shown and their importance in table number 1.2 page 3.
 - eating a balanced diet: to be healthy.
 - boiling drinking water: to prevent diseases like typhoid and bilharzia.
 - doing exercise: to have a strong and healthy body.

Additional notes

Maintaining personal hygiene is necessary for many reasons; personal, social, health, psychological or simply as a way of life. Keeping a good standard of hygiene helps to prevent the development and spread of infections, illnesses and bad odour.

Most people are very conscious of personal hygiene because:

- ▲ We are taught of the importance of hygiene from an early age.
- ▲ We may have been “picked-on” at school for a one-off or a peristent hygiene problem. This may even have been an issue mistakenly related to hygiene by others - such as head lice.
- ▲ It is considered a way of making ourselves more attractive to the opposite sex.
- ▲ It is off-putting to our friends and colleagues if we smell unpleasant and so on.
- ▲ We’re aware of health problems that can develop as a result of poor personal hygiene.

Body image

Body image influences self-esteem, confidence and motivation. Those who already have low self-esteem and especially those with depression often neglect personal hygiene which perpetuates the problem of poor body image.

Many forms of modern media including magazines, fashion, TV, film and the internet present a certain body image as being “acceptable” or “expected”. Young children and teenagers are especially influenced by this; physical appearance being the ultimate factor by which to judge and be judged.

To youngsters, teenagers and those who care for them, there are three things to remember:

- ▲ The first thing to accept is that you may probably never look like those perfect specimens in the media but you can, and will look good to most people if you follow basic personal hygiene principles.

- ▲ Secondly, your actions and the way you behave are more important to most people than the way you look.
- ▲ Thirdly, good hygiene practices help to keep you healthy, give you confidence and be pleasant for those around you.

Social reasons

Most people hate to be talked about, especially in a negative manner. By ensuring that our body is clean and well-presented, we are more assured of projecting a positive body image that reflects our personalities.

Children should be taught the importance of hygiene and how to achieve good hygiene very early to keep themselves and others healthy and to reduce the risk of being bullied at school.

Health reasons

Poor hygiene can lead to poor health. If you have cut yourself, the wound should be cleaned and dressed suitably, this can help reduce the risk of infection and pain. Conditions such as head lice, athlete's foot and so on should be treated immediately to prevent further infections and spread to others.

Hand washing cannot be emphasised enough as this simple action can prevent a plethora of illnesses and disorders developing. Many people 'forget' to wash their hands after using the toilet or before handling foods; this can cause a great deal of illness and even death.

Psychological issues

By being well-presented, clean and tidy, people can feel more confident, especially in social situations. Our chances of succeeding either in work or social settings, or even with the opposite sex can be altered by maintenance of good hygiene.

Maintaining hygiene practices helps to reduce the risks of ill health, but equally important affects how we and others perceive ourselves and can influence our levels of confidence and self-esteem which can affect many aspects of our lives.

Limiting alcohol use and avoiding smoking also leads to good personal health.

Personal health also depends partially on the social structure of a person's life. The maintenance of strong social relationships, volunteering, and other social activities have been linked to positive mental health and even increased longevity. In contrast, prolonged psychological stress may negatively impact health, and has been cited as a factor in cognitive impairment with aging, depressive illness, and expression of disease.

LESSON 2

GOOD HEALTH PRACTICES

Learner's book, pages 3-8

Instructional objective

Having materials and tools that are used to promote good health, learners will be able to correctly demonstrate and apply good health practices.

Teaching methods

- ▲ Investigating the principles of good personal health.
- ▲ Guided class discussion on the indices of good personal health.
- ▲ Practising good personal health.

Competences to be practised

- | | |
|---------------------|-------------------------|
| ▲ Critical thinking | ▲ Practical work |
| ▲ Communication | ▲ Brainstorming |
| ▲ Observation | ▲ Questions and answers |

Teaching methodology

The teacher will guide the learners to form two groups to give the indices of good personal health.

Learners will define good health and the teacher will give clarifications where necessary.

Guide the learners in practising the indices of good health.

Learner's activity

Debating on the indices of good personal health.

Evaluation

Determine the learners' ability to identify indices of good personal health.

Expected answers to the table. Refer to Learner's Book, pages 4-5.

Answer to activity 1.3

- indices of good personal health.
- practicing good personal hygiene.
- eating a well balanced diet.
- having enough rest and sleep.
- doing regular physical exercises
- having regular medical checkups.
- having clear bright skin and eyes.
- having strong teeth, gum, hair and nails.
- having regular and healthy bowel movement.

- when joints and muscles can flex with ease.
- having urine that is clear.
- having consistent temperature.
- when you are free from cravings of certain foods and drinks.

	Practice	Importance
1	Practising good personal hygiene	<ul style="list-style-type: none"> - prevents development of bad odour. - helps one to gain respect in society. - prevents diseases like scabies and ringworm. - increases one's confidence and self-esteem. - helps one to feel good within.
2	Eating a well-balanced diet	<ul style="list-style-type: none"> - provides the body with energy for various activities and body processes. - repairs damaged tissues for quick recovery in sickness. - helps in weight management. - protects the body against diseases.
3	Having enough rest and sleep	<ul style="list-style-type: none"> - boost immune function. - improves metabolism. - improves one's memory. - improves one's ability to learn.
4	Doing regular physical exercise	<ul style="list-style-type: none"> - they help to control body weight. - exercise help to manage and reduce health conditions and diseases like diabetes, hypertension and so on. - they help to improve the mood of someone. - they help to boost energy hence improving the strength of muscles and personal endurance.
5	Having regular medical checkups	<ul style="list-style-type: none"> - helps to prevent diseases like diabetes that can be prevented by having one's sugar levels checked. - lowers the cost of healthy care as many diseases are prevented.
6	Having enough fresh air and sunshine	<ul style="list-style-type: none"> - having fresh air clears the lungs enabling one to take deeper and longer breaths of air, this improving oxygen flow and energy production. - they improve overall health of someone. - they reduce stress and depression. - they improve sleep

Additional notes

Good personal health is one of the most effective ways of protecting ourselves and others from illness. Good habits can help to control body odour and bad breath and help to promote a good feeling about oneself.

LESSON 3

PERFORMING PHYSICAL EXERCISE

Learner's book page 8

Instructional objective

Having pictures and manuals on physical exercise, learners will be able to demonstrate and practice correctly atleast four types of physical exercises.

Teaching methods

- ▲ Pair work to list some of the physical exercises.
- ▲ Brainstorming the importance of physical exercises.
- ▲ Practising some physical exercises.

Competences to be practised

- ▲ Critical thinking
- ▲ Communication

Teaching methodology

Guiding learners to pair up and list some of the physical exercises they know.

Taking the learners out to the field to practise some of the physical exercises.

Giving clarification where necessary.

Letting the learners brainstorm the benefits of doing physical exercises.

Harmonise and emphasise the main points where necessary.

Learner's activity

Take the learners out to the field to practise some physical exercises.

Evaluation

Determine the learners' ability to correctly give the benefits of physical exercises.

Practising some of physical exercises.

Expected answers to learner's activity 1.4. Refer to learner's book, page 8

Activity 1.4

1. Swimming, jogging, running, walking, playing soccer, jumping, dancing.
2. - increases circulation of blood.
- makes body systems function better.

- makes body to be physically fit.
- reduces body weight.
- makes one relax and sleep better.
- reduces stress and tension.

3. Practise jogging, running, walking, playing soccer, jumping, dancing, skipping, stretching, squatting and so on.

Additional notes

Physical exercises simply mean movement of the body by use of energy through; walking, gardening, pushing a baby stroller, climbing the stairs, playing soccer, dancing and so on.

No matter which type of exercise you do, there are certain factors to consider each and every time you exercise. Most are important for your safety.

- ▲ Check with your doctor before starting an exercise program.
- ▲ Set aside a specific time each day to make physical activity and exercise part of your routine. Exercising in the morning may help you make sure something doesn't come up in the day to make you skip it.
- ▲ When needed, you can break up your daily activity goal into smaller sessions. For example, you could go for a 10-minute walk three times a day, or a 15-minute walk two times a day to get the recommended amount of moderate intensity activity—30 minutes a day, 5 days of the week. Just make sure the shorter sessions are at least 10 minutes long.
- ▲ Get a friend or family member to join you. This will make your physical activity more enjoyable, help you encourage each other, and it's the safest way to exercise.
- ▲ Always warm up for at least 5 to 10 minutes (or longer if you have special considerations) before any physical activity and cool down at least 5 to 10 minutes at the end of your activity.
- ▲ To stay hydrated, drink water before, during, and after exercise.
- ▲ Maintain proper form during exercise. It is essential for safety and effectiveness. Seek the help of a physical therapist, or certified personal trainer if needed. Start with light activities and light weights as you improve your form and get accustomed to the exercises you are doing. Start slowly and work your way up to more physically challenging activities. For many people, walking is a particularly good place to begin.
- ▲ Vary your exercise programme. When you do the same activities over and over, your body becomes efficient at performing them. Plus, you may get bored. You will need to change your routine every six to eight weeks to keep your body

constantly adapting. When you do, your muscles will have to work harder, you will burn more calories, and you will be challenged. For example, if you continue to walk the same mile each day at the same intensity and in the same amount of time, your body becomes used to the routine. To change things up so your body can be challenged, you could walk the mile more quickly, or find a hilly street to increase the intensity. You could also alternate walking with another more challenging physical activity. But the point is to keep adjusting to improve your fitness. If you are up for a challenge, interval training is a great way to keep your body challenged and guessing what comes next during your physical activity.

- ▲ Figuring out your Target Heart Rate and taking the Talk Test are two ways to monitor your body and make sure you are not working harder than you are able to as you begin your heart-healthy physical activity plan.
- ▲ In addition to cardio, strength training, and stretching exercises, consider also practicing specific balance exercises to help prevent falls and injuries. Balance techniques are used frequently as exercises in yoga or more simple forms of balancing exercises such as walking heel-to-toe, standing on one foot, or standing up and sitting down without using your hands (using support as needed for safety).
- ▲ If at any time you feel lightheadedness, dizziness, or chest discomfort during physical activity, call your doctor or dial 911 in the case of an emergency.

LESSON 4

PERIODIC MEDICAL CHECKUPS AND SLEEPING

Learner's book, page 10

Instructional objective

Having pictures and magazines on medical checkups and sleeping, learners will be able to demonstrate sleeping and conducting periodic medical checkups.

Teaching methods

- ▲ Brainstorming the uses of sleep.
- ▲ Group work to answer activity 1.5
- ▲ Presentation of answers from activity 1.5.

Teaching methodology

Calling upon learners to brainstorm the uses of sleep.

- ▲ Demonstration
- ▲ Guided class discussion

Helping the learners form groups of five and letting them answer the questions on periodic medical checkups.

Allowing learners to share their answers with the rest of the class.

Harmonising and emphasising the main points.

Learner's activity

Organise with the school nurse to carry out medical check up of the learners. If the school does not have a nurse the school administration may help in getting an external doctor. You may carry out, dental check ups, eye, ear and oral check ups, pregnancy tests for girl and many more.

Evaluation

Determine the ability for learners to know the uses of sleep and periodic medical check ups.

Expected answers to the activity 1.5. Refer to learner's book, page 10

1. Learners may say last week, last month, a year ago depending on when they last had medical checkups. Answer vary so much.
2. Answers will vary according to how learners do medical checkups.
3. Here answers will also vary because some will say they get medical checkups when sick and others will say they do checkups may be after a certain period of time which is a regular activity.
4. Periodic medical checkups help to cure certain illnesses and prevent certain diseases that would come up without our knowledge like cancer, diabetes, high blood pressure and so on.

Additional notes

An adult should sleep for an average of 8 hours while children should sleep for 12 hours to encourage proper growth and development of both the body and brain.

Periodic medical checkups involve checking all the organs and systems of the body that is the ears, throat, eyes, stomach and so on. Having all these checked encourages one to take care of any illness before the situation worsens.

The amount of sleep a person needs depends on many factors, including age. For example, in general:

- ▲ Infants require about 14-15 hours a day.
- ▲ Teenagers need about 8.5-9.5 hours on average.
- ▲ Most adults need 7 to 9 hours a night for the best amount of sleep, although some people may need as few as 6 hours or as many as 10 hours of sleep each day.

- ▲ Women in the first 3 months of pregnancy often need several more hours of sleep than usual.

Periodic medical checkups

Due to the advancements of modern medicine, people around the world are living much longer lives. It is extremely important to invest in your health today in order to enjoy a healthy and productive life in your later years. Unexpected circumstances are part of life and are often unavoidable and sometimes sudden accidents and illnesses can destroy our ambitions and seriously reduce our quality of life.

For this reason, it is extremely important for us to do everything in our means to mitigate the risks of the unknown. By educating ourselves as much as we can about our health and taking the proper measures to take care of our bodies, we can greatly increase our chances of avoiding or at least correcting and managing health problems as soon as they begin to surface.

Without doubt, the best tool we have for investing in our tomorrow is doing the periodic health checkup. With the growing appreciation of the importance of early-detection and diagnosis of illness, the periodic checkup has become a central part of primary prevention health care.

The clinical and laboratory examinations performed in a check-up provide health information which, when analysed, can help in predicting “unforeseen” health events such as heart attacks, strokes, cancer and other health complications that can reduce the quality and length of our lives.

The periodic checkup also tells us what we our doing wrong with our bodies. Once these unhealthy lifestyle habits and other risk factors are identified, the checkup experience can become the starting point of an extreme lifestyle transformation and improvement.

So the check-up is much more than just a simple series of clinical tests; it is a rare opportunity for you to learn more about your own body and gain the inspiration to improve your health and quality of life.

Therefore the simple reason that there is no debate that prevention is both more effective and less costly than treatment. Indeed, a periodic checkup not only significantly improves your long-term health quality but also greatly reduces your long term health care expenses.

With sound health, we are capable of fully enjoying the company of our friends and family as well as achieve our career and personal goals. The checkup is truly a powerful aid for us to live longer, healthier and happier lives

Advantages of checkup scheme

- ▲ Provide opportunity to assess your health status and risk factors;
 - ▲ Identify and treats illness at an early stage;
 - ▲ Initiate counseling, lifestyle modification and other appropriate intervention which may reduce the risk of heart disease, cancer and other diseases;
 - ▲ Promote healthy lifestyle;
 - ▲ Help you to keep the best health conditions.
-

LESSON 5

EATING A BALANCED DIET

Learner's book, page 10

Instructional objective

Having pictures and magazines on food and nutrition, learners will be able to choose correctly the different food that makeup a balanced diet.

Teaching methods

- ▲ Pair work to answer the activity questions.
- ▲ Guided discussion on the importance of eating a balanced diet.
- ▲ Practical work to plant foods that make up a balanced diet.

Teaching methodology

Guide learners to form pairs and let them answer questions about their eating experiences. You can add other questions of your choice.

Guide a class discussion on the importance of eating a balanced diet.

Plan an activity to be done in your free time to plant foods that make up a balanced diet , for example, beans or soya beans, maize, cabbage or any other greens.

Learner's activity

Displaying foods that make up a balanced diet, you may ask learners to get these foods if they come from home or you bring them in class yourself if learners are in boarding.

Planning an activity to be done in your free time to plant foods that make up a balanced diet for example, beans/ soya beans, maize, cabbages or any other greens.

Evaluation

Determine the ability for learners' to correctly mention the importance of eating a balanced diet.

Answers to activity 1.6. Refer to learner's book, page 10

1. Food commonly eaten at home; answers
potatoes, plantain, bananas, beans, meat, chicken, sorghum, rice, peas and so on.
2. Answers will be **Yes** or **No**. Go on to ask learners to lists the foods they eat in a meal and help them to identify a balanced meal.
3. This will vary from student to student but harmonise by teaching that it should be two to three meals a day.
1. breakfast 2. lunch 3. super or dinner
4. Carbohydrates and lipids help to provide energy for various activities and body process.
Proteins help to repair damaged tissues and help for quick recovery in sickness.
Vitamins and minerals protect the body against diseases.
Dietary fibre helps in weight management and it helps to avoid constipation due to the roughage it has.

Answers to revision questions. Refer to learner's book, page 11

1. (i) Personal hygiene is the habitual practice of keeping one's body clean including the things used like shoes, clothes, combs, toothbrushes and so on.
(ii) Good personal health is a state of being well mentally, physically, socially, emotionally and spiritually and not merely the absence of disease.
2. Importance of maintaining good personal hygiene
 - ▲ leads to having a healthy life style.
 - ▲ increases confidence and self esteem.
 - ▲ makes one feel good within.
 - ▲ prevents development of bad odour.
 - ▲ makes one gain respect in society.
3. Indices of good health
 - ▲ practising good personal hygiene.
 - ▲ eating a balanced diet.

- ▲ having enough rest and sleep.
 - ▲ doing regular exercises.
 - ▲ maintaining good posture.
 - ▲ having regular medical checkups.
 - ▲ having enough air and sunshine.
4. Importance of sleep
- ▲ restores lost energy.
 - ▲ helps the brain to relax.
 - ▲ helps one to have proper digestion and utilisation of food.
5. Benefits of doing periodic medical check ups.
- Helps one prevent certain illnesses and diseases which would develop unknowingly.
6. Boiled rice, chicken stew, steamed pumpkin leaves and mixed fruit juice.

Additional notes

When planning a balanced diet, we should take note that everyone has different needs and requirements for food and this depends on; age, sex, health condition, their daily activity, climate, where one lives, likes and dislikes and finally food customs and taboos. So these have to be put into consideration when planning someone's balanced diet.

Additional notes lesson 5

Choosing a variety of foods from all food groups is one of the easiest ways to plan a balanced diet. When you eat a meal, half of the plate should contain vegetables and fruits, one-quarter of the plate is for lean protein and the remaining quarter of the plate is reserved for whole grains.

Healthy eating tip

To set yourself up for success, think about planning a healthy diet as a number of small, manageable steps—like adding a salad to your diet once a day—rather than one big drastic change. As your small changes become habit, you can continue to add more healthy choices.

- ▲ Prepare more of your own meals. Cooking more meals at home can help you take charge of what you're eating and better monitor exactly what goes into your food.
- ▲ Make the right changes. When cutting back on unhealthy foods in your diet, it's important to replace them with healthy alternatives. Replacing dangerous

fats with healthy fats (such as switching fried chicken for grilled fish) will make a positive difference to your health. Switching animal fats for refined carbohydrates, though (such as switching your breakfast bacon for a donut), won't lower your risk for heart disease or improve your mood.

- ▲ Simplify. Instead of being overly concerned with counting calories, think of your diet in terms of color, variety, and freshness. Focus on avoiding packaged and processed foods and opting for more fresh ingredients.
- ▲ Read the labels. It's important to be aware of what's in your food as manufacturers often hide large amounts of sugar or unhealthy fats in packaged food, even food claiming to be healthy.
- ▲ Focus on how you feel after eating. This will help foster healthy new habits and tastes. The more healthy food you eat, the better you'll feel after a meal. The more junk food you eat, the more likely you are to feel uncomfortable, nauseous, or drained of energy.
- ▲ Drink plenty of water. Water helps flush our systems of waste products and toxins, yet many people go through life dehydrated—causing tiredness, low energy, and headaches. It's common to mistake thirst for hunger, so staying well hydrated will also help you make healthier food choices.

LESSON 6

COMMUNICATION AND LANGUAGE ETIQUETTES

Learner's book, pages 12-13

Instructional objective

Referring to illustrations and text learners will apply the personal and professional etiquette, communication and language perfectly.

Teaching methods

- ▲ Question and answer about communication and language that are acceptable or not.
- ▲ Role play different communicating and using language.
- ▲ Research on personal and professional etiquettes.
- ▲ Group work during research.
- ▲ Discussion on different personal and professional etiquettes.

Teaching methodology

Guiding learners to form groups, and in their groups let them research and discuss about different personal and professional etiquettes.

Calling upon learners to identify behaviours that are acceptable and those that are not acceptable.

Asking learners to define communication and language.

Guide learners to form groups of 10 and let them role play the different ways of passing communication and language.

Learner's activity

- Let learners role play the different communication and language etiquettes.
- Let learners watch a video clip to see the use of proper communication and language.

