



ZIMBABWE

MINISTRY OF PRIMARY AND SECONDARY EDUCATION

**CURRICULUM DEVELOPMENT AND TECHNICAL SERVICES**

**BUILDING  
TECHNOLOGY  
AND DESIGN  
SECONDARY SCHOOL LEVEL  
FORMS 1 - 6  
2015-2022**

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**TEACHER'S GUIDE**

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## ORGANISATION OF THE GUIDE

This teachers' guide was created to guide you the teacher as you embark on teaching Building Technology Design in the new curriculum. We hope that it will make your undertaking easier and clarify most aspects in the Building Technology and Design syllabus. This Teachers' Guide will be divided into two sections; Part, A which covers critical documents, and Part B, which covers curriculum delivery

### Part A - Critical Documents

- Curriculum Framework
- National syllabus
- School syllabus
- Scheme of work
- Lesson plan
- Progress records
- Learner Profile

### Part B -Curriculum Delivery

- Content
- Objectives
- Methodology
- Teaching-learning materials
- Assessment and Evaluation
- Class Management
- Scope of the Guide

## PREAMBLE

This teachers' guide was created to guide you the teacher as you embark on teaching in the new curriculum. We hope that it will make your undertaking easier and clarify most aspects in the syllabus. This teachers' guide will be divided into two sections; Part A which covers Critical Documents and Part B which covers Curriculum Delivery(content, objectives, methodologies, media, assessment and evaluation.)

This teachers' guide aims to assist you the teacher to:

- interpret the national syllabuses and translate them into meaningful and functional school syllabuses, schemes of work and record books
- prepare relevant daily teaching notes
- appreciate and understand the need to keep and maintain useful, comprehensive and up to date class records
- make and use relevant teaching and learning materials in the delivery of your lessons
- acquire and use effective teaching techniques suitable for the subject and level of learners
- acquire and demonstrate skills of setting reliable and valid test/ examination questions
- cope with specific problem areas in teaching
- design appropriate strategies for problem solving
- manage your class effectively
- be resourceful