Evaluation

Determine the learners' ability to correctly define communication and language and give ways on how they are achieved.

Expected answers to the behaviours. Refer to learner's book , page 12

1. acceptable because prayers are good.
2. acceptable because the girl and boy are dressed well and seated properly.
3. not acceptable because its not good to smoke especially school going children.
4. not acceptable because a teacher should not dress indecently in front of students.
5. acceptable because the teacher is well-dressed.

Answers for activity 1.8 Learner's book, page 12

- ▲ role playing how to provide a good voice that show confidence. The teacher will guide them the voice should project well, should be loud and clear and not shaky.
- ▲ role play good upright posture, good eye contact and firm handshakes.
- ▲ role play using gestures like folded arms, crossed arms, relaxed hands , wringing and squeezing hands to mean nervousness and anxiety.

Additional notes

To be great at communication one needs to put in mind the following;

- You need to start becoming aware of your body language and what it is saying.
- Repetitive gestures or walking while talking could detract people from your presentation.
- Gestures need to be expressive, emphasising what you are saying but at the same time neutral.
- A high-pitched piercing voice is very difficult to listen to, just like a flat monotonous voice. We need to ensure we are producing a good resonant or booming sound that can be heard by our audience.
- Our speech needs to be clear to ensure we are understood. For this, we need to exercise the muscular organs of articulation.
- To create an interesting voice we need variation in the pitch and pace of our presentation. As well as making correct use of pause and emphasis.
- The way we communicate also plays a large role when making a good first impression. And body language, is the dominant factor including, posture, handshake and the way we are dressed. If you want to send out the message of professionalism, ensure you have good upright posture, use good eye contact, open body language and have a firm handshake.
- Make sure your clothing is appropriate to the work situation, and that it is neat and tidy. Have clean hair, nails and shoes. The voice should be well produced amplifying confidence.

Gestures can be in form of:

- ▲ folded arms to mean unwillingness to listen to the speaker.
- ▲ crossed arms to mean insecurity and lack of confidence.
- ▲ relaxed hands to mean confidence and self assurance.
- ▲ tightened hands to mean stress or anger.
- ▲ wringing or squeezed hands to mean nervousness and anxiety.
- ▲ finger gestures to mean one's speech and a state of well-being of a person.
- ▲ thumbs gestures to mean "OK" in some countries like USA, France and Germany. through it is an insulting gesture in countries like Iran, Bangladesh and Thailand.
- ▲ nodding in agreement or disagreement.

LESSON 7

VALUES AND ETHICS

Learner's book, page 13

Instructional objective

Given various illustrations and text, learners will be able to correctly apply and practice values and ethics.

Teaching methods

- ▲ Presentation on the values and ethics that are acceptable in the personal and professional life.
- ▲ Question and answer about values and ethics in each student's cultural society.
- ▲ Research work
- ▲ Individual work to define ethics and values.

Teaching methodology

Asking learners individually to define ethics and values.

Letting each learner tell the class the values and ethics in their cultural society.

Giving clarification and harmonising their definitions.

Teacher will call upon the learner to present their research work about values and ethics that are acceptable in the personal and professional life.

Learner's activity

Calling upon learners to mention the values and ethics practiced in their community.

Evaluation

Determine the learners' ability to correctly define values and ethics.

Expected answers for activity 1.9. Refer to learner's book , page 13

- ▲ Answers may be; kindness, integrity, responsibility, competency, patience, enjoyment, respect, dedication, teamwork, understanding.

Additional note

The importance of ethics in the workplace

Our actions affect not only ourselves, but also those around us. Many of our professional decisions involve ethics. If we tell a lie, we can lose someone's trust and undermine our own integrity. If we use shoddy materials or workmanship on the job, we can jeopardize the safety of others.

Questions of morality and ethics can be found at all levels of society. Ethical behavior is equally important in the workplace as it is in our personal lives. Everywhere business is conducted, ethics matters.

A successful business depends on the trust of various parties—employees, managers, executives, customers, suppliers, and even competitors. Six ethical terms form the foundation of trust upon which ethical business practice is built:

- | | | |
|----------|-------------|-------------|
| ▲ Ethics | ▲ Morals | ▲ Character |
| ▲ Values | ▲ Integrity | ▲ Laws |

Ethics

Ethics refers to a set of rules that describes acceptable conduct in society. Ethics serve as a guide to moral daily living and helps us judge whether our behaviour can be justified.

Ethics refers to society's sense of the right way of living our daily lives. It does this by establishing rules, principles, and values on which we can base our conduct. The concepts most directly associated with ethics are truth, honesty, fairness, and equity.

While ethics is a societal concern, it is of critical importance to the professions that serve society. Because professionals such as physicians, attorneys, engineers, and property and facility managers provide services that affect our welfare, they develop professional codes of ethics that establish professional standards for behaviour.

Examples of the types of standards found in professional codes of ethics include:

- ▲ An attorney or physician maintaining client-patient confidentiality
- ▲ An accountant not using client information for personal gain

Values

Values are defined as the acts, customs, and institutions that a group of people regard in a favourable way. Statements of value typically contain words of approval, disapproval, and obligation. Some of these words might be good, bad, should, and should not. However, value judgments do not have to contain specific value words. "That is a lie" does not contain a particular word of disapproval, but the implication that a lie is wrong is understood.

Values are what really matter to us most what we care about. For instance, family devotion, respect for the environment, and working hard for a day's pay are three values that can evoke a response in many people.

Morals

Morals are a set of rules or mode of conduct on which society is based. Certain moral elements are universal, such as the laws forbidding homicide and the basic

duties of doing good and furthering the well-being of others. With morals serving as the underpinning of society, there are four points we should remember, says philosopher Robert C. Solomon.

- ▲ Moral rules are important: In general, moral rules are rules that help society function in a civilized way.
- ▲ Morality consists of universal rules: They apply to everyone, everywhere, and are recognised by everyone as being necessary.
- ▲ Morals are objective: They do not consider personal preferences. Right is right and wrong is wrong.
- ▲ Morality affects other people: Morality involves considering the well-being of others as reflected by the Golden Rule: Do unto others as you would have them do unto you.

Integrity

To have integrity is to be honest and sincere. Integrity is defined as adhering to a moral code in daily decision making. When people and businesses possess integrity, it means they can be trusted. On the other hand, companies that lack this quality and mislead customers with inferior products or false advertising will suffer the consequences.

Character

Ethics is not just how we think and act. It is also about character. Character drives what we do when no one is looking. Each person has the ability to build, change, or even destroy his or her own character. We can build our character through the way we live by thinking good thoughts and performing good acts. Similarly, bad thoughts and behaviour can destroy our character.

A person with character has high morals and will act morally in all situations by choice, not force. A person with character will honor his or her commitments. Character pertains to organizations, as well. A company with high character is worthy of trust and respect, acts honestly, and stands by its promises.

Laws

The law is a series of rules and regulations designed to express the needs of the people. Laws protect people from the most blatant and despicable affront to morality, such as murder, rape, and theft.

Laws frequently provide us with a sense of right and wrong and guide our behaviour, but not always. While murder is against the law, the law does not always stop someone from killing another out of hatred, anger, or in defense of a personal philosophy.

Laws are instituted as notions of justice and tend to be specific, yet diverse within different societies. Laws have always had a strong connection to morality, ethics, and values. But, not all laws are ethical.

Laws have legalized slavery, segregation, sexism, and apartheid. Although these laws might have reflected society's values at the time they were enacted, they could not nor will they ever justify immoral behaviour. Likewise in business, it is not unlawful to lie to a coworker or on a job application, but both are ethically wrong.

These six concepts ethics, values, morals, integrity, character, and laws—form the foundation of trust upon which ethical business practice is built.

Professional codes of ethics

Many professions and corporations have developed codes of ethics to address their unique business situations. In fact, 90 percent of Fortune 500 companies and nearly half of all corporations have codes of ethics that can be applied to all employees. By developing a code of ethics, an organization makes it clear that employees and members cannot claim ignorance as a defense for unethical conduct.

Benefits of a corporate code of ethics

Codes of ethics help employees strike a balance between the ends and the means used to obtain them. This balance may be one of the most challenging aspects of being an ethical organization.

The Federal Sentencing Guidelines for Organizations provide an additional incentive for having corporate codes of ethics and ethics training. Companies that have made a bona fide effort to prevent unethical and illegal behavior are likely to receive less severe punishment should an employee be found guilty of breaking the law. The unethical conduct of just a few employees can affect an entire corporation.

Benefits of a professional code of ethics

A professional code of ethics sets a standard for which each member of the profession can be expected to meet. It is a promise to act in a manner that protects the public's well-being. A professional code of ethics informs the public what to expect of one's doctor, lawyer, accountant, or property manager. As long as professionals adhere to these standards, the public is willing to have their professional associations create and enforce their ethical codes.

In cases where these codes are repeatedly and grossly violated, the public's likely response is to demand protective legislation. The Sarbanes-Oxley Act of 2002 was enacted in response to such violations and the ensuing public outcry. Most professionals would prefer to police themselves, rather than have an externally imposed set of regulations. That is a major reason why they create codes of ethics in the first place.

Successful implementation of a code of ethics

Within a corporation, top-down support is critical. If senior management does not act ethically and support others who do, an organization's ethical code will have little meaning. It is critical for managers and executives to:

- ▲ act consistently with the company's ethical standards
- ▲ apply those standards in dealing with employees

Acknowledging and rewarding those whose behaviours are consistent with a company's code of ethics proclaims to all that ethical behaviour is truly valued. On the other hand, promoting and providing bonuses to employees whose successes are due in part to unethical behaviour sends an unwanted message. Remaining ethical is not a static issue. It requires review and evaluation. Companies need to periodically review their priorities and make necessary adjustments. Otherwise, their standards and training become outdated.

LESSON 8

BODY LANGUAGE, FACIAL EXPRESSIONS AND BODY POSTURE

Learner's book, pages 15-17

Instructional objective

Basing on the illustrations given, learners will apply body languages, eating habits, facial expressions and body posture for positive meaning.

Teaching methods

- ▲ Research work on body language.
- ▲ Presentations about body language especially facial expressions.
- ▲ Practising different body expressions.

Teaching methodology

Calling upon learners to define body language.

Giving clarifications where necessary.

Letting the learners present their research about body language and for this lesson about facial expressions and body posture.

Letting the learners practise the different body expressions and body postures while giving their meanings.

A chart showing different drawings of facial expressions and postures will be put up by learners.

Harmonising the lesson and make conclusions.

Learner's activity

Practising different body expressions and body postures while giving their meanings.

Evaluation

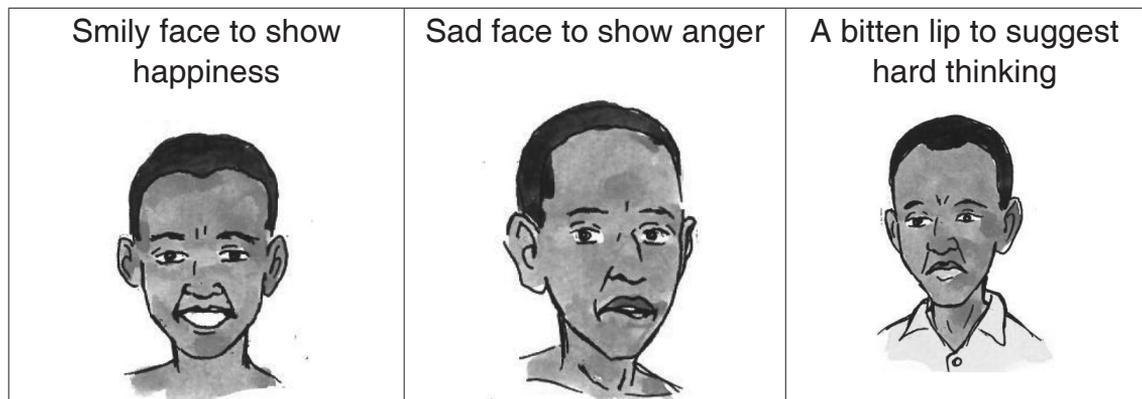
Determine the learners' ability to correctly use body language (facial expressions and body postures).

Additional notes

No other part of your body can convey the immense richness of nonverbal communication than your face does.

For example;

- ▲ smiles are important signals of generosity and nonaggression. But forced smiles signal that you can barely tolerate the other person.
- ▲ frowns signal disagreement, disapproval, and sometimes anger. But they can also suggest hard-thinking and focused concentration.



These facial expressions are the most obvious ones, but hundreds of others exist: an arched eyebrow, flared nostrils, a bitten lip, a frowned face and so on represents body language.

Emotions can also be detected through body postures. Body postures are more accurately recognised when an emotion is compared with a different or neutral emotion. For example, a person feeling angry would show dominance over the other, and his or her posture displays move towards tendencies. Comparing this to a person feeling fearful: he or she would feel weak, submissive and his or her posture would display avoidance tendencies, the opposite of an angry person.

Sitting or standing postures also indicate one's emotions. A person sitting till the back of his or her chair, leans forward with his or her head nodding along with the discussion implies that he or she is open, relaxed and generally ready to listen. On the other hand, a person who has his or her legs and arms crossed with the foot kicking slightly implies that he or she is feeling impatient and emotionally detached from the discussion.

Take care in the way you sit, for no other position suggests so much on its own. Think of the variety of sitting positions that you have seen from practically horizontal to alert and upright. Sit with a straight back and with your legs together in front of you or crossed, either at the knee or at the ankle. Normally, women don't cross their legs, but men are allowed. Avoid jiggling your knee, which is a sign of nervousness (and can be pretty annoying to people sitting near you).

In a standing discussion, a person stands with arms and with hands on the hips and elbows turned outward with feet pointed towards the speaker could suggest that he or she is attentive and is interested in the conversation. However, a small difference in this posture could mean a lot. For example, if the same person has his or her leg crossed over the other, and places his or her entire balance on one leg, this suggests a more casual attitude.

When you stand, keep your back straight, middle section in alignment with your back, shoulders back, and head up. This posture brings comfort with yourself and ease in the situation.

Sticking your belly out, stuffing your hands in your pockets and folding your arms defensively all suggest aggressive unease.

LESSON 9

GESTURES AND HANDSHAKES

Learner's book, pages 16-17

Instructional objective

Basing on illustrations and text given, learners demonstrate and practice correctly gestures and handshakes.

Teaching methods

- ▲ Role plays different gestures and handshakes.
- ▲ Research about gestures and handshakes.
- ▲ Group work to carryout research on gestures and handshake.
- ▲ Presentations about gestures and handshakes.

Teaching methodology

Calling upon learners to define what gestures are.

Giving clarification.

Letting learners present their researchwork about gestures and handshakes used.

Letting each learner role play the different gestures and handshakes used while giving their meanings.

Learner's activity

Learners to role play the different gestures and handshakes used while giving their meanings.

Evaluation

Determine the learners' ability to correctly identify different gestures and handshakes while giving their meaning.

Additional notes

Gestures are movements made with body parts for example, hands, arms, fingers, head, and legs. They may be voluntary or involuntary.

Arm gestures can be interpreted in several ways. In a discussion, when one stands or sits with folded arms, this is normally not a welcoming gesture. It could mean that he or she has a closed mind and is most likely unwilling to listen to the one speaking. Another type of arm gesture also includes an arm crossed over the other, indicating insecurity and a lack of confidence.

Hand gestures often signify the state of well-being of the person making them. Relaxed hands indicate confidence and self-assurance, while tightened hands may be interpreted as signs of stress or anger. If a person is wringing or squeezing his or her hands, this demonstrates nervousness and anxiety.

Some people talk with their hands; others stand with their hands glued to their sides. Most people have no clear idea what their hands are doing when they talk. Using your hands can be effective sometimes, aggressive sometimes and irrelevant most of the time. Controlling your hands takes effort and determination. Monitor your hand movements. Avoid making sweeping gestures during meetings. If you have to, sit on your hands.

Head movements communicate important information. Nodding in agreement can be immensely helpful to others, but too much nodding is not good because it makes you look like a move up and down-head doll. Shaking your head can signal disagreement or disapproval, but avoid shaking your head too much.

LESSON 10

EATING HABITS

Learner's book, pages 17-18

Instructional objective

Given photographs and text, learners will be able to apply and practice correctly the different eating habits.

Teaching methods

- ▲ Research on eating habits.
- ▲ Presentations about findings on eating habits.
- ▲ Practising different eating habits where necessary.

Teaching methodology

Asking learners to define eating habits.

Giving clarification where necessary.

Letting learners present their research about eating habits.

Letting them do demonstrations where necessary.

Letting learners watch a video clip to see proper eating habits.

Emphasising main points and give a conclusion.

Learner's activity

Watching a video clip to see the proper eating habits.

Evaluation

Determine the learners' ability to correctly apply proper eating habits.

Additional notes for lesson 10

Balanced diet

A balanced diet it is a way of eating all of the right nutrients that your body needs in order to be healthy. Everyone's bodies are different and often individuals require a different amount and type of nutrients. This can depend on age, gender, illness and the rate at which your body works.

To maintain good health, your body needs healthy foods and regular exercise. Below are eight tips that cover the basics of maintaining a balanced diet and choosing the healthier option:

1. Eat at least five portions of fruit and vegetables a day. If you can, try to include more.
2. Cut down your sugar and saturated fat intake.
3. Drink plenty of water, six to eight glasses are the recommended amount. Add a fresh squeeze of lemon if you want a bit of flavour.
4. Aim for at least two portions of fish every week, with such a variety available you will find it hard to get bored.
5. Reduce your salt intake. It is advised to eat no more than 6g a day. Avoid adding it to your meals, it should be cooked with the food
6. Always eat breakfast, it gives you energy for the day.
7. Use starchy foods as the base of your meals. These act as your fuel for the day.
8. Get active. Adults aged 19 - 64 are required to conduct 150 minutes moderate exercise a week. Try a brisk walk for 30 minutes daily.

You may have four meals a day

- ▲ Breakfast
- ▲ Mid-morning snack
- ▲ Lunch
- ▲ Dinner

the snack may also be taken in between lunch and dinner

how to replace old Habits with New, Healthy Ones

Find health choices for snacks and plan ahead:

- ▲ If you are in the habit of eating candy at the end of the day for energy, try having a cup of herbal tea and a small handful of almonds.
- ▲ Eat fruit and yogurt in the mid-afternoon about 3 or 4 hours after lunch.

Control your portion sizes. It is hard to eat only a few chips or other tempting

foods when there is a lot in front of you. Take only a small portion and put the rest away. Eat on a plate or in a bowl instead of straight out of a bag.

Eat slowly:

- ▲ Put down your fork between bites.
- ▲ Wait until you have swallowed your mouthful of food before taking the next bite.

Eating too quickly leads to overeating when the food you have eaten has not yet reached your stomach and told your brain you are full. You will know you are eating too quickly if you feel stuffed about 20 minutes after you stop eating.

Eat only when you are hungry:

- ▲ Eating when you feel worried, tense, or bored also leads to overeating. Instead, call a friend or go for a walk to help you feel better.
- ▲ Give your body and your brain time to relax from the stress of daily life. Take a mental or physical break to help you feel better without turning to food as a reward.

Plan your meals:

- ▲ Know what you will eat ahead of time so you can avoid buying unhealthy foods (impulse buying) or eating at fast-food restaurants.
- ▲ Plan your dinners at the beginning of the week so you can prepare healthy, well-balanced meals each evening.
- ▲ Prepare some dinner components ahead of time (such as chopping vegetables.) This will allow you to put together a healthy meal more quickly at the end of the day.

Get rid of unhealthy foods:

- ▲ Replace your candy dish with a bowl of fruit or nuts.
- ▲ When you do have unhealthy foods in your house, put them in a place that is hard for you to reach rather than out on the counter.

An old saying goes: “Eat breakfast like a king, lunch like a prince, and dinner like a pauper.”

Breakfast sets the tone for the day. A hearty, healthy breakfast will give your body the energy it needs to get you to lunch. If you are not hungry when you wake up, you could try a glass of milk or a small fruit and dairy-based smoothie.

Plan a good lunch that will satisfy you, and a healthy afternoon snack that will keep you from becoming too hungry before dinner time.

Avoid skipping meals. Missing a regular meal or snack often leads to overeating or making unhealthy choices.

Answers to unit assessments. Refer to learner's book , page 19

- 1)i. Etiquette are the habits or rules governing behaviour regarded as correct or acceptable in social or official life or a standard but unwritten code of practice followed by members of any profession or group.
 - ii. Communication is the imparting or exchanging of information or news.
 - iii. Language is the method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way.
 - iv. Values are important long-lasting beliefs about what is important to a person.
 - v. Ethics are moral principles that govern a person's or group's behaviour.
 - vi. Body language is a kind of nonverbal communication, where thoughts, intentions or feelings are expressed by physical behaviours, such as facial expressions, body posture, gestures, eye movement, touch and the use of space.
 - vii. Eating habits refers to why and how people eat, which foods they eat, and with whom they eat, as well as the ways people obtain, store, use, and dispose of food.
2. Points to put in mind in order to be a great communicator
- You need to start becoming aware of your body language and what it is saying.
 - Repetitive gestures or walking while talking could detract from your presentation.
 - Gestures need to be expressive, emphasising what you are saying but at the same time neutral.
 - A high-pitched piercing voice is very difficult to listen to, just like a flat monotonous voice. We need to ensure we are producing a good resonant or booming sound that can be heard by our audience.

- Our speech needs to be clear to ensure we are understood. For this, we need to exercise the muscular organs of articulation.
 - To create an interesting voice we need variation in the pitch and pace of our presentation. As well as making correct use of pause and emphasis.
 - The way we communicate also plays a large role when making a good first impression. And body language, is the dominant factor including, posture, handshake and the way we are dressed. If you want to send out a message of professionalism ensure you have good upright posture, use good eye contact, open body language and have a firm handshake.
 - Make sure your clothing is appropriate to the work situation, and is neat and tidy. Have clean hair, nails and shoes. The voice should be well produced amplifying confidence.
3. Professional ethics for people working in banks include:
- Give value in return to your business or customers.
 - You should have respect for all employees whether they are local or global and show respect to all your superiors and subordinates.
 - Delivering your work on time and with quality.
 - Always maintain high integrity which involves honesty and trustworthiness in all your business transactions and communication.
 - Always display teamwork and cooperation in the office.
 - Respect the employers' need for privacy and therefore, may withhold important information whether you are employed with the company and even after leaving your job.
 - Treat others like you like to be treated and have concern for the well-being of others.
 - Never use foul language, insult or demean any of your colleagues, always have Constructive criticism.
 - Respect all races, religion, caste, sex and colour.
 - Never discuss the employer's faults with business clients in order to prevent harm.
 - Never tarnish the image of the company you work for when you are in or out of the office

4. Posture with an open and relaxed mind .

- A person sitting till the back of his or her chair, leans forward with his/her head nodding along with the discussion implies that he or she is open, relaxed and generally ready to listen.

5. What needs to be done in order to develop a healthy eating habit.

- Eat balanced meals in a day and eat nutritious snacks along the way. The diet should include protein, fruits, vegetables, and carbohydrates, and the less processed and how fat-filled the food is, the healthier one will be.
- Schedule three meals a day into your routine. It's important that we should be nourished adequately throughout the day to prevent fatigue.
- Eat a healthy breakfast. Include grains and fruits. Try a high-fibre cereal with low fat milk and sliced bananas or fruits of your choice.
- Eating small frequent and nutritious meals is less taxing on the digestive system than one large meal.
- Snack between meals help to bring down appetite and provide a little energy. Try a piece of fruit or a few crackers like crisps and roasted nuts.
- Do not let yourself become so hungry as to overeat at mealtime. Overeating burdens your digestive system.
- Drinking water or having a small bowl of soup before meals may keep you from overeating at your meal.
- Eat slowly and chew your food thoroughly to aid in your digestion. Take time to taste your food.
- Obtain protein from a less complicated source, such as nuts, legumes, grains and sprouts.
- Choose low fat dairy products, lean white meat or fish if animal products are desired.
- Choose a variety of whole grain products to include millet, barley, sorghum, oats and buckwheat.
- Choose a variety of fruits and vegetables that are deep in colour, such as the dark orange of a carrot or the deep green of spinach. They contain more nutrients.

- Choose organic products to eliminate chemical exposure from preserved foods, chemicals are harmful to overall health.
- Avoid processed food as it contains ingredients that have been changed from their natural state. These unnatural foods are difficult for your body to digest.
- Choose sea salt as it is equivalent in nature to the salt within your body. It is very cleansing. Refined salt causes fluid retention and increased blood pressure.
- Eliminate sugars or choose unrefined sugar, such as honey.
- Drink plenty of clean water to aid in washing out toxins and the waste products of natural cell metabolism.
- Gradually wean from large portions to achieve a healthy weight.
- Eat less in the evening if you are no longer exercising throughout the remainder of the day.
- Use moderation when developing new eating habits. The important thing is to develop a plan that you'll find easy to accomplish and easy to maintain.
- Eat at least one nutritious meal per day with your family to encourage their good eating habits.

Unit 2

DECORATION COLOURS

	Lesson map
Lesson 1	Types of colours
Lesson 2	Using colours
Lesson 3	Decorative materials, tools and equipment

Learner's book page 21

Introduction

Interior decoration is concerned with the study of colours, their properties as well as their applications. The teacher should ensure that learners understand the different aspects of colours in order to effectively apply them in interior decoration. Since the learners know some of the aspects of colours and decorating materials, the teacher should engage them as much as possible such that they contribute a lot towards the discussion. The teacher should encourage learners to ask questions, involve themselves in the brainstorming sessions and discussions. The teacher should give activities in order to enable learners effectively master the concepts very well.

Key unit competency:

Learners should be able to match decorative colours on different backgrounds, using the appropriate tools and equipment.

Specific outcomes

By the end of this unit, the learners should be able to:

- ^ identify different types of colours.
- ^ explain principles of colour usage.
- ^ identify types of decorative materials, tools and equipment.

Instructional materials

- ^ Reference books
- ^ Magazines or newspapers
- ^ Charts
- ^ Pictures
- ^ Internet
- ^ Small equipment in the Home Economics Laboratory
- ^ Real objects
- ^ Chalkboard

Skills

- ^ Match decorative colours on different background.
- ^ Apply principles of colour usage.
- ^ Recognise decorative materials, tools and equipment.

Attitudes and values

- ^ Appreciate the value of using colours on different backgrounds.
 - ^ Comply with principles of colour usage.
 - ^ Pay attention to decorative resources.
-

LESSON 1(2 PERIODS)

TYPES OF COLOURS

Learner's book, pages 22-23

Instructional objective

Basing on illustrations and text given, learners will use correctly different types of colours.

Teaching methods

- ^ Demonstration on primary secondary colours
- ^ Brainstorming on the types of colours
- ^ Discussion of the types of colours
- ^ Observation of the activities on colours

Teaching methodology

Let the learners attempt activity 2.1 in the Learners' Book, page 19. Define for learners what colour is. Let the learners state the different colours that they know. Give them the colours that they have not mentioned and explain all the different types of colours.

Learner's activity

Learners should take assignment for activity 2.1. As a teacher, know the skills of learners in decoration using different colours.

Evaluation

Determine the learners' ability to correctly state and explain colours.

Answers to learners' activity.

Activity 2.1 Learner's book, page 22

1. Primary colours are used during decoration of the home for example, living room.
2. Combine vegetables of different colours to create natural beauty on the dining. For example, a combination of tomatoes, carrots, cucumbers, onions and green pepper properly organised in an attractive dish can be used as a centre piece for the dining table.

Additional notes

Description of colours

Hue: Is the name of the colour itself, the dominant wavelength of light or the choice of pigment.

Lightness (brightness): Is the lightness or darkness of colour.

Saturation: Is the level of white, black or grey, ranging from neutral to brilliant (pastel to full colour).

Tint – Base colour plus white.

Tone – Base colour plus grey.

Shade – Base colour plus black.

Value – How light or dark a colour is.

Aggressive: (Warm). The yellows, oranges, and reds. These come towards the eye more (spatially) and are generally 'louder' than passive colours.

Passive: (Cool). The greens, blues, and violets. These recede from the eye more (spatially) and are generally 'quieter' than the aggressive colours.

LESSON 2 (4 PERIODS)

USING COLOURS

Learner's book, page 23.

Instructional objective

With reference to illustrations and text given, learners will mix correctly different colours and use the mixtures appropriately.

Teaching methods

- ▲ Practical work on mixing colours
- ▲ Demonstration on how to use warm colours and cool colours
- ▲ Discussion of colour effects
- ▲ Observation of colours

Teaching methodology

Let learners work out activities 2.2, 2.3 and 2.4 in the Learners' Textbook pages 22 and 24. Define colour mixing, warm and cool colours and complementary colours. Let the learners discuss about colour mixing, warm and cool colours, complementary colours and decorative background. Give them and explain to them all the above aspects.

Learner's activity

Learners must take the assignment for activity 2.2 , 2.3 and 2.4. Learners ought to demonstrate colour mixing.

Evaluation

Determine the learners' ability to correctly explain colour mixing, warm and cool colours as well as complementary colours.

Answers to learners exercises

Exercise 2.1 Learner's book, page 26

1. Warm colours make a room appear smaller and shorter than its actual size hence reducing the appearance of two big room and the reverse is true due to its advancing effect.
2. Warm colours make a short person appear taller and a small room appear wider.

Exercise 2.2 Learner's book, page 30

1. See Learner's book, page 28.
2. Correct colours, create a real feel for the particular occasion and help in the proper communication of the theme of occasion. For example black for funeral, red for the valentines day and so on.

Additional notes

The Colour Wheel

The colour wheel was developed by Sir Isaac Newton by taking the colour spectrum and bending it into a circle. If you follow around the colour wheel, you will find the same order of the colour spectrum red, orange, yellow, green, blue, indigo (blue-violet), and violet. Some remember it by the acronym ROY G. BIV.

The colour wheel is made up of three different types of colours Primary, Secondary, and Tertiary.

The primary colours are red, yellow, and blue. They are called primary for a couple of reasons. First, no two colours can be mixed to create a primary colour. In other words, primary colours can only be created through the use of natural pigments. Secondly, all other colours found on the colour wheel can be created by mixing primary colours together.

The secondary colours are orange, green, and purple. Secondary colours are created by mixing equal parts of any two primary colours. Yellow and blue will give you green. Red and blue will create purple (violet). Red and yellow will give you orange.

Tertiary colours are created by mixing equal parts of a secondary colour and a primary colour together. There are six tertiary colours red purple, red orange, blue green, yellow green, blue purple, and yellow orange. Notice that the proper way to refer to tertiary colours is by listing the primary colour first and the secondary colour, second.

Colour Schemes

Achromatic: An achromatic colour scheme is one that is colourless-using blacks, whites and greys.

Complementary: A complementary colour scheme is one that uses colours directly across from each other on the colour wheel. This can be accomplished by using two colours or hues that are opposites such as red and green or violet and yellow.

Monochromatic: A monochromatic colour scheme is a one-colour scheme. However, the colour can be neutralised by adding its complement to lower the intensity of the colour. Black and white can also be used to darken and lighten the value of the colour. It is achieved by using one colour or hue, utilising that colours' various tints, tones and shades.

Analogous: An analogous colour scheme is any three adjacent primary, secondary, or tertiary colours on the colour wheel. These schemes can be warm

or cool. Each can be neutralised by use of its complement and black and white can be used.

Colour Triad: A triadic colour scheme are colours that are an equal distance from each other on the colour wheel. Any three colours equidistant around the colour wheel form a triad and can be used in this colour scheme (for example, red, yellow and blue).

Colour tetrad: A tetradic colour scheme is one using four or more colours on the colour wheel ((for example, green, violet, red and yellow).

Colour diad: A diadic colour scheme is one using two colours that are apart on the colour wheel (for example, red and orange).

Split complementary: A split complimentary colour scheme is similar to complimentary but instead of just two colours directly opposite on the colour wheel, two of the three colours are adjacent to one of the colours that is opposite.

LESSON 3 (3 PERIODS)

DECORATIVE MATERIALS, TOOLS AND EQUIPMENT

Learner's book, page 33

Instructional objective

Given different photographs and a description that follows, learners will clearly demonstrate the use of decorative materials, tools and equipment.

Teaching methods

- ▲ Practical work on natural and artificial decoration materials.
- ▲ Demonstration on the decorative materials.
- ▲ Discussion of available decorative materials.
- ▲ Observation of decorative materials.

Teaching methodology

Let the learners attempt activities 2.7 and 2.8 in Learner's Book page 31. Let learners state the different types of decorative materials. Give them decorative materials that may not they have mentioned and explain for them all the materials. Let the learners individually explain the different decorative materials and tools.

Learner's activity

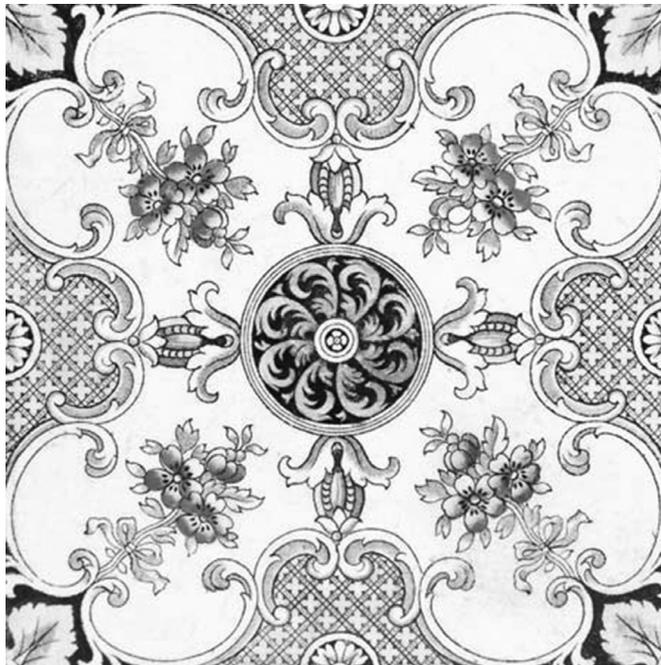
Learners must take the assignment for activities 2.7 and 2.8. Learners ought to identify different decorative tools commonly used in their community.

Evaluation

Determine the learners' ability to correctly explain different decorative materials and tools.

Additional notes

Decorative art



Any of those arts that are concerned with the design and decoration of objects that are chiefly prized for their utility, rather than for their purely aesthetic qualities.

Ceramics, glassware, basketry, jewelry, metalware, furniture, textiles, clothing, and other such goods are the objects most commonly associated with the decorative arts. Many decorative arts, such as basketry or pottery, are also commonly considered to be craft, but the definitions of both terms are arbitrary. It should also be noted that the separation of decorative arts from art forms such as painting and sculpture is a modern distinction.

Cake decorating equipment

▲ Cake pans

They help making beautiful cakes

▲ Parchment paper

For cutting circles and placing them in the bottom or cake pans for a perfect release everytime.

▲ Sharp knife or X-Acto blade

Help release your cakes from pans by running the blade around the edge, with parchment paper in the bottom

▲ Cake boards

These give stability and strength to cakes and hold them together.

▲ Off-set spatula and bench scraper

They are used for cleaning the bench.

Answers to unit assessment Learner's Book, page 35

1.
 - Blue and orange
 - Blue-green and red-orange
 - Green and red
 - Yellow-green and red violet
 - Yellow and violet
2. Let learners shade accordingly in their exercise book.
3. See Learner's Book, page 25

Unit 3

SOURCES OF FIBRE

	Lesson map
Lesson 1	Sources of fibre
Lesson 2	Sources of natural fibres
Lesson 3	Sources of artificial fibres

Learner's book page 37

Introduction

The goal of this unit is to help learners understand the:

- ▲ sources of fibre and their characteristics.
- ▲ natural and artificial fibres.

Key unit competence:

Learners should be able to identify types of fibres and explain their characteristics

Specific outcomes

By the end of this unit, learners should be able to;

- ▲ identify sources of fibres and their characteristics.

Instructional Materials

Fibres: natural, animal and artificial, internet projectors, scissors, working tables, audio and visual images , flipcharts and markers.

Skills

Recognising sources of fibres and their characteristics.

Attitudes and values

Paying attention to natural and artificial fibres

LESSON 1 (2 PERIODS)

SOURCES OF FIBRE

Instructional objective

Given illustrations and text, learners will be able to identify the different sources of fibres by looking at garments availed by the teacher. Learners will take on various activities to explore the fibres in relation to their sources appropriately.

Teaching methods:

- ▲ Group discussion about the sources of fibres by looking at garments.
- ▲ Presentation on the findings from group discussions.
- ▲ Question and answer from both the teacher and the learner on sources of fibres (natural and artificial).
- ▲ Demonstration by the teacher.

Teaching methodology

Giving the learners Activity 3.1 in the Learner's Textbook page 38.

- Dividing learners into groups of four or five. (Crops discussion)
- Giving each group time to pull out pieces of different garments such as pulling a yarn from the inner side of each and try to take out fibres. All groups should have the garments in the same number of pieces. (Presentation)
- Tell learners that when you give the sign, they have to start pulling out the yarn. (Demonstration)
- Tell them to study the similarities and differences among fibres in respect to their length and feeling. (Question and answer)

NB: The actual widthwise and lengthwise structure of fibres cannot be seen with naked eyes but can be recognised easily under the high power microscope

Learner's activity

Learners to take the assignment for Activity 3.1, Learners Book, page 38.

In groups, discuss the sources and types of fibre and make a presentation.

Main activity:

Source and characteristics of fibres

- Begin by explaining that fibres are the unit elements of the garments we put on. Mention that there are two types of textile fibres: Natural and artificial or man-made.

Natural fibres originate from natural sources mainly plant (cellulosic) or animal (protein), synthetic or man-made fibre, originate from chemical sources and may also be from regenerated or recycled sources. There is a disparity between natural and synthetic fibres, how each fibre functions and which fibres can be combined.

Evaluation

- Identify the different types of fibres used in textile industry.
- Discuss the major sources of textile fibres.

Answers to exercise 3.1 Learner's book, page 40

1. Natural and synthetic sources
2. Plants- examples are cellulose from cotton and linen from flax.
Animals- example is wool from the sheep's skin.
Linen - from flax plant.
Silk – from silk worms.
3. Synthetic fibres are manmade while natural fibres occur naturally.
4. Cotton and flax
5. Fibres that originate from chemical sources and also be from regenerated or recycled
6. Silk is exceptional because it has a lengthy continuous filaments of up to about 1 kilometre as compared to plants , animals and minerals which have short fibres

Additional Notes

Textile fibre is a material made from natural or synthetic sources. This material will be converted into the making of textile yarns and fabrics Woven, knitted, nonwoven, and carpets. It may be in a form of a pliable hair like strand or as the smallest visible unit of textile production.

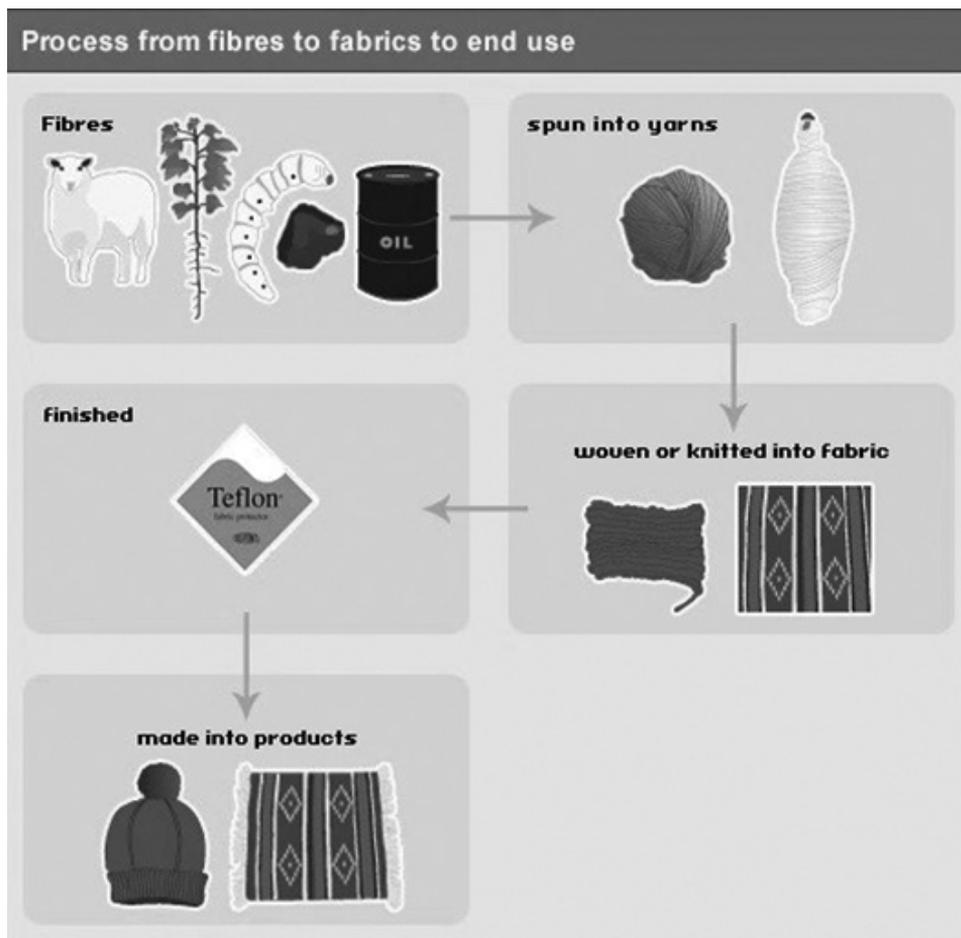


Figure 1.1: Steps in textile and manufacturing

Classification of Textile Fibre

Since from the past, there are many types of textile fibre that have been used or developed in textile production such as cloth, rope, household and etc. In textile industry, fibre can be classified into two different types based on their sources which are Natural fibre and Synthetic fibre or well known as Manmade fibre.

We are surrounded by a variety of fibres and fabrics. Fibres fall under two categories - Natural and Man-Made. Natural fibres fall under three categories:

1. Animal or Protein fibre
2. Vegetable or Cellulose fibres
3. Mineral or Inorganic fibres

Natural fibres are usually obtained from shearing, clipping or shed hair from animals. The staple length varies according to the breed of the animal.

Silk is the only occasion when a natural fibre is found in filament form.

Vegetable fibres are obtained from the seed, stem (or bast), leaves of plants.

Mineral or inorganic fibres are used in a variety of decorative and functional circumstances, usually for specialist requirements.

Man-made fibres fall under two categories, regenerated and synthetic.

Synthetic fibres, such as nylon and polyester, are manufactured by chemically reacting materials that are mainly derived from crude oil. Like natural fibres they can be combined together to form threads and woven into fabrics. They can also be made in a sheet form such as the Teflon layer inside waterproof clothing.

LESSON 2 (2 PERIODS)

SOURCES OF NATURAL FIBRES

Learner's book, page 40

Instructional objective

Given different illustrations and text, learners will clearly identify natural fibres.

Teaching methods

- ▲ Group discussion on natural fibres
- ▲ Presentation on the findings of the group discussions
- ▲ Question and answer on natural fibres as the teacher shores equitable experience with the learners.

Teaching methodology

The teacher begins by explaining that:

The source of natural textile fibres is plants or vegetables, animals and minerals. These normally have short fibres, referred to as staple fibres. The exception to this rule is silk, a natural textile fibre whose continuous filaments are relatively lengthy up to one kilometre.

- The teacher displays a chart showing sources of natural fibres as shown in the Learner's book on page 40.
- Explains the characteristics of natural fibres.

Evaluation

Define and identify natural sources of textile fibre.

Additional Notes

Fibre is the starting point of the textile chain. First of all, fibre is obtained from the source, which is then spun into yarn. Yarn is then woven or knitted into fabric. Fibres can be classified into 2 main categories: **natural** and **synthetic**.

Natural fibres are obtained from natural sources such as animals and plants, while those which are not obtained from natural sources are called synthetic fibres.

The following are some of the popular fibres used in the textile industry:

- 1) **Cotton:** Cotton fibre is obtained from the cotton plant. . It is one of the most preferable fibres because the cloth made from it is durable, at the same time having a good drape.
- 2) **Linen:** Linen fabric is obtained from the flax plant. Like cotton, linen fabric is also highly moisture-absorbent and durable. It creases easily and requires ironing. However, it is stiffer as compared to cotton. Linen is usually used in the manufacture of summer clothes and home linen.
- 3) **Jute:** Jute is a natural fibre. It is obtained from the jute plant and is popularly known as Golden fibre on account of the golden sheen that it possesses. Jute is sometimes blended with other fabrics or even used individually in the production of apparel. However, it does not have as good a drape as cotton and creases easily. Bangladesh in India is one of the major sources of jute.
- 4) **Silk:** Silk, again, is a natural fibre used in the textile industry since ages. It is obtained from silkworms. The most popular kind of silk is obtained from the mulberry silkworm. The silk that is obtained from other varieties of silkworms is called wild silk.
- 5) **Wool:** Wool is a fibre obtained from sheep. Wool fabric is soft to touch and provides warmth to the weather, due to which it is the preferred choice for winter apparel.

The common type of wool used for the production of apparel is Merino wool, obtained from the Merino sheep. Merino wool is the softest wool in the world.

The wool industry in the world is largely spread out in Australia, China and New Zealand. Australia contributes nearly 25% of the world's wool production.

LESSON 3 (2 PERIODS)

SOURCES OF ARTIFICIAL FIBRES

Refer to Learner's book, page 40

Instructional objective

Using the illustrations and text that follows, learners clearly list man-made fibres and demonstrate how they are used.

Teaching methods

- ▲ Group discussion on manmade fibres.
- ▲ Presentation on the findings of the discussion about manmade fibres.
- ▲ Question and answer from teachers and learners about sources of fibres.
- ▲ Demonstration involves display of some sources of fibres.
- ▲ Display display a short used artificial fibres.

Teaching methodology

The teacher Begin by explaining that:

The source of artificial or man-made fibres are:

Regenerated fibres – These fibres are made from extremely small cotton fibres or any other fibre source such as wood pulp, milk protein and so on. Chemicals are used to dissolve them and the solution is then converted into solid fibres. Examples are rayon (cellulose out of viscose or acetate or triacetate) of different types, casein fibre (from milk) and soya bean fibre.

Synthetic fibres - are made using various petrochemical products. Nylon, acrylic and polyester are all synthetic fibres. Synthetic fibres are man-made, usually from chemical sources. They are continuous filament fibres, which means the fibres are long and do not always have to be spun into yarn. These fibres are made in laboratories using chemicals and are known as man-made fibres

- The teacher displays a chart showing sources of artificial or man-made fibres.
- Explain the characteristics of artificial or man-made fibres.

Evaluation

Determine the extent to which learners can define and identify artificial or man-made fibre sources.

Answers to unit assessment exercise page 48, Learner's book

1. A textile fibre is the basic building blocks of any fabric.
2. The two types of fibres are natural and artificial or man-made.
3. The four major sources of natural fibres:
 - Cellulosic from the cotton plant.
 - Wool from fleece (hair) of sheep or lambs.
 - Cellulosic from flax or Linen plant stems.
 - Protein from animals (Silk from silkworms).
4. Synthetic fibres are man-made, usually from chemical sources. They are continuous filament fibres, which means the fibres are long and do not always have to be spun into yarn. These fibres are made in laboratories using chemicals and are known as man-made fibres and manufactured fibre are fibres created by a manufacturing process of any substance that is not a fibre.
5. Refer to Learner's Book, page 43.
6. Refer to Learner's Book, page 43.
7. (a) cotton plant fibre Learner's Book, page 43.
(b) Animal fibre Learner's Book, page 46.
 - Cotton- dresses, jeans, t-shirts, towel, pant.
 - Wool- jumpers, sweaters, suits and blankets.
 - Silk - blouses, evening gowns, wedding gowns, lingerie and so on, Learner's Book, page 45.
8. Stages of making a yarn
 - i. Blow room processes
 - ii. Carding
 - iii. Combing
 - iv. Drawing
 - v. Roving

Additional Notes

Suede fabric – from animal hides

Suede fabric is considered a type of leather created when the inner side or flesh side of the skin is finished, as opposed to the outside of the skin, which is tanned to produce leather.

Suede fabric comes as lamb suede, pig suede, chamois or deerskin.

Fabric characteristics

- ▲ Does not fray and resists tears.
- ▲ Windproof and waterproof, but may spot.
- ▲ It is easily marred by pins and sewing machine stitching.
- ▲ These garments cannot be let out if they become too small.
- ▲ Some cannot be stitched with a regular presser foot because they stick.
- ▲ Easily damaged by steam and a hot iron.
- ▲ May crease permanently when left folded.
- ▲ Glues and adhesives may bleed through causing spots.
- ▲ The colours on some may rub off.
- ▲ Will mildew and permanently stain when stored in humid areas.
- ▲ Suedes have a nap and may require a nap layout .The fine fibres you feel standing up on Suede & Nubuck is referred to as the nap.

Working with these fabrics requires:

- ▲ sewing machine needles recommended as sizes 70/10 jeans needle for lightweight skins, 90/14 leather needle for pig suede.
- ▲ hand sewing needles recommended as glover's needle, leather needle.
- ▲ sewing machine stitch length of 3 mm.
- ▲ sewing machine feet recommended is the teflon foot or roller foot.
- ▲ layout with nap, wrong side up single thickness.
- ▲ marking tools recommended as fabric markers or pencils, non-wax based marking chalk, because it stains.
- ▲ tools and equipment recommended as sharp scissors, rotary cutter and mat.
- ▲ seam finishing recommended is a plain seam.
- ▲ hem finishing recommended is double row of topstitching on thin suede.
- ▲ pressing recommended is a dry iron at the medium setting, using a pressing cloth on the right side.
- ▲ interfacing recommended as sew-in at a low temperature setting.
- ▲ closures recommended as bound buttonholes, snaps, button loops, eyelets and lacing.

Suede fabrics are suitable for:

for soft and drapery designs if using lamb suede, such as loose shirts, loose pants, semi-fitted pants or jackets. Since pig suede is less drapery use for fitted skirts or flat front pants. Suede can also be used in upholstery, shoes, bags and other accessories.

Synthetic Fibres

Synthetic fibres are a subset of the larger area of textiles. Textiles can be natural or synthetic. Natural fibres include cotton, fur, wool and so on. Regenerated fibres are natural materials that have been processed into a fibre structure. Regenerated fibres such as cellulose and wood pulp are used to make materials such as rayon and acetate. Synthetic fibres are man made from chemicals. They are generally based on polymers and are stronger than natural and regenerated fibres.

Advantages of Synthetic Fibres

Strong

Thermoplastic

Resistant to moths and fungi

Abrasion-resistant

Easy to care for

Low absorbency

Inexpensive

Easily available

Identification of textile fibre | Fibre test for identification

There are many methods available for identification of the structural, physical, and chemical properties of fibres. Various methods are used for fibre identification like microscopic methods, solubility, heating and burning method, density and staining and so on. End-use property characterisation methods often involve use of laboratory techniques which are adapted to simulate actual conditions of average wear on the textile or that can predict performance in end-use.

Unit 4

SEWING MATERIAL, TOOLS AND EQUIPMENT FOR BASIC STITCHES

	Lesson map
Lesson 1	Sewing materials, tools and equipment
Lesson 2	Pressing equipment
Lesson 3	Identification of basic stitches and their technique

Learner's book page 51

Introduction

This unit looks at sewing materials, tools and equipment, the basic stitches and their techniques, it also looks at how to manipulate sewing materials, tools and equipment . It includes application of basic stitches on simple objects.

Key unit competence

Learners should be able to identify basic sewing materials, tools, equipment and sew basic stitches

Specific outcomes

By the end of this unit, learners should be able to;

- ▲ identify sewing materials tools and equipment.
- ▲ explain basic stitches and their techniques.

Instructional Materials

Fabrics, sewing needles, carbon papers, pins, scissors, metre rule, paper, tape measure, sewing machine, sewing threads, pressing equipment.

Skills

- ▲ Manipulating sewing materials tools and equipment.
- ▲ Applying basic stitches on simple objects.

Attitudes and values

- ▲ Show concern using sewing materials, tools and equipment.
 - ▲ Ability to use basic stitches on simple objects.
-

LESSON 1 (2 PERIODS)

SEWING MATERIALS, TOOLS AND EQUIPMENT

Learner's book page 52

Instructional objective

Basing on illustrations and teachers explanations, learners will clearly operate the basics of sewing materials, tools and equipments.

Teaching methods

- ▲ Group discussion
- ▲ Presentation
- ▲ Question and answer
- ▲ Guided discovery
- ▲ Brainstorming

Teaching methodology

- The teacher displays the sewing tools materials and equipment.
- The teacher read through questions and also introduces the items above.
- Let learners attempt activity 4.1, Learner's textbook page 52.
- Group discussion and presentation on sewing materials, tools and equipment.

Evaluation

Are the learners knowledgably exposed to sewing equipment and tools?

Answers to activity 4.1 Learner's book, page 52

- 1&2 i. **Needles:** are pointed small metals (shafts) with different diameters and eye sizes, when threaded, they are used in sewing.
 - ii. **Scissors:** A cutting tool held with fingers evenly balanced, meant to be used in the air while holding your fabric up.
 - iii. **Tape measure:** A measuring tool that is marked at opposite ends and are in tape form usually made out of fibre glass.
 - iv. **Pins:** Small pointed tools with a round head used to attach fabric on pattern paper. **Metre rule:** Referred to as a sewing gauge, 6 inches long and divided into different measuring formats.
 - v. **Tracing machine:** These come in two styles*one with a serrated edge for use on most fabrics and a smooth edge for delicate fabrics. Tracing wheels are used with dressmaker's tracing paper to transfer construction markings from the pattern to the garment pieces.
 - vi. **Sewing threads:** Are highly twisted and smooth strand of fibre. They are used for sewing and embroidery.
 - vii. **Metre rule:** A tool used to measure distance up to 3 feet.
3. sketches of tools used in sewing (52-60 pages in student's book)

Additional Notes

The costume technician is constantly asked to quickly and efficiently produce a high quality product. The right tools aid with this task. At first the number of these gadgets can be overwhelming but they quickly become familiar friends. Following is a list of the most common tools found in the theatrical costume shops.

Refer to Learner's Book.

Measuring tools

- Tape Measures
- Seam or Sewing Gauge
- French, Hip And Miscellaneous Curves
- Rulers.
- L or Framing Square

Cutting tools

- Dressmaker shears
- Embroidery scissors or thread snips
- Cutting tables
- Paper scissors
- Pinking or scalloping shears
- Seam rippers

Marking tools

- Tracing wheels
- Embroidery floss
- Tailor's wax
- Pins; silk, ball point, coloured headed, corsage, T-pins, safety, push and thumbtacks pins.
- Dressmaker's tracing paper
- Tailor's chalk

Hand tools

- Hand sewing needles - Magnets
- Thimbles - Pin cushions
- Beeswax - Bodkin
- Needle threader - Tweezers
- Point turners

Sewing machines

- Domestic lockstitch machines - Industrial lockstitch machines
- Industrial blind hemmers - Sergers

Sewing machine accessories and attachments

- Bobbins - Sewing machine oil

Craft supplies

- Craft tables - Hammers
- Screwdrivers - Pliers
- Hot melt glue gun and glue sticks - Staple or tacking gun
- Grommet and eyelet cutters and setters - Pop rivet guns
- Stove or hot plate - Dye vats
- Wringer washers - Adhesives

Maintenance equipment

- Washer - Dryer

Miscellaneous equipment

- Dress forms
-

LESSON 2 (2 PERIODS)

PRESSING EQUIPMENT

Learner's book, page 61

Instructional objective

Given illustrations and text, learners will clearly use equipment for pressing household iron and ironing boards.

Teaching methods

- ▲ Group discussion
- ▲ Presentation

- ▲ Question and answer
- ▲ Guided discovery
- ▲ Brainstorming

Teaching methodology

Display the tools used for pressing; household iron and ironing boards.

Explain to the learners that:

Household irons are identical to those found in our homes. Most of them are equipped with a steam and a dry setting. Household irons are used in costume shops for maintenance and to press small, hard to reach areas. When a household iron is on the steam setting, the steam is pushed through the vents only when the iron is placed flat against the fabric.

Ironing boards also found in homes are sturdier to withstand constant use. All ironing boards must be level and well-padded, they also have a tapered end to press small areas.

- ▲ In groups of 3, discuss the elements of pressing in including heat and moisture. (Group discussion and brainstorming).
- ▲ (Presentation) The result from each group should be presented.
- ▲ The teacher read through questions and answer endeavour to find out from learners how pressing works.
- ▲ The teacher provides an ironing box and flat iron and through guided discovery, learners are taught how to use it.

Evaluation

Determine whether learners can identify pressing tools.

Answers to learners' exercise 4-1, Learner's book page 61

Additional Notes

Pressing equipment

Industrial iron: These are heavy-duty professional steam irons. They deliver more heat and steam than a household iron.

Household iron: These are identical to those found in your home. Most of them are equipped with a steam and a dry setting.

Ironing table: This square or rectangular padded table is used for the bulk of the pressing procedures. The ironing tables are significantly larger than a

regular ironing board to allow the costume technician to spread large pieces of fabric out flat for proper pressing.

Ironing board: These are similar to ironing boards found in the home, but are sturdier to withstand constant use.

Press cloths: These pieces of fabric are used to protect the garment from marking during the pressing process.

The procedure for using a press cloth is the same for any of the above types. To avoid a shine, place the press cloth over the right side of the fabric and press as usual. To avoid seam edges marking the right side of a garment, place the press cloth between the wrong side of the fabric and the seam allowance.

Needle or velvet board: These boards have hundreds of small ? dull metal spikes attached to a heavy fabric . They are used to press any fabric with a nap or pile.

Tailor's ham: This oblong, firmly stuffed cushion has rounded curves. It is designed to press curved areas of the garment such as darts, sleeve caps, and princess seams.

Press mit: This is similar to a ham, but it is small enough to slip over your hand. In addition it can be slipped over the end of the sleeve board to press sleeve caps and ruffles.

Sleeve board: This actually is two small ironing boards placed one on top of the other. It is designed to press small, narrow areas such as sleeves, trouser legs, and necklines.

Sleeve roll: This tubular, firmly stuffed cushion is rounded on either end. It can be used to press curves and seams in hard to reach places. With this roll you press not only the seam, but the surrounding area as well, which prevents creases.

Point presser or pressing board: This is an important tool because it has a variety of pressing surfaces. One side of the smooth wooden block has a narrow ridge that is pointed. It is used to press open enclosed seams such as collars, lapels and so on. It is also useful when pressing a seam that comes to a point.

Pounding block or clapper: This smooth wooden block is usually attached to the point presser. It is used to flatten seam edges and produce crisp flat edges. To use the pounding block press the area as usual and then immediately place the block over the area just steamed. The wooden block forces the steam back into the fabric, producing a crisp edge. On large or bulky areas you may actually pound the fabric in a circular motion.

Spray bottle: Often stubborn wrinkles and creases need a shot of water in addition to the steam provided by the iron. A light spray before pressing will usually remove these marks. Pretest the fabric before applying the water as some fabrics water spot.

Clothes brush or nylon net: A clothes brush or a wadded piece of nylon net is used to remove small pieces of thread and lint from the garment or the ironing surface before pressing. If you press without removing this lint, it can permanently mark the fabric.

Steamer: Hats and various accessories need a constant source of steam. This tool has a gallon of water that is attached to a motor. A long, flexible wand delivers the steam. The steamer is also useful to maintain costumes during the run of a production.

Iron cleaner: This product is designed to remove scorch, marks, lint, and dirt buildup from the bed of the iron while the iron is hot. Read the directions carefully before using, and always protect the surface of the ironing table with several layers of scrap fabric.

LESSON 3 (2 PERIODS)

IDENTIFICATION OF BASIC STITCHES AND THEIR TECHNIQUE

Learner's book, page 61

Instructional objective

Basing on illustrations and teacher's explanation, learners will clearly construct basics stitches.

Teaching methods

- ▲ Group discussion
- ▲ Presentation
- ▲ Question and answer
- ▲ Guided discovery
- ▲ Brainstorming
- ▲ Passion for children teaching and learning

Teaching methodology

- The teacher displays a chart showing the different stitches
- The teacher introduces the different basic stitches
- The teacher demonstrates how each stitch is applied

Learner's activity

Create samples of each basic stitch on large pieces of felt (mount them on poster board or attach to bulletin board). Pre-cut 6" squares of fabric for this assignment. Demonstrate how to do each stitch with a large needle on felt pieces, and then have students practice. Have students do one quality row of each stitch and turn it in for grading.

Evaluation

Determine the level of understanding and acquisition of skills regarding different basic stitches

Answers to learners' exercise 4.2 Learner's book, page 71

1. Short notes on the following textile stitches:
 - i. **Running:** "Run" the needle through the fabric in an over-under-over-under pattern until you reach the end
 - ii. **Back:** Simply bring your needle up through the back of your fabric, and take one running stitch. Instead of pulling your needle up after a small space though, pull it up right before the place where your last stitch ended. This will give you a nice, consistent look.
 - iii. **Blanket:** Knot the thread and pull your needle from the back to the front of the fabric, anchoring it. Next, push your needle through your first stitch's entry point, making a vertical stitch and leaving a loop of thread loose. Bring the needle through the loop, and make a new vertical stitch, leaving a new loop of thread, but pulling the first loop of thread tight (but not too tight!). When you are done, you should have a uniform line of threads running along the raw edge, and evenly spaced vertical stitches perpendicular to that.
 - iv. **Herring bone:** A herringbone stitch is a needlework stitch used in embroidery, knitting and crochet. it is so named as it resembles the bones extending from the spine of a herring fish.
 - v. **Satin:** A satin stitch or damask stitch is a series of flat stitches that are used to completely cover a section of the background fabric.
 - vi. **Stem:** Stem stitch, and its variations, are worked as a thin line and can be used to outline embroidered shapes, stitch lines and curves, embroider letters and is a great stitch to learn for a beginner.
 - vii. **Chain:** Chain stitch is a sewing and embroidery technique in which a series of looped stitches form a chain-like pattern.
 - viii. **Faggoting:** Faggoting is a variation of lace knitting, in which every stitch is a yarn over or a decrease. There are several types of faggoting, but all are an extremely open lace similar to netting.

- ix. **Feather:** A series of very small stitches are taken on alternate sides of a given line, pleat, or tuck area. The thread can be single or double, decorative or plain. This stitch can be used liberally to make beautiful borders, horizontal or vertical fillings, or even designs with curves. It looks like a series of interconnected 'v's.

Answers to the unit assessment exercise on page 71. Learner's book

Refer to Learner's Book page 48-67 for answers.

Additional Notes

Stitches

When you want to sew something or even mend something, you can make stitches by using a needle and sewing thread. Stitches are sewn differently and so they can be put in different groups.

Groups of stitches

The following are the groups of stitches.

1. Temporary stitches

These types of stitches help to keep the pieces of fabric together before you sew a permanent stitch.

Temporary stitches include:

Tailor's tacking: This is the stitch used to mark fitting lines on double material with loops of double thread. It is done by marking perforations on patterns and taking two stitches through each perforation and both layers of material, leaving a loop on the upper side and then removing the pattern, separating the layers and cutting the threads between, leaving loose threads on both sides.

Tacking stitch is done on the right or wrong side of the fabric. There are two kinds:

(a) long equal stitches and

(b) long and short stitches alternately (which is used for thick fabrics).

2. Permanent stitches

These stitches hold two or more pieces of fabric together.

Permanent stitches include:

Running stitch

This type of stitch can also be used as a temporary stitch when you are making gathers. The stitches when being made look like tacking stitches but they are smaller. When they are being used as temporary stitches, they are removed after sewing a permanent stitch.

Back stitch

This is a very strong stitch and is used to join two pieces of fabric. Usually, it is worked on the right side but if it is done to make a strong seam it is normally inside.

Oversewing

This stitch is used to join two folded edges of fabric, in the sewing on of straps and tapes and making some kinds of patches. It is usually worked on the right side and should not be pulled too tightly.

Hemming stitch

This type of stitching helps to hold hems in position. It is done on the wrong side of the fabric and is worked from right to left.

- ▲ Fringed mats
- ▲ Table napkins
- ▲ Tray cloth

3. Neatening stitches

For the prevention of fraying of the fabric when pieces of fabric threads are easily falling off), you have to use neatening stitches.

Blanket stitch

This stitch is sometimes called **loop stitch**. It is worked on the right side of the fabric from left to right. It can either be worked over a raw edge or done over a folded edge.

Over casting stitch

As mentioned earlier, this stitch is used for neatening edges which tend to fray. It is worked from left to right on the wrong side worked from left to right on the wrong side of the fabric. The needle is put in at an acute angle, and not at right angles to the fold.

4. Decorative or embroidery stitches

If you want something to look nice, you can sew a decorative stitch or at times called an **embroidery stitch**.

- (a) Chain stitch is made by starting with small running stitches away from you and sew a small backstitch and work.
- (b) Stem stitch is used for outlining designs, for stems, veins and even fixing down bands or facings.
- (c) Herring - bone stitch

It is also a decorative stitch that is worked from left to right. It can also be used over a raw edge of flannel or any woolen fabric.

Unit 5

FOOD HYGIENE AND SAFETY TECHNIQUES

	Lesson map
Lesson 1	Food hygiene practices and sanitation at workplace
Lesson 2	Food hygiene procedures
Lesson 3	Kitchen hygiene
Lesson 4	Safety techniques and handling food
Lesson 5	Appropriate handling and proper disposal of garbage
Lesson 6	Disposing house hold refuse
Lesson 7	Disposal of liquid refuse and the refuse bin

Learner's book page 75

Introduction

In this unit, the teacher should endeavour to make sure that learners know the importance of hygiene and sanitation at workplace, food hygiene procedures that involve cleaning and sanitising procedures, hygienic food handling and appropriate handling and disposal of garbage.

Key unit competence: Learners should be able to understand and apply health and safety procedures in the handling and preparation of food.

Specific outcomes

By the end of this unit, learners should be able to;

- ▲ explain the importance of food hygiene and sanitation.
- ▲ maintain hygiene and sanitation at workplaces.

- ▲ state hygiene procedures accordingly.
- ▲ apply food hygiene procedures.

Instructional Materials

Utensils, fridge, cooking stoves, food shelves, food thermometer, chafing dishes(food warmers) cupboards, stainless working tables, cleaning agents and materials, kitchen sanitiser, gloves, cutting boards, hair nets, garbage bags, dustbins, containers and kitchen uniforms.

Skills

- ▲ Maintain workplace hygiene and sanitation.
- ▲ Apply food hygiene procedures.

Attitudes and values

Embrace a positive attitude towards paying attention to work place hygiene and sanitations and make a positive contribution. Maintain positive attitude towards potential risks related to food hygiene.

Adapt cleaning and sanitation methods to maintain hygiene.

LESSON 1

FOOD HYGIENE PRACTICES AND SANITATION AT WORKPLACE

Learner's book, page 74

Instructional objective

Given the illustrations and text that follows, learners will clearly prepare food in a hygienic and well-sanitised place.

Teaching methods

- ▲ Observation
- ▲ Question and answer about importance of food hygiene and sanitation.
- ▲ Explanation about definition of food hygiene and food sanitation.

Teaching methodology

Ask learners to identify the importance of cooking in a hygienic and well sanitised place.

Give clarification where necessary.

Ask learners to define food hygiene and food sanitation.

Learners will answer the questions at the end of this lesson in which the teacher will mark in his or her free time.

Learner's activity

- ▲ field trip to the community to observing people cooking from different environments.

Evaluation

Determine the learner's ability to correctly give the importance of food hygiene and sanitation at workplace.

Answers to Exercise 5.1 Learner's book, page 74

1. Food hygiene means the preservation and preparation of foods in a way that ensures the food is safe for human consumption at an individual or family level.
Food sanitation is the preservation and preparation of food to ensure that it is safe for human consumption.
2. Importance of food hygiene and sanitation at workplace.
 - Good food hygiene helps to ensure that the food the family eats is safe because poor hygiene procedures in your home puts your family members at risk.
 - Harmful germs that cause food poisoning can spread very easily, so you need to make sure that you do everything you can to prevent this.
 - Poor food hygiene causes food poisoning and can lead to serious illnesses like stomach ache, diarrhoea, nausea, vomiting and even death. Therefore, it is important to have workplaces kept clean to avoid this.
 - Proper hygiene is very important when it comes to food preparation area because without washing hands and kitchen tools, diseases may easily spread.
 - Hygiene and sanitation at workplace reduces cross-contamination which is the transfer of bacteria from one food item to other foods and this is a major cause of food poisoning.
 - Food poisoning spreads when one food, mainly raw food, comes in contact with other types of food. Bacteria can also be transferred indirectly, for example from hands, tools, surfaces, knives, and clothes. One thing you can do to prevent cross-contamination is keep separate chopping boards for raw and cooked foods.

Additional notes

Food hygiene are the conditions and measures necessary to ensure the safety of food from production to consumption. Food can become contaminated at any point during slaughtering or harvesting, processing, storage, distribution, transportation and preparation. Lack of adequate food hygiene can lead to food borne diseases and death of the consumer.

Due to a heightened public awareness as a result of all types of media coverage concerning foodborne illnesses, the level of training for employees working in the food industry in general needs to be increased. This is a responsibility that the food industry has to their clients and the general public. Employers have a responsibility to provide a well-designed, informational training programme for employees to follow while on the job. It is important that this training be communicated in language that all employees understand. Practices and procedures must be translated for all employees, no matter what language they speak. Proper hygiene practices should be communicated prior to employment and reaffirmed with periodic training programmes.

Signs with pictures of good practices are an excellent method to reinforce training. These should be displayed in areas where applicable and be multilingual. Training should be documented and list the employees that have completed it.

Workers can carry pathogens internally and on their hands, skin and hair. It is imperative that they follow and understand basic food protection practices and maintain a high degree of personal cleanliness and good sanitation practices to prevent food product contamination. Unless employees understand and follow basic food protection principles, they may unintentionally contaminate food packaging, water and other workers, thereby creating the opportunity to transmit foodborne illness. Employee health and hygiene falls into two categories, cleanliness and disease control.

Personal hygiene begins at home, with the essential elements for good hygiene being a clean body, clean hair and clean clothing. Hair in food can be a source of both microbiological and physical contamination. Hairnets and beard covers should be worn to assure food product integrity. Long-sleeved smocks should be worn to cover arm hair. Clean uniforms, aprons and other outer garments that are put on after the employee gets to work can help minimise contamination. While working, clothing should be kept reasonably clean and in good repair. Removal of smocks, lab coats or aprons should take place when leaving the work area to go to the employee break room, restroom or exiting the building. Personal items such as meals and snacks should be stored in a locker or break room area that is located away from processing areas or areas where equipment and utensils are washed.

LESSON 2

FOOD HYGIENE PROCEDURES

Cleaning and sanitising procedures

Learner's book, page 76

Personal hygiene

Instructional objective

Basing on photographs and the description given, learners will practise good personal hygiene that leads to good food hygiene accordingly.

Teaching methods

- ▲ Practical on personal hygiene
- ▲ Question and answer about personal hygiene
- ▲ Pair work to define personal hygiene

Teaching methodology

Call upon learners in pairs to define personal hygiene as it was covered in the first unit.

Let each learner practise personal hygiene that leads to good food hygiene.

Let the learners demonstrate different ways of ensuring personal hygiene that leads to good food hygiene.

Learner's activity

Let learners practise or demonstrate different ways of ensuring personal hygiene.

Evaluation

Determine the learner's ability to correctly demonstrate food hygiene procedures and in this case personal hygiene.

Additional notes

Good personal hygiene is one of the most effective ways of protecting ourselves, and others, from illness. This means washing your hands, especially, but also your body.

- Wash your hands properly.
- ▲ Wash them when you first get to the kitchen.
- ▲ Wash them when you switch working from raw meats to vegetables or fruits.
- ▲ Wash them anytime your hands become self-contaminated. For example after sneezing and coughing into your hand or after using the washroom.

- Always tie long hair back or wear a hat or hairnet while cooking.
 - Don't handle food with open sores or cuts on your hand. Thin plastic gloves or finger cots are the best solution in this case.
 - If you are sick (cold, vomiting or have diarrhea) do not attend the community kitchen. If you must come, do not cook. You may contaminate the food you are cooking.
 - Pull up your sleeves to prevent your clothing from contaminating the food.
 - Wear a clean apron.
-

LESSON 3

KITCHEN HYGIENE

Learner's book, page 77

Instructional objective

Referring to activities and illustrations, learners will practise good kitchen hygiene that also enables having good food hygiene.

Teaching methods

- ▲ Group practical to clean the kitchen tools, materials and equipment.
- ▲ Group discussion on how to keep the kitchen hygienic.
- ▲ Presentation on how to keep a hygiene kitchen.

Teaching methodology

Guide learners to form manageable groups and let them carry out a class practical to clean the kitchen that is tools, materials and equipment in the Home Science Laboratory. If the school does not have a Home Economics laboratory, improvise with someone's kitchen in the school community.

Let the learners in their groups discuss and present the points on how to keep the kitchen hygienic.

Harmonise the lesson, emphasise main points and give a conclusion.

Learner's activity

Group practical on cleaning the kitchen tools, materials and equipment.

Evaluation

Determine the learners ability to correctly demonstrate food hygiene procedures and in this case kitchen hygiene.

Answers to exercise 5.2, Learner's book, page 78

Additional notes

Here are some basic hygiene rules you should follow in the kitchen

1. Clean kitchen surfaces after every stage of preparing your recipe. Try to 'clean as you go'. This may sound a little obsessive, but it's not.
Raw meat, poultry, fish, eggs and many other raw foods are the most common sources of germs, but they can easily cross-contaminate other foods. After handling these foods, always wash your hands, utensils and surfaces thoroughly before you touch anything else.
2. One important way of stopping cross-contamination is to make sure that you always use a different chopping-board for your raw meat and everything else. If you keep one for raw meat and fish, and another for all your other chopping, you will be making a major contribution to your health and kitchen safety.
3. After use, wash all your dishes and utensils with hot water and dish washing liquid. (Don't just run them under the water), Change the water regularly, then rinse in clean, hot water. When possible, leave everything to drain until dry.
4. Use paper towels whenever possible, if you can afford to buy them. Dish towels can be a source of cross-contamination so use them sparingly and change them regularly. Be sure to wash them in a hot-wash cycle.
5. Use the "sani-rinse" cycle on your dishwasher if anyone in your household has a cold or flu. This is a really hot cycle that totally annihilates germs and bacteria.

LESSON 4

SAFETY TECHNIQUES OF HANDLING FOOD

Learner's book, page 79

Instructional objective

Basing on the illustrations and text given, learners will clearly demonstrate hygienic food safety techniques.

Teaching methods

- ▲ Practical work on food safety techniques.
- ▲ Group discussion about food safety techniques

Teaching methodology

Guide learners to form groups, let the learners discuss and make their presentation on food safety techniques.

Call upon learners to mention the ways on how to handle food hygienically.

In the same groups, learners should carry out a practical to demonstrate proper safety techniques food.

Supervise and give clarifications where necessary.

Learner's activity

Learners ought to carry out a practical to demonstrate hygienic ways of handling food.

Evaluation

Determine the learners ability to correctly demonstrate food hygiene procedures and in this case, hygienic food handling.

Answers to exercise 5.3

Refer to learner's book page 81.

Additional notes

Food naturally contains bacteria and some foods may contain food poisoning bacteria. Foods need to be handled correctly to ensure that they do not become contaminated and that the bacteria already in the food do not have an opportunity to grow.

It is important to keep raw food totally separate from cooked or ready-to-eat foods.

If raw food is cooked thoroughly most of these bacteria will be killed. However, if raw food comes into contact with other food that has already been cooked, or is ready-to-eat, the bacteria can transfer to this food. This is called **cross-contamination**.

LESSON 5

APPROPRIATE HANDLING AND PROPER DISPOSAL OF GARBAGE

Learner's book, page 81

Instructional objective

Using illustrations and text given, learners will practically categorise garbage and give reasons why it should be disposed of as quickly as possible.

Teaching Methods

- ▲ Community tour to visit garbage disposal area of the school kitchen.
- ▲ Practical to categories garbage into organic and inorganic refuse.
- ▲ Question and answer about the importance for disposing off household refuse quickly.

Teaching methodology

Ask learners to define household refuse.

Organise learners to visit the garbage disposal area of the school kitchen to identify the different categories of household refuse.

Let them practically group those categories.

Let the learners mention the different categories of household refuse while giving examples.

Call upon learners to give reasons why it is important to dispose of household rubbish as quickly as possible.

Emphasise the main points and conclude the lesson.

Learner's activity

- Visiting a school kitchen garbage disposal area.
- Categorising the garbage into groups.

Evaluation

Determine the learner's ability to correctly give the categories of household refuse and the importance for disposing of household refuse as quickly as possible.

Answers to learner's activity 5.5 Learner's book, page 81

1. House hold refuse is waste material that has been thrown away.
2. Organic refuse is that waste material that has had life for example, dead flowers, vegetable peelings, stale food and so on.
3. Examples of inorganic refuse include; broken glass, nylon, polyethenbags, plastics, broken crockery.

Additional notes

Solid waste comprising of garbage and rubbish (such as bottles, cans, clothing, compost, disposables, food packaging, food scraps, newspapers and magazines and yard trimmings) that originates from private homes or apartments. It may also contain household hazardous waste. Also called **domestic waste** or **residential waste**.

LESSON 6

DISPOSAL OF HOUSE HOLD REFUSE

Learner's book, page 81

Instructional objective

With reference to illustrations and text given, learners will clearly practice different methods of solid rubbish disposal.

Disposal of solid rubbish

Teaching methods

- ▲ Group discussion on methods of disposal of solid rubbish.
- ▲ Presentation on methods of disposal of solid rubbish.
- ▲ Practising how to dispose of solid rubbish.
- ▲ Field work to market or garbage collection place to practise how to dispose of solid rubbish.

Teaching methodology

Guide the learners to form groups of 8, let the learners discuss and make presentations on methods of disposal of solid rubbish or garbage.

Organise a field work tour to a nearby hotel or market place and let the learners collect different categories of garbage or rubbish and let them practise every method of disposal of rubbish discussed.

Learner's activity

- Field tour to a nearby hotel or market place to collect garbage.
- Practising how to dispose of solid rubbish.

Evaluation

Determine the learner's ability to correctly explain and demonstrate the methods of disposal of solid rubbish.

Additional notes

There are various groups of waste disposal methods. Those groups include source reduction and reuse, animal feeding, recycling, composting, landfills and burning. You can start using many techniques right at home, like reduction and reuse, which work to reduce the amount of disposable material used.

LESSON 7

DISPOSAL OF LIQUID REFUSE AND THE REFUSE BIN

Learner's book, page 83

Instructional objective

Given relevant examples learners will be able to dispose of liquid refuse and practise how to care for a refuse bin appropriately.

Teaching methods

- ▲ Guided discussion on how to care for refuse bins.
- ▲ Question and answer to define refuse bin.
- ▲ Practising how to dispose of liquid refuse.
- ▲ Demonstrating how to clean and care for the refuse bin.
- ▲ Think pair share to define refuse bin.

Teaching methodology

Call upon learners to define what a refuse bin is.

Guide a class discussion on how a refuse bin should be.

Let each learner bring a dustbin or a bucket with a cover and practise how to care for it and how to clean it.

Ask the questions about what refuse bin is, guide learners to make pairs, let them think about the answers and let them share between themselves and agree on the right answer. One person from each pair will present their answers to the rest of the class.

Call upon learners to demonstrate how to dispose of liquid refuse.

Harmonise the lesson, emphasise main points and make conclusions.

Learner's activity

- Practising how to care for and how to clean dustbins.
- Demonstrating how to dispose of liquid refuse.

Evaluation

Determine the learner's ability to correctly mention the different ways for disposing of liquid refuse.

Answers to exercise 5.4 Learner's book, page 85

1. refer to Learner's book, page 74.
2. rags, papers, pieces of wood.
3. Water from bathtubs, sinks and washbasins, water used for washing up utensils, for scrubbing the floor, water used for laundry, water from water closets, rain or storm water.
4. Most of the water is collected in gutters and carried away into either street drains or a soak pit. Water used for laundry may be sprinkled in the compound to help keep down the dust. Water from toilets is flushed into the septic tank.

Answers to unit assessment questions. Learner's book, page 85

1.
 - i. Food hygiene means the preservation and preparation of foods in a way that ensures the food is safe for human consumption at an individual or family level.
 - ii. Food sanitation usually refers to preservation and preparation of foods in a way that ensures the food is safe for human consumption at the commercial level within the food industry, such as during production and packaging or at stores or restaurants.
 - iii. Food safety is the handling, storing and preparing food to prevent infection and help to make sure that our food keeps enough nutrients for us to have a healthy diet.
2. Importance of food hygiene and sanitation at workplace.
 - ▲ Helps to reduce the risk of food poisoning.
 - ▲ Helps to obey the law of national bureau of standards.
 - ▲ It helps to control harmful bacterial which can cause serious illness like stomachaches, diarrhoea, vomiting, nousea and even death.
 - ▲ Good food hygiene is essential for you to make or sell food that is safe to eat.
3. Refer to Learner's Book, pages 74-76.
4. Household refuse may be classified as; Organic that which has had life, for example, dead flowers, stale food, leaves, vegetable peelings, scraping from plates and inorganic, for example broken crockery, glass, tins, plastic, nylon, polythene papers.
5. It is important to dispose of household rubbish as quickly as possible because:
 - It attracts rats, lice and other insects which spread disease germs.
 - Organic refuse decomposes rapidly and produces bad odours.
 - Inorganic refuse left lying about looks unpleasant, takes up space and makes cleaning difficult.

Unit 6

FOOD NUTRIENTS SELECTION PRINCIPLE

	Lesson map
Lesson 1	Types of nutrients
Lesson 2	Carbohydrates
Lesson 3	Lipids/fat
Lesson 4	Vitamins (fat soluble vitamins)
Lesson 5	Vitamins (water soluble)
Lesson 6	Mineral salts (calcium, iron and phosphorous)
Lesson 7	Mineral salts (potassium, sodium and chlorine, iodine and fluorine)
Lesson 8	Food and nutrient selection principles.
Lesson 9	Selecting vegetarian diets
Lesson 10	Revision about types of food nutrients and principles of food nutrient selection

Learner's book, page 87

Introduction

In this unit, the teacher will ensure that learners know types of food nutrients which are proteins, vitamins, carbohydrates, fats and mineral salts then Principles of food nutrients selection which include growth, physical activities level, pregnancy, adequacy balance, caloric control and vegetarian diets.

Key Unit Competency:

- Learners should be able to apply principles of food nutrient selection.

Specific Outcomes

By the end of this unit, learners should be able to know the;

- ▲ instructional materials.
- ▲ different types of foods.

Skills

- ▲ Demonstrate different types of food nutrients.
- ▲ Apply principles of food nutrients selection.

Attitudes and values

- ▲ Appreciate the value food nutrients.
 - ▲ Comply with principles of food nutrient's select.
-

LESSON 1

TYPES OF NUTRIENTS

Learner's book, page 88

Instructional objective

Having pictures and illustrations materials, learners will be able to choose food that provide different nutrients to the body and prepare a list of effects of deficiency of the different nutrients in the body correctly.

Teaching methods

- ▲ Displaying foods rich in proteins, photograph of children with kwashiorkor and marasmus.
- ▲ Group research on protein, nutrients that is importance, food sources, effect of excess and deficiency.
- ▲ Group discussion on functions of proteins, food sources, effect of excess and deficiency.

Teaching methodology

- Guide learners to form manageable groups that will research and discuss about the different nutrients and presentations that will be made in proceeding lessons.
- Group leaders will present the research work on protein that is what they are made of, functions, sources plus displaying foods rich in proteins, effect of excess protein in the body and effect of deficiency in the body, photograph or image of a child with protein deficiency will be passed around for all learners to see.

- The teacher will elaborate where necessary.
- Learners will take notes and answer the exercise given at the end.
- Teacher will mark the exercise in his or her free time.

Learner's activity

Learners if day scholars will be requested to bring in class the protein foods they know, if they are boarders, the teacher will provide and bring to class the protein foods.

Additional notes

Recommended daily allowance for proteins.

The amount of protein you need in your diet depends on your weight, age and health. As a rough guide, the recommended dietary intake (RDI) for protein (measured in grammes per kilogramme of body weight) is:

- ▲ 0.75 g/kg for adult women.
- ▲ 0.84 g/kg for adult men.
- ▲ Around 1 g/kg for pregnant and breastfeeding women and for men and women over 70 years.

Evaluation

Determine the learner's ability to correctly describe protein nutrient.

Answers to exercise 6.1 Learner's book, page 91

1. Oxygen, hydrogen, carbon and nitrogen.
2. Amino acids are small units joined together to form a protein molecule.
3. Function of protein:
 - ▲ Helps repair and build bod's tissues.
 - ▲ Allows metabolic reaction to take place and coordinates bodily function (digestive enzymes + hormones)
 - ▲ Maitains proper ph and fluid balance in body
 - ▲ Protocts the body from foreign pathogens (immuno globulins)
4. Chicken, meat, milk, eggs, fish, peas, beans, cereals, groundnuts.
5. Deficiency of carbohydrates and proteins lead to;
 - ▲ retardation of growth especially in children.
 - ▲ less resistance to diseases.
 - ▲ malfunctioning of the body organs and systems.
 - ▲ body wastage because the worn out cells and tissues are not replaced.
 - ▲ kwashiorkor and marasmus breakdown, in severe cases

LESSON 2

CARBOHYDRATES

Learner's book, pages 91-93

Instructional objective

Given different illustrations and text, learners will be able to:

- ▲ Choose carbohydrate food and list effects of deficiency of carbohydrates in the body perfectly.

Teaching methods

- ▲ Research work of functions, food sources, effects of deficiency and excess of carbohydrates.
- ▲ Group discussion on carbohydrates.
- ▲ Presentation on carbohydrates.
- ▲ Displaying foods rich in carbohydrates.

Teaching methodology

- Putting in mind that learners in groups have in their own time researched and discussed about carbohydrates, call upon a member from each group to make a presentation about what carbohydrates are, their functions, food sources, effect of excess and deficiency of carbohydrates in the body.
- Learners will be required to display foods rich in carbohydrates.
- Learners should use the internet to get images of people with excess and deficient carbohydrates which should be passed around in class for all to see.
- The teacher will harmonise the lesson and emphasise main points in conclusion.
- Learners are to answer the exercise given at the end of this lesson which will be marked during the teacher's free time.

Learner's activity

- In groups, learners ought to research and discuss carbohydrates, what their functions are, foods rich in carbohydrates, effects of excess and deficiency in the body.
- Displaying foods rich in carbohydrates.
- Passing images around the classroom of people affected by excess and those deficient in carbohydrates.

Additional notes

Recommended daily allowance of carbohydrates

The average 1,800-calorie diet should contain between 210 and 290 grammes

of carbohydrates each day, which is equal to 45 to 65 per cent of your daily calories for both children and adults.

Evaluation

Determine the learner's ability to correctly describe carbohydrates.

Answers to exercise 6.2. Learner's book, page 93

1. The body requires carbohydrates for the following reasons:
 - ▲ Carbohydrates are a source of energy used as they provide glucose that is used in the brain and cells.
 - ▲ Carbohydrates are used as a 'protein sparer' so that proteins are used for its main functions rather than a source of energy because when carbohydrates are not provided in the body, the proteins available are broken down to provide energy.
 - ▲ Carbohydrates add bulk or roughage to the food which helps in digestion for example, cellulose in cassava.
 - ▲ Carbohydrates provide warmth or heat to the body.
2. Carbon, hydrogen and oxygen.
3. When too much carbohydrate is eaten, the following happens:
 - ▲ Obesity: when there is a lot of sugar in the body the excess sugar will be converted to fat and this fat will be kept in the fat deposits. When the fat is not used for energy production, it will lead to overweight and this condition is known as **obesity**.
 - ▲ High rates of sugar in the diet will led to dental decay where the sugars will first be deposited on the enamel of the tooth and latter fed on by bacteria which will eat up the enamel thus leading to dental decay.
 - ▲ High consumption of sugar is related to high incidence of chronic heart disease. This is due to too much sugar in the blood and this leads to high blood pressure.
4. Millet, sorghum, wheat, rice, maize, potatoes, cassava, bananas, oats and so on.
5. The symptoms of deficiency of carbohydrates are;
 - ▲ Marasmus which is as a result of breakdown of body protein and body tissues to provide energy in the body.
 - ▲ Weight loss.
 - ▲ Scaly dry skin.

LESSON 3

LIPIDS/FAT

Learner's book, page 93

Instructional objective

Having illustrations and text given, learners will be able to:

- ▲ choose foods rich in lipids and solve deficiency problems of lipids correctly.

Teaching methods

- ▲ Brainstorming the importance of fat in cooking.
- ▲ Question and answer to define fat.
- ▲ Displaying foods rich in fat.
- ▲ Group discussion about functions of fat, food sources, effect of excess and deficiency of fat in the body.
- ▲ Presentations about functions of fat, food sources, effect of excess deficiency in the body.

Teaching methodology

- Teacher asks learners to define fat.
- Teacher gives clarification where necessary.
- Teacher calls upon learners to display fat and oil.
- Teacher will ask learners in their groups to discuss functions of fat, food sources, effect of excess and deficiency.
- Learners display foods rich in fat.
- Learners brainstorm on the importance of fat in cooking.
- Learners note down major points and answer the exercise at the end of the lesson.

Learner's activity

- Displaying fat, oil and foods rich in fat.
- Group research and discussion on fat that is its functions, food sources, effect of excess and deficiency in the body.

Additional notes**Recommended daily fat intake**

Total calories per day	Saturated fat in grammes	Total fat in grammes
1,600	18 or less	53
2,000	20 or less	65
2,200	24 or less	73
2,500	25 or less	80
2,800	31 or less	93

Evaluation

Determine the learner's ability to correctly describe fat as a nutrient.

Answers to exercise 6.3. Learner's book, page 96

1. Functions of fats
 - ▲ Fats are a source of energy. It supplies energy to the body more than carbohydrates and proteins.
 - ▲ Fat surrounds and protects important organs of the body like the kidney and the heart, however, too much fat around the organs is dangerous as it slows down their functions.
 - ▲ Fat forms an insulating layer beneath the skin to help keep us warm by preserving body heat and it also protects the skeleton and organs.
 - ▲ Fat is a good source of fat soluble vitamins **A, D, E** and **K**.
 - ▲ Fat is a reserve of energy for long term storage and can be used if energy intake is restricted.
 - ▲ Fat in foods provide texture and flavour in foods and helps to make it palatable.
 - ▲ Food containing fat provides a feeling of satiety or fullness after a meal as fat is digested slowly.
2. The difference between fat and oils are that; fats are solids at room temperature while oils are liquids at room temperature.
3. Carbon, oxygen and hydrogen.
4. Animal fat include, fatty beef, pork, suet, egg yolk, flesh of oily fish and plant sources of fat include; groundnuts, avocado, soybeans, simsim seeds, cashew nuts, sunflower seeds and so on.
5. Visible fat is the fat that is easily seen or detected in food while invisible fat is the fat in the food that is not easily seen.
6. Excess fat is undesirable because; excess fat leads to obesity (over weight) and excess fat may also result in cardio vascular diseases for example, heart attack and heart failure.

LESSON 4

VITAMINS (FAT SOLUBLE VITAMINS)

Learner's book, pages 97-109

Instructional objective

Having illustrations on vitamins, learners will be able to:

- ▲ list foods rich in different vitamins (fats soluble) and solve vitamins deficiency problem in their community accurately.

Teaching methods

- ▲ Discussion on functions, food sources, effect of deficiency and properties of fat soluble vitamins.
- ▲ Displaying foods rich in fat soluble vitamins, charts showing effect of deficiency.
- ▲ Presentation on functions, food sources, effect of deficiency and properties of fat soluble vitamins.

Learner's activity

- Researching work and presentations on various fat soluble vitamins.
- Displaying foods rich in fat soluble vitamins.
- Preserving the foods for later use.

Additional notes

Recommended daily intakes of vitamins.

Vitamins	Recommended daily intake
Biotin (B-complex)	30 µg
Folate (B-complex)	400 µg
Vitamin A	600 µg
Vitamin B ₁ (thiamine)	1,4 mg
Vitamin B ₂ (riboflavin)	1,6 mg
Vitamin B ₃ (niacin)	18 mg
Vitamin B ₅ (pantothenic acid)	6 mg
Vitamin B ₆ (pyridoxine)	2 mg
Vitamin B ₁₂ (cobalamin)	6 µg
Vitamin C (ascorbic acid)	75 mg

Vitamin D (cholecalciferol)	5 µg
Vitamin E (tocopherol)	10 mg
Vitamin K	80 µg

Evaluation

Determine the learner's ability to correctly explain fat soluble vitamins

Answers to exercise 6.4. Learner's book, page 109

1. vitamin B complex has B₁- thiamine, B₂- riboflavin, B₃- nicotinic acid, B₆, - pyridoxine, B₁₂-cobalamin
2. here you can select any 3 of the B vitamins that is their functions and food sources, refer to Learner's Book page 104.
3. Beri beri is caused by lack of vitamin B₁-thiamine, it has the following symptoms; excessive, weight loss, the legs, ankles and wrists drop.
4. symptoms of deficiency of riboflavin are;
 - ▲ failure to grow.
 - ▲ skin lesions, skin disorder and conjunctivitis(disorder of the outer membrane of the eye).
 - ▲ tongue may swell, mouth and lips become sore.
5. folate is important during pregnancy because a deficiency in early pregnancy may lead to a condition called spina bifida in a baby which causes permanent disability to the baby.
6. pellagra is caused by lack of vitamin B₃(niacin) in the body.
7. refer to Learner's Book, pages 107-108.
8. the name associated with deficiency of vitamin C is scurvy and the symptoms refer to Learner's Book page 86.

LESSON 5

VITAMINS (WATER SOLUBLE)

Learner's book, pages 102-109

Instructional objective

Having illustrations and text given, learners will clearly and correctly:

- ▲ list sources of water soluble vitamins and prepare food without destroying water soluble vitamins.

Teaching methods

- ▲ Research work on various water vitamins.
- ▲ Group discussion on the vitamins.
- ▲ Presentation importance of water soluble vitamins, sources of food, effect of deficiency and properties of vitamins.
- ▲ Displaying food rich in water soluble vitamins, displaying chart of showing effect of deficiency of water soluble vitamins.

Teaching methodology

- Teacher will guide learners through a discussion on the introduction of vitamins.
- Teacher will call upon a representative of learners in their groups to present their researched and discussed work on the water soluble vitamins (**B** group complex and **C**). For each vitamin, they will discuss its functions, sources, deficiency, properties and they will display food rich in those vitamins plus drawing charts and researching on internet for images of people deficient in those vitamins.

Learner's Activity

- ▲ Research work and presentations on various water soluble vitamins.
- ▲ Displaying foods rich in water soluble vitamins.
- ▲ Preserve them for later use.

Evaluation

Determine the learner's ability to correctly explain water soluble vitamins.

LESSON 6

MINERAL SALTS (CALCIUM, IRON AND PHOSPHOROUS)

Learner's book, pages 109-116

Instructional objective

Having illustrations and descriptions given, learners will be able to:

- ▲ select foods rich in minerals and solve mineral deficiency problems in the community correctly.

Teaching methods

- ▲ Group research on functions, food sources, effects of deficiency and excess of calcium, phosphorous and iron.
- ▲ Group discussion about minerals, calcium, iron and phosphorous.
- ▲ Presentation on minerals salts.
- ▲ Guided discussion about what minerals are.
- ▲ Displaying foods rich in minerals.
- ▲ Brainstorming the examples of mineral elements in each group of minerals.

Teaching methodology

Learner's activity

- Researching about mineral salts (calcium, iron and phosphorous) that is their functions, effect of deficiency and excess in the body plus the foods rich in those mineral salts.
- Displaying foods rich in the mineral salts discussed.
- Getting images or photographs of people with deficiency and excess of the mineral salts discussed.

Evaluation

Determine the learner's ability to correctly describe mineral salts (calcium, iron and phosphorus).

LESSON 7

MINERAL SALTS (POTASSIUM, SODIUM AND CHLORINE, IODINE AND FLUORINE)

Instructional objective

Basing on illustrations and descriptions, learners will be able to show the importance of mineral salts in the body, identify their food sources, explain effect of excess and deficiency in the body effectively.

Teaching methods

- ▲ Group research about functions of minerals, (potassium, sodium, chloride, iodine and fluorine), food sources, effect of excess and deficiency.
- ▲ Group discussion about functions of minerals, food sources, effect of excess and deficiency.
- ▲ Presentations on functions of minerals, food sources, effect of excess and deficiency.
- ▲ Displaying foods rich in minerals (potassium, sodium, chloride, iodine and fluorine), charts of effect of deficiency and excess.

Teaching methodology

- Group leaders will present their work in class about mineral salts (potassium, sodium and chlorine, iodine and fluorine) their functions, effect of deficiency of lack of mineral salts and effect of excess mineral salts in the body plus the food rich in those mineral salts.
- Learners are to display foods rich in these mineral salts, learners are to use internet to research images of people with deficiency and excess and these images will be passed around for all learners to see.
- Teacher will make necessary clarifications and point out major points.
- Learners will take notes where necessary.
- Learners will answer the exercise given at the end of the lesson which will be marked in class.

Learner's activity

Researching about mineral salts (potassium, sodium and chlorine, iodine and fluorine) that is their functions, effects of the deficiency and excess in the body plus the food rich in those mineral salts.

Displaying foods rich in the mineral salts discussed.

Getting images or photographs of people with deficiency and excess of the mineral salts discussed.

Additional notes

Recommended daily intakes of minerals

Minerals	Recommended daily intake
Boron	< 20 mg
Calcium	1000 mg
Chlorine	3400 mg (in chloride form)
Chromium	120 µg
Copper	2 mg
Fluorine	3,5 mg
Iodine	150 µg
Iron	15 mg
Magnesium	350 mg
Manganese	5 mg
Molybdenum	75 µg
Nickel	< 1 mg
Phosphorus	1000 mg
Potassium	3500 mg
Selenium	35 µg
Sodium	2400 mg
Vanadium	< 1,8 mg
Zinc	15 mg

Evaluation

Determine the learner's ability to correctly describe mineral salts (potassium, sodium and chlorine, iodine and fluorine).

Answers to exercise 6.5. Learner's book, page 118

- Minerals needed in large amounts are; Calcium (Ca), Phosphorus (P), Iron (Fe), Sodium (Na), Potassium (K)
Those needed in small amounts are; Iodine (I), Fluorine (F), Copper (Cu), Manganese (Mn), Cobalt (Co),
- Refer to learners book pages 86-90.
- Haemoglobin is required for the transport of Oxygen around the body to every cell and it is associated with mineral salt Iron.

4. Iron helps to form haemoglobin which is required for the transport of oxygen around the body to every cell.
5. Goiter is the swelling of the thyroid gland in the neck, it is caused due to lack of Iodine in the body.
6. Osteomalacia is when the bones of adults become weak and fragile due to lack of Calcium in the body.

LESSON 8

FOOD AND NUTRIENT SELECTION PRINCIPLES

Learner's book, page 118

Instructional objective

Given the different illustrations and descriptions, learners will be able to clearly select food nutrients for different stages of growth cycle.

Teaching methods

- ▲ Guided discussion on the principles of food nutrient selection
- ▲ Practising how to plan a balanced meals for different groups of people.
- ▲ Presentation on the principle of food nutrient selection.

Teaching methodology

- Teacher guides a class discussion about the different principles of food nutrient selection.
- Learners actively give answers to questions asked by the teacher. And for each principle of food nutrient selection, each learner will be required to practise how to plan a balanced meal for different categories discussed for example, the young, old, physically active, sedentary lifestyle, pregnant women, lactating mothers and the sick.
- Presentations on meal plans will be made.
- Teacher gives clarification where necessary and conclude the lesson.

Learner's activity

Practising how to plan meals for different categories of people.

Evaluation

Determine the learner's ability to correctly apply the principles of food nutrient selection.

LESSON 9

SELECTING VEGETARIAN DIETS

Learner's book, page 121

Instructional objective

Given the description and illustrations, learners will be able to clearly plan meals for different people.

Teaching methods

- ▲ Pair work to discuss principles of vegetarian nutrient selection.
- ▲ Discussion on the principles of vegetarian nutrient selection.
- ▲ Presentation on the principles of vegetarian nutrients selection.
- ▲ Practising meal planning

Teaching methodology

- Teachers guides learners to pair up and discuss the principles of food nutrient selection, that is, adequate balance, caloric control and vegetarian diet.
- Learners in pairs are required to plan menus for these principles discussed.
- Each learner from a pair will present their work to the rest of the class.
- Teacher harmonises the lesson and highlights main points.
- Learners are to answer the exercise given at the end of the lesson. Teacher is expected to mark it during her/his scheduled time.

Learner's activity

Practising how to plan meals for different categories of people.

Additional notes

The best way to think about a healthy diet is that it should balance nutrients. This means you are getting a balance of the three main nutrients – carbohydrates, healthy fats, and protein – everyday on average, and, additionally, you are not undereating or overeating. There are three main nutrients as well as additional nutrients that your body requires.

Carbohydrates: provide fuel for our brains and muscles as well as contain important vitamins, minerals, fibre, antioxidants, and phytochemicals which help prevent disease. Grains are often our main source of carbohydrates, although

fruits and vegetables and other foods also contain carbohydrates.

Fats - There is such a thing as healthy fat, which means you cannot and should not avoid all fat in your diet. Healthy fats provide energy and essential fatty acids, which help to keep our skin healthy, help absorb certain vitamins, and play a key role in brain development.

Proteins- Protein provides building blocks for bones, muscles, cartilage, skin, and blood in our bodies. Proteins are also used to make important enzymes, hormones, and vitamins. Protein helps normalise blood sugars, makes us feel alert, and provides a feeling of fullness

Fruits and Vegetables - The American Dietetic Association (ADA) guideline recommends eating five to nine servings of fruits and vegetables a day. That is at least two servings at each meal, but less than 20 percent of young adults fulfil the recommended daily amount. You should try to make half of your plate vegetables and/or fruits at every meal!

Dairy-nutrients, which are both important for a healthy, balanced diet. When we eat fruits and vegetables, we can avoid foods that are full of empty calories, or high in processed sugars or flour.

Sugars- foods, such as milk and fruits, contain naturally occurring simple sugars. These sugars are not harmful to our body, and in fact may contain essential vitamins and minerals. The sugars to be concerned about are added sugars – such as glucose, fructose, corn syrup, and high fructose corn syrup – which are often added to processed foods. Used sparingly and in moderation, added sugars can enhance the taste of food

Supplements: If your diet contains a wide variety of foods – including whole grain products, fresh fruits and vegetables, dairy products, nuts, seeds, eggs, and meat – then you are probably getting all the vitamins and minerals your body needs. But it is difficult to eat all those things on a regular basis, especially confined to the restraints of your busy life.

If you are worried that you are not getting enough vitamins and minerals because you do not eat enough variety of foods, try a vitamin that gives you 100 percent of the daily recommended amounts.

Evaluation

Determine the learner's ability to correctly apply the principles of food nutrient selection.

Answers to exercise 6.6. Learner's book, page 122

1. People have different energy requirements due to the differences in age, sex, state of body health, and occupation.
2. During pregnancy, extra protein is required for the growth of the baby and the adjustment of the mother's body to pregnancy.
3. Sedentary life style people include; office workers, drivers, pilots, clergy, typesetters, shop attendants, book writers or authors, lawyers, doctors, architects.
Active lifestyle people include; industrial workers, railway workers, plumbers, bus conductors, builder's labourers, farmers, army recruits, forestry workers, miners and so on.
4. People living with diabetes, high blood pressure, the obese, and the slimmers all need a caloric control diet.
5. These need to eat food with very little sugars and fat to avoid worsening their health condition.
6. Vegetables and fruits, pulses, cereals and nuts.

LESSON 10**REVISION ABOUT TYPES OF FOOD NUTRIENTS AND PRINCIPLES OF FOOD NUTRIENT SELECTION****Instructional objective**

Basing on the lesson content given, learners will be able to revise food nutrients and the principles of food nutrients selection.

Teaching methods

- ▲ Group discussion on the revision questions.
- ▲ Presentation of answers for revision questions.

Teaching methodology

- Teacher will guide learners to form groups.
- In groups, learners will answer assessment questions about this unit.
- They will also discuss the subjects that are related to this unit, they will give a summary about what they have studied in this unit, the new words learnt and their meaning.

- They will present their work to the rest of the class.
- Teacher will clarify and give conclusions.

Evaluation

Determine the learner's ability to correctly discuss food nutrients and the principles of food nutrient selection.

Answers to unit assessment. Learner's book, page 123

1. Proteins, vitamins, fats, carbohydrates, and minerals.
2. a) Refer Learner's Book, pages 91 -93.
b) Refer Learner's Book, page 88.
c) Refer Learner's Book, page 97.
d) Refer Learner's Book, page 110.
3. Vitamins can be classified as, Fat soluble are vitamins that are absorbed along with fats. They are also found in fatty foods. Examples are vitamin **A, D, E, and K**. These vitamins are fairly more stable to high temperatures therefore, not lost during cooking and they do not dissolve in cooking water. They are water soluble vitamins. These dissolve in water and are easily lost during in cooking liquids. They are destroyed by high temperatures and sunrays. Examples of water soluble vitamins are; vitamin B complex which has (B₁. thiamine, B₂. riboflavin, B₃. nicotinic acid, B₆. pyridoxine, B₁₂. cobalamine) and vitamin C-ascorbic acid.
4. Refer learners book page:
 - a. carbohydrates refer learners book page 93
 - b. proteins refer learners book page 90-91
 - c. vitamin A refer learners book page 98
 - d. Vitamin B1 refer learners book page 102-103
 - e. Vitamin C refer learners book page 108
 - f. Vitamin G refer learners book page 99-100
 - g. Phosphorus refer learners book page 113
 - h. Iodine refer learners book page 115
 - i. Calcium refer learners book page 110

Unit 7

OCUPATION AND KITCHEN

	Lesson map
Lesson 1	Introduction to occupation
Lesson 2	Kitchen orientation
Lesson 3	Kitchen tools
Lesson 4	Electrical tools
Lesson 5	Heavy equipment
Lesson 6	Maintenance for kitchen tools and equipment
Lesson 7	Vegetable Cuts
Lesson 8	Stock
Lesson 9	Sauces

Learner's book, page 125

Introduction

The topic involves equipping learners with skills concerning occupation, kitchen materials, tools and equipment as well as preparation of stock and sauce.

The proper understanding of different kitchen equipment is very important to the learners since it enables them identify, choose, use and care for them. The teacher should know that many learners have never seen some of the kitchen equipment before and should try as much as possible to ensure that they get an opportunity of seeing them in the class. This can involve taking the learners to the Home Science Laboratory or bringing them to the classroom for them to see.

Proper and effective use of teaching aids is very important in order to bring about the real picture of what is being taught in class.

Repeated questioning is also very important to ensure increased cognition of the subject matter. On the other hand, many learners are not familiar with the various types of sauce so the teacher should be innovative enough to ensure that learners understand sauce very well as well as knowing the reason to why some types of sauce are prepared and when are they served and how.

Key unit competency

Learners should be able to explain the occupation; use and maintain kitchen materials, tools and equipment safely.

Specific outcomes

By the end of this topic, learners should be able to;

- ▲ Explain the occupation of food preparation.
- ▲ Identify kitchen materials, tools and equipment.
- ▲ Explain the maintenance procedures for utensils and equipment.
- ▲ Identify materials for basic dishes.

Instructional materials

- ▲ Reference books.
- ▲ Magazines or newspapers.
- ▲ Small equipment in the Home Science Laboratory.

Skills

- ▲ Match decorative colours on different backgrounds.
- ▲ Apply principles of colour usage.
- ▲ Recognise decorative materials, tools and equipment.

Attitudes and values

- ▲ Appreciate the value of using colours on the different backgrounds.
 - ▲ Comply with the principles of colour usage.
 - ▲ Pay attention to decorative resources.
-

LESSON 1

INTRODUCTION TO OCCUPATION

Learner's book, page 126

Instructional objective

Basing on illustrations and text, learners will be able to prepare a list of requirements of food occupation perfectly.

Teaching methods

- ▲ Brainstorming on cooking or food preparation as an occupation
- ▲ Discussion of the different requirements for the cooking occupation

Teaching methodology

- Let learners attempt Activity 7.1 in the Learner's Book, page 128. They are to present the research results at a later date that you will determine.
- Define for the occupation. Let the learners discuss cooking occupation as they see it. Give them the information on working conditions.
- Let the learners individually explain what they understand by occupation.

Learner's activity

Learners to take the assignment for activity 7.1. Learners to discuss the working conditions for a chef in one of the modern restaurants in their area.

Evaluation

Determine the learners' ability to correctly explain the meaning of occupation.

Answers to exercises 7.1 Learner's book, page 127

Exercise 7.1 Learner's book, page 127

1. An occupation is a vocation to which a person is specially drawn.
2. Characteristics of a good food preparation personnel.
 - ▲ Should cover the hair with the headgear and maintain the fingernails short and clean.
 - ▲ Should avoid scratching of the body parts while handling food.
 - ▲ Should not sneeze over the food and where possible avoid handling food when suffering from cough, flu and other contagious diseases.
 - ▲ Should wear protective clothes like apron and headscarfs.
 - ▲ Should use a disposable handkerchief.
 - ▲ Should cover open wounds with waterproof adhesive plasters.

Additional notes

Qualities of a good cook or chef

- ▲ **Creativity**; must be able to do something new.
 - ▲ **Passion**; should enjoy the process of selecting food and cooking.
 - ▲ **Business sense**; should produce quality foods which are cost effective.
 - ▲ **Pays attention to details**; should ensure effective measurements and must be aware of any changes in recipes.
 - ▲ **Team player**; must work well with everyone to ensure effectiveness.
 - ▲ **Practise**; should know that preparing food requires techniques and skills which comes through continued practice.
 - ▲ **Multi task**; a great cook should be able to handle a number of tasks at ago.
 - ▲ Commitment to quality.
 - ▲ A quick decision maker
 - ▲ Should handle criticism.
-

LESSON 2

KITCHEN ORIENTATION

Learner's book, page 128

Instructional objective

Basing on personal experience and teachers explanation, learners will be able to arrange kitchen equipment in the different layouts in order to easy work as well as mining fatigue.

Teaching methods

- ▲ Discussion on the types of kitchen orientation
- ▲ Observation of the different kitchen layouts.

Teaching methodology

Let learners answer activity 7.2 in the Learner's Textbook. Define for the learners kitchen orientation. Let, the learners discuss the different kitchen orientations that they know. Give them the characteristics of the different types of kitchen orientation.

Learner's activity

Learners to take the assignment of activity 7.2. Learners to discuss the different types of kitchen orientation.

Evaluation

Determine the learners' ability to correctly state and explain the different types of kitchen orientation.

Answers to learner's exercises**Exercise 7.2 Learner's book, page 130**

1. Kitchen orientation

Refers to arrangement or placement of equipment in the kitchen to ease work and minimise fatigue.

2. Factors affecting kitchen orientation.

- ▲ Shape, size and layout of area.
- ▲ Room ventilation.
- ▲ Lighting.
- ▲ Working surfaces.

3. Space

- ▲ Lighting
- ▲ Equipment available
- ▲ Room ventilation

Additional notes**How to minimise fatigue in the kitchen**

The height of working surfaces and storage areas should be comfortable enough for one to work without bending or stooping.

The sink should be placed under the window, or on an outside wall for proper lighting and ventilation together with reasons of plumbing.

Having work tops on both sides of the cooker to enable pans and serving dishes to be placed.

The distance between the working steps should be small to avoid overwalking.

Kitchen lighting

The kitchen should have good natural and artificial light to make working safe and comfortable.

Windows should be well-placed and large enough to provide adequate day light, as well as ventilation.

Extra lighting may be given to working areas such as the sink, cooking area and storages.

The walls and floors should be finished in pale colours which do not absorb light. Providing hanging fluorescent lights or spot lighting prevents a person from working in their shadow.

Kitchen ventilation

Efficient kitchen ventilation ensures that steam, fumes, odours, products of combustion and grease are extracted from the air and replaced by cool fresh air.

Ventilation in the kitchen is aided by;

Windows, extractors, ventilators, cooker hoods, chimney, doors, wall bricks etc.

Kitchen surfaces

Work surfaces should be made of materials that are smooth, easily cleaned and can withstand moisture, heat and mechanical action.

The colours should be bright and pleasant.

The floor and floor covering for a kitchen should be resilient so that its not tiring to stand on, silences sounds, withstand heat, grease, frequent cleaning and pressure from heavy equipment and should not be slippery when wet.

Quiet easy to clean coverings are provide by vinyl tiles, vinyl asbestos, felt booked vinyl and lino-tiles.

LESSON 3

KITCHEN TOOLS

Learner's book, pages 130-134

Instructional objective

Basing on personal experience, learners will be able to properly use different kitchen tools.

Teaching methods

- ▲ Demonstration on how to use kitchen tools.
- ▲ Brainstorming on the different types of kitchen tools.
- ▲ Observation of kitchen tools.

Teaching methodology

Let learners attempt activity 7.3 in the Learner's Textbook. They are to present the research results at a later date that you will determine. Define kitchen tools and equipment. Let the learners give the different kitchen tools and equipment that they know. Explain to them in detail the operation of these kitchen tools and equipment.

Learner's activity

Learners to take assignment for activity 7.3. Learners to try how to open a pressure cooker.

Evaluation

Determine the learners' ability to correctly describe kitchen tools and equipment.

Answers to learner's exercises

Exercise 7.3 Learner's book, page 136

a) Lemon squeezer

It is used to extract juice from lemons or other citrus fruits for example, oranges, tangerines and so on.

b) Kitchen scale

It is used for determining the weight or mass of any food and ingredients in the kitchen.

c) Whisks

It is used to whip egg whites into a firm foam to make meringue, or to whip cream into whipped cream.

Additional notes

Factors to consider when choosing kitchen equipment.

- Choose a recommended, reliable brand for example, Phillips, Kenwood, Russell Hobbs (for electrical appliances).
- Buy energy saving equipment, in terms of fuel and labour for example charcoal stoves buy clay instead of metallic.
- Consider equipment which is well-designed and easy to operate or programme. For example for measuring cups or jugs buy those with litres or millilitres instead of pounds(lb) or pints.
- Cost should be considered; it should be within the means of the buyer and should give value for money.

- Should be easy to clean. The more easily cleaned an equipment is, the less time, cost and energy used.
 - Space available in which the appliance must fit should be enough.
 - Consider whether it is electrically safe that is, well insulated and earthed to avoid electric shock.
 - Buy from a reliable source or dealer as they offer wide choice, good value for money and after sale services as well as spare parts.
 - Consider the type of fuel available for example, its useless buying an electric refrigerator when you have no electric connections.
 - Height especially for large equipment. They should permit the user to maintain an erect and comfortable body position while working.
 - Portability; for appliances which are constantly moved, they should be light in weight and well-balanced. Even those which are not constantly moved should not be very heavy.
 - Consider the general colour scheme of the kitchen. Choose colours and finishes that blend with the colour scheme.
 - Handles of equipment should be made of good materials and well fitting.
 - Suitability for the specific purpose for which it is intended.
 - Durability; for long wear while in use.
 - Quality; the materials for construction should be considered as this influences the effectiveness of an equipment.
 - Consider the guarantee or warranty especially for appliance.
-

LESSON 4

ELECTRICAL TOOLS

Learner's book, pages 134

Instructional objective

Through practicals, learners will be able to clearly operate electrical tools that are used in food preparations.

Teaching methods

- ▲ Demonstration on the use of electric kitchen tools.

- ▲ Discussion on the use of electrical equipment.
- ▲ Observation of electric tools.
- ▲ Oral question on electrical kitchen equipment.

Teaching methodology

Let learners attempt activity 7.4 in the Learner's Textbook. Let the learners state the different electrical equipment in the kitchen. Give them the electrical equipment that they have not mentioned and explain for them all the electrical kitchen equipment. Let the learners individually explain the different electrical kitchen equipment.

Learner's activity

Learners to take the assignment for the activity 7.4. Learners to describe the operation of any of the common kitchen equipment.

Evaluation

Determine the learners' ability to correctly explain electrical kitchen equipment.

Answers to learner's exercises

Exercise 7.4 Learner's book, page 137

1. Identify the common kitchen utensils that are common in your community.

- | | |
|-----------------|------------------|
| ▲ Grater | ▲ Lemon squeezer |
| ▲ Potato peeler | ▲ Fish slice |
| ▲ Sieve | ▲ Whisks |

2 a) **Grater**

It is used to grate foods into fine pieces.

b) **Potato peeler**

It is used for removing the outer skin or peeling vegetables like potatoes, carrots, fruits and so on.

c) **Pressure cooker**

It is used for cooking food more quickly than conventional cooking methods.

d) **Microwave oven**

It uses microwaves or heat food quickly and efficiently.

Additional notes

Caring for electrical tools.

- ▲ Switch on only when it's necessary.
 - ▲ Do the necessary repairs.
 - ▲ Use a soft abrasive and scourers when cleaning.
 - ▲ Always use a stabiliser to protect the equipment from electric surge.
-

LESSON 5

HEAVY EQUIPMENT

Learner's book, page 137

Instructional objective

Given the illustrations and activities, learners will be able to use heavy equipment during food preparation correctly.

Teaching method

- ▲ Demonstration on the heavy equipment.
- ▲ Discussion of the use and maintenance of heavy equipment
- ▲ Observation of heavy equipment.

Teaching methodology

Let the learners attempt activity 7.5 in the Learner's Textbook. Let the learners identify the different heavy equipment. Give them the heavy equipment they have not mentioned and explain for them the operation of all the heavy equipment.

Learner's activity

Learners to take the assignment for activity 7.5. Learners to identify and describe the heavy equipment they know.

Evaluation

Determine the learners' ability to correctly explain the heavy equipment.

Answers to learner's exercises

Exercise 7.5 page 137

See Learner's book, pages 135 and 130 respectively

Additional notes

Using cookers (gas or electric).

- ▲ Check that all connections are proper.
- ▲ Prepare what is to be cooked in advance.
- ▲ Switch on the cooker knobs and put on.

Let the learners to discuss how a refrigerator is used as well as any other heavy equipment.

LESSON 6

MAINTENANCE FOR KITCHEN TOOLS AND EQUIPMENT

Learner's book, pages 145-147

Instructional objective

Basing on the description given, learners will be able to maintain kitchen tools and equipment correctly.

Teaching methods

- ▲ Brainstorming of different ways of maintaining kitchen equipment.
- ▲ Discussion on the maintenance of kitchen tools.

Teaching methodology

Let the learners attempt activity 7.6 in the Learner's Textbook. Let them identify the different methods that are used in maintenance of kitchen tools and equipment at their homes. Give them the methods they have not mentioned and explain all for them.

Learner's activity

Learners to take the assignment for activity 7.6. Learners to clean the refrigerator and a deep freezer in the Home Science Laboratory or school canteen.

Evaluation

Determine the learners' ability to correctly explain the different maintenance procedures for kitchen tools and equipment.

Additional notes**Laundry room appliance maintenance**

If the hoses in your washing machine are old, consider replacing them with the tougher metal hoses available at hardware stores. If your washing machine rattles when it runs, it may need levelling. For most items, lowering the water

temperature to warm wash and cold rinse will get your clothes clean and reduce your energy bills. Clean the lint trap before you use your dryer; this will prevent a fire hazard, save you energy, and make your clothes dry faster.

Electricity and appliance maintenance

Larger appliances shouldn't be powered by an extension cord if at all avoidable. If it is a necessity, make sure that extension cord connections are secure and that the extension cord is the appropriate size for your needs. If an appliance stops working, test the outlet with a lamp or radio. With gas appliances, it is important to remember that older models often contain a flame that's constantly burning. Never store paints, solvents, and other chemicals anywhere near an appliance with a pilot light.

LESSON 7

VEGETABLE CUTS

Learner's book, pages 147-148

Instructional objectives

Having the illustrations and text given, learners will be able to prepare different vegetable cuts accordingly.

Teaching methods

- ▲ Demonstration of different vegetable cuts.
- ▲ Brainstorming on how to perfectly make good vegetable cuts different.
- ▲ Observation of different vegetable cuts.

Teaching methodology

Let the learners do activity 7.7 in the Learner's Book. Let the learners discuss the different types of vegetable cuts that they normally do at home. Give them all the types in details.

Learner's activity

Learners to take the assignment for activity 7.7. Learners to practise different types of vegetable cuts.

Evaluation

Determine the learners' ability to explain different vegetable cuts.

Additional notes

Preserving cut vegetables

Lettuce, spinach and similar greens

In the refrigerator: Cut or tear the leaves from the end of the head, if applicable. Wash and dry the leaves thoroughly (such as in a salad spinner). Remove any dead or wilted leaves. Once dry, place in one or two thin layers on top of paper towels. “Wilted” greens, such as cooked kale, spinach or beet greens, can be frozen once cooked; drain thoroughly and store in freezer bags for up to a year.

Artichokes

Sprinkle with a little lemon water and refrigerate in an airtight container for up to 3 days.

Asparagus

Trim the ends of asparagus, and place in a jar or container of water, almost as if the asparagus stalks are flowers in a vase. Place a plastic bag loosely on top of the stalks to keep them from absorbing scents from other foods in the fridge. To freeze, blanch the cut asparagus, drain thoroughly, and store in freezer bags.

Beets

Be sure to remove the root first thing, leaving 1-2 inches of stem. The greens can be stored like lettuce and greens, but they have a short shelf life in the fridge. Cut beets can be stored in a container lined with a moist paper towel in the refrigerator.

Broccoli

Once cut, broccoli will maintain its moisture if you store it between lightly moistened paper towels and store in the refrigerator. Do not put it in an airtight container, as it needs to breathe to maintain freshness.

Brussels sprouts

If you have halved or quartered your sprouts, store them as you would cut broccoli, following the same instructions for refrigeration and freezing.

Cabbage

Once cut, cabbage should be wrapped tightly in plastic and put in the refrigerator. It should be used within a few days. Freezing cabbage is not suggested, but it can be pickled for longer keeping.

Carrots

Fresh cut carrots can be kept in plastic bags in the refrigerator, but to prevent them from drying out, either wrap them in moist paper towels or store in cold water. Loosely cover the water to ensure no debris gets into the water, but don't use an airtight container.

To freeze, blanch carrots, drain thoroughly, and store in freezer bags for up to a year.

Celery

Cut celery can be treated the same as cut carrots in terms of refrigeration and freezing. However, once thawed, celery that has been frozen loses its crisp texture, so it is best used as a component in a recipe where a crisp texture is unimportant, such as a stew.

Cucumber

Wrap cut cucumbers in an airtight bag or tightly with plastic wrap, and store in the crisper of your refrigerator for up to 3 days.

Cucumbers are not suggested for freezing.

Eggplant

Beware that eggplant does not age well, but it is possible to refrigerate it if you are in a pinch. Layer sliced eggplant in a container between sheets of paper towel for up to 2 days. Brushing a few drops of lemon juice on top can reduce browning.

To freeze, blanch slices of eggplant, drain thoroughly, and store in freezer bags for up to one year. Be aware that the texture will suffer once thawed, so consider using the frozen eggplant in recipes where the texture is not of great importance, such as baba ghanoush or ratatouille.

Garlic

Place cut garlic in an airtight container as soon as possible after it is cut, and store it in the refrigerator for up to 2 days.

To freeze, wrap the garlic tightly in plastic wrap or aluminium foil, and place in an airtight freezer bag. It will keep for up to a year.

Green beans

To store cut green beans in the refrigerator, wrap with plastic wrap or store in a plastic bag.

To freeze, blanch the cut green beans, drain thoroughly, and store in freezer bags for up to a year.

Onions

Place cut onions in an airtight container as soon as possible after it is cut, and store it in the refrigerator for 3 to 5 days.

To freeze, wrap the onions tightly in plastic wrap or aluminium foil, and place in an airtight freezer bag. They will keep for up to a year.

Peppers

Store cut peppers in plastic wrap or in a plastic bag for up to 2 days in the refrigerator. To keep them from getting slimy, wrap in a sheet of paper towel.

To freeze, place the slices of pepper in a single layer on a plate or cookie sheet, and freeze until crisp. Transfer to a freezer bag, and store for up to 6 to 8 months.

Potatoes

Store cut potatoes in water for up to 1 day, loosely covered in the refrigerator.

To freeze, blanch cut potatoes, drain thoroughly, and store in freezer bags for up to a year.

Radishes

Fresh cut radishes can be kept in plastic bags in the refrigerator, but to prevent them from drying out, either wrap them in moist paper towels or store in cold water. Loosely cover the water to ensure no debris gets into the water, but don't use an airtight container.

Radishes do not freeze well, cut or uncut.

Tomatoes

Technically, tomatoes are a fruit, but since they are frequently used with vegetables, they are included on this list.

Cut tomatoes do not refrigerate well. However, if you have cut a portion of the tomato, you may be able to salvage the rest if you place it, cut side down, on a plate, and cover loosely. It will keep at cool room temperature for up to a day.

Tomatoes do not freeze well, sliced or unsliced.

LESSON 8

STOCK

Learner's book, page 148.

Instructional objectives

Having illustrations and text given, learners will be able to correctly prepare stock.

Teaching methods

- ▲ Demonstration on different methods of making stock.
- ▲ Brainstorming on how to avoid faults in stock making.

Teaching methodology

Let the learners answer activity 7.8 in the Learner's Text book. Define for the learners what stock is. Let the learners explain how stock is made at home. Give them a detailed method of making stock. Let the learners individually explain the process of making stock.

Learner's activity

Learners to take the assignment for the activity. Learners to explain the importance of stock.

Evaluation

Determine the learners' ability to correctly explain how stock is made.

Additional notes

Rules for stock making

- ▲ Never salt stock.
- ▲ Skim stock often in the beginning.
- ▲ Never boil stock.
- ▲ The better your ingredients, the better your stock.
- ▲ Strain your stock when it comes off the stove.
- ▲ Always drop your stock quickly.

LESSON 9 (2 PERIODS)

SAUCES

Learner's book, page 148

Instructional objectives

Having text and illustrations, learners will be able to correctly make different types of sauces.

Teaching methods

- ▲ Demonstration of the different classes of sauce.
- ▲ Brainstorming on how to make different classes of sauce.
- ▲ Discussion of the different types of sauce.

Teaching methodology

Let the learners attempt activity 7.9 in the Learner's Textbook. Define for the learners sauces. Let the learners identify the different types of sauce they know. Give them the sauces they have not mentioned and explain for them all the different types of sauce. Practice with the learners how to make different types of sauce.

Learner's activity

Learners to take the assignment for activity 7.9. Learners to explain how different types of sauce can be served.

Evaluation

Determine the learners' ability to correctly explain the different types of sauce.

Answers to Unit Assessment learner's book, page 155

1. Sauces are thickened, flavoured liquid that can be added to food or dish
2. See Learner's book page 154
3. Refer learner's book page 128-129

Additional notes

Rules for making sauces

Consider the colours, textures, flavours and styles when serving more than one type of sauce at a meal.

A basic sauce recipe is meant to encourage improvisation. Take full advantage

of the opportunity.

Sauces should be appropriate for the season and for the occasion.

One sauce is adequate for a meal, two kinds of sauce are the ultimate, and three types of sauce can overwhelm the overall presentation.

Avoid strong flavoured sauce at the beginning of a meal.

Try not to combine hot sauce with cold sauce on the same plate.

The different kinds of sauce should be made to compliment one another.

Unit 8

PASTRY AND BAKERY PRODUCTS

	Lesson map
Lesson 1	Bread
Lesson 2	Scones
Lesson 3	Biscuits and cookies
Lesson 4	Cakes
Lesson 5	Pastry
Lesson 6	Pastry and baking ingredients

Learner's book page 157

Introduction

The topic involves equipping learners with both knowledge and practical skills on how to prepare different baked items which include; bread, scones, biscuits and cookies, cakes and pastries. Therefore, the teacher should organise enough practical sessions to ensure that the learners master the processes of making these items. Use of charts that display the recipes for making these items enables the learners to get familiar with the processes. The teacher should also create a favourable environment that allows learners to share their personal life experience, thus helping them understand more.

Key unit competency: Learners should be able to understand the different types of pastry and bread and the process of baking.

Specific outcomes

By the end of this unit, the learners should be able to;

- ▲ identify types of dough and yeast bread products.
- ▲ name different ingredients used in pastry and bakery.
- ▲ demonstrate dough and yeast products.
- ▲ choose ingredients according to different pastry and bakeries and make simple food items.

Instructional materials

- ▲ Baking material tools and equipment, different pastry and bakery ingredients
- ▲ Baking ovens
- ▲ Wall clocks
- ▲ Measuring tools and materials
- ▲ Weighing scales ,different ingredients
- ▲ Utensils
- ▲ Regular internet
- ▲ Audio visual images
- ▲ Pictures flipchart
- ▲ Projectors

Skills

- ▲ Appreciate the importance of bread and yeast.

Attitudes and values

- ▲ Introduction to pastry and bakery.
 - ▲ Different pastry and bakery ingredients.
-

LESSON 1

BREAD

Learner's book, page 158

Instructional objective

Considering illustrations and text given, learners will be able to prepare bread correctly.

Teaching methods

- ▲ Brainstorming on the different types of dough and products.

- ▲ Discussion on the common methods of making bread.
- ▲ Group work on making bread.
- ▲ Practical work on bread making.

Teaching methodology

Let the learners attempt activity 8.2 in the Learner's Textbook. They are to present the research results at a later date that you will determine. Define bread for the learners. Let the learners state characteristics of bread. Explain the process of bread making. Let the learners individually explain bread making process.

Learner's activity

- Learners to take the assignment for Activity 8.2. Learners to state and explain characteristics of bread.

Evaluation

Determine the learners' ability to correctly state and explain characteristics of bread.

Answers to learner's exercises

Exercise 8.1 Learner's book, page 162

1. Bread is a staple food prepared from a dough of flour and water usually by baking.
2. Mixing
 - ▲ Kneading
 - ▲ Rising
 - ▲ Shaping
 - ▲ Proving
 - ▲ Baking
3. Good symmetrical shape with a well-rounded top.
 - ▲ Uniform golden brown crust.
 - ▲ A nutlike flavour free from yeast taste.
 - ▲ A well risen but not overinflated.
 - ▲ Moist texture with a moist and resilient crumb.

Additional notes

Rules for baking better bread

Make sure you have enough liquid in your dough, a dry dough will make a tough, dry bread. It is always better for a dough to be too wet than too dry. If you are mixing by hand don't worry if the dough is sticking to your hands or the counter. Once you have the gluten developed to the proper point it will stop sticking,

do not add extra flour to keep the dough from sticking just let it stick and keep working it until it finally comes together.

Make sure that you have enough gluten in your flour, if you are not using bread flour buy some gluten and add a tablespoon per loaf. It will improve the texture of your bread.

Use a soaker, it will greatly improve the texture of your bread. On the morning that you plan to make your bread mix all your ingredients in a large bowl except for the last 2 cups of flour. It should have the consistency of a thick cake batter. Cover it and let it sit, bubble and rise for several hours. I do at least 3 hours but 4 hours is better, don't be concerned if the dough takes on a slightly sour smell, it won't be sour when you bake it. Then mix in the last 2 cups of flour, knead and continue with your recipe. And yes you can still do this if the batter has milk and eggs in it. The lactobacilli in the yeast, which is what gives you the sour smell, will also protect the perishable ingredients from any other unwanted germs joining the party. The soaker will also keep your homemade bread from going stale for days longer than usual.

If you don't already have one buy an instant read thermometer. When you bake your bread start checking it at the shortest stated time in your recipe. If you want a soft sandwich bread pull it from the oven when it reaches an internal temperature of 180°...If you are looking for a harder crustier bread pull it at 200°.

Let your baked bread cool completely before you cut it then store the bread you want to keep soft in a plastic bag.

LESSON 2

SCONES

Learner's book, page 162

Instructional objective

Using personal experience and teacher's explanation, learners make a well in the mixture preparing scones.

Teaching methods

- ▲ Brainstorming on methods of making scones.
- ▲ Discussion of scone making procedure.
- ▲ Group work on preparation of scones.
- ▲ Observation of the process of making scones.

- ▲ Practical work on making scones.

Teaching methodology

Let the learners attempt activity 8.4 in the Learner's Textbook. They are to present the research results at a later date that you will determine.

Define for the learners what scones are. Let the learners state characteristics of scones. Give them the characteristics they have not mentioned and explain for them how scones are prepared. Let the learners individually explain the process for making scones.

Learner's activity

Learners to take the assignment for activity 8.4.

Learners to prepare and bake scones.

Evaluation

Determine the learners' ability to correctly state ingredients and explain how scones are prepared.

Answers to learner's exercises

Exercise 8.2 learner's book, page 165

1. Scones are single serving cakes or quick breads.
2. They are the ones that have;
 - ▲ Smooth surface.
 - ▲ An even symmetrical shape.
 - ▲ A uniform golden brown crust that is both crisp and tender.

Additional notes

Basic rules for making good scones

1. Make a soft, sticky dough.
2. Use minimum flour while handling dough.
 - Turn dough onto lightly floured surface, dust your hands with flour and shape the dough into a smooth ball by working the dough gently into a manageable, smooth shape. Avoid excess flour.
 - Flatten the dough gently with your hand until it is an even thickness all over, pressing from the centre outwards.
 - Use a floured, sharp metal cutter to cut as many scones as possible from the dough.
 - Lightly knead the scraps together. Press dough out again slightly thicker to help make up for the second handling.

3. Bake at high temperatures.
4. Cool on wire racks

LESSON 3

BISCUITS AND COOKIES

Learner's book, page 165

Instructional objective

Having photography and text on biscuits and cookies making given, learners will be able to properly prepare biscuits and cookies.

Teaching methods

- ▲ Brainstorming on the different methods of making biscuits and cookies.
- ▲ Discussion about characteristics of biscuits.
- ▲ Group work on biscuit and cookies making.
- ▲ Observation of the preparation processes.
- ▲ Practical work on making cookies and biscuits.

Teaching methodology

Let the learners attempt activity 8.5 in the Learner's Textbook. Define for the learners biscuits and scones. Let the learners state the characteristics of scones and cookies. Give them the characteristics they have not mentioned and explain for them how biscuits and cookies are prepared.

Learner's activity

Learners to take the assignment for Activity 8.5. Learners to state and explain characteristics of scones and biscuits.

Evaluation

Determine the learners' ability to correctly state ingredients and explain how biscuits and cookies are prepared.

Answers to learner's exercises

Exercise 8.3 Learner's book, page 166

1. Symmetrical shape.
 - ▲ Short and crisp texture.
 - ▲ Pale brown colour.
 - ▲ Pleasant flavour
2. Plain cakes contain little fat while rich cake contain alot of fats to flour.

Additional notes

Rules for baking nice cookies or biscuits

- Read through the recipe before baking.
- *Preheat* as requested by the recipe. The oven must be at the correct temperature before placing the cookies or biscuits into it.
- Don't over mix the cookie or *biscuit dough*. Doing so can cause the mixture to turn too greasy and this makes it very hard to work with.
- Keep the flour used for rolling down to a minimum. Too much additional flour added to the biscuit or cookie dough will unbalance the recipe, possibly making the cookies or biscuits tougher.
- Roll or shape the cookie or biscuit dough to the same consistency. This means that both size and thickness should be the same for the entire batch to ensure even cooking.
- Use a suitable *cookie sheet* or *baking tray*. The best for cookies are the trays which have air pockets between them or flat, heavy ones.
- If you need to grease the sheet or tray, consider using *parchment paper* (baking paper) to avoid adding more grease to the cookies or biscuits.
- Place cookies or biscuits on the sheet/tray with consideration for expansion during baking.
- Know how to cool cookies and biscuits.

LESSON 4

CAKES

Learner's book, page 166

Instructional objective

Having the tools, ingredients and recipes, learners will be able to make correctly different types of cakes.

Teaching methods

- ▲ Brainstorming on different classes of cakes
- ▲ Discussion on cake making
- ▲ Observation of cake making
- ▲ Practical work on cake making

Teaching methodology

Let the learners attempt activity 8.6 in the Learner's Textbook. Define for the learners cakes. Let the learners state the different characteristics of cakes. Give them the characteristics they have not mentioned and explain for them the different methods of making cakes.

Learner's activity

Learners to take the assignment for Activity 8.6. Learners to prepare and bake different types of cakes.

Evaluation

Determine the learners ability to correctly explain all the different methods of cake making.

Answers to learner's exercises

Exercise 8.4 Learner's book, page 168

1.
 - ▲ Plain cakes
 - ▲ Rich cakes
 - ▲ Spongy cakes
 - ▲ Ginger bread
2. See Learner's book page 165

Additional notes

Rules for baking perfect cakes

- ▲ Always grease the pan and line with parchment.
 - ▲ Allow the oven to fully preheat before putting your cake in.
 - ▲ Bake in the centre of the oven unless otherwise specified.
 - ▲ Bake in the size of pan specified, otherwise uneven baking will mean an uneven cake.
 - ▲ Don't try to double a recipe: cake recipes are more complex than that. Source out a recipe for a larger volume instead.
 - ▲ Use fresh ingredients. Old ingredients taste bad and old leaveners simply do not work.
 - ▲ With the exception of spices, don't substitute ingredients. Especially ones that have structural impact.
-

LESSON 5(3 PERIODS)

PASTRY

Learner's book, page 168

Instructional objective

Having the illustrations, recipes and necessary equipment, learners will be able to properly make different types of pastries.

Teaching Methods

- ▲ Brainstorming the different guidelines of cake making.
- ▲ Discussion on methods of pastry making.
- ▲ Group work on pastry making.
- ▲ Observation of the pastry making process.
- ▲ Practical work on pastry making.

Teaching methodology

Let the learners attempt activity 8.7 in the Learner's Textbook. Define for the learners what pastry is. Let the learners discuss what they know about pastries. Explain to them what pastries are and the different types of pastries. Explain to learners the different types of yeast breads. Let the learners individually explain pastry and types of yeast breads.

Learner's activity

Learners to take the assignment for Activity 8.7. Learners to prepare short crust pastry and use it to make products.

Evaluation

Determine the learners' ability to correctly explain pastry and types of yeast breads.

Additional notes

- Pastries are used in the making of a wide range of baked and steamed products. Fresh cream strawberry tarts, apple pie, quiche Lorraine, fresh french pastries and so on are examples of pastry products.
- Pastry making techniques include; rubbing in/creaming/batter method, mixing, relaxing and kneading.
- Pastry processing methods include cutting, rolling, shaping and lining.

LESSON 6

PASTRY AND BAKING INGREDIENTS

Learner's book, page 176

Instructional objective

Having recipe books and text given, learners will be able to choose best quality pastry and baking ingredients.

Teaching methods

- ▲ Discussion about different ingredients.
- ▲ Observation of different pastry and baking ingredients.
- ▲ Practical work of identification of ingredients.

Teaching methodology

Let the learners attempt activity 8.8 in the Learner's Textbook. Define for the learners baking ingredients. Let the learners state the different baking ingredients. Give them the pastry and baking ingredients and explain for them their significance in baking. Let the learners individually explain the different baking ingredients.

Learner's activity

Learners to take the assignment for Activity 8.8. Learners to identify different ingredients and use them to prepare simple items.

Evaluation

Determine the learners' ability to correctly state different baking ingredients.

Additional notes

Flour is a basic ingredient in all bread making. Wheat flour is the most common type of flour used when baking with yeast. Wheat flours include bread flour, all-purpose flour and whole wheat flour. When wheat flour is mixed with liquid, proteins in the flour combine to form gluten.

Answers to unit assessment

Refer to Learner's book, pages 157-177 for answers.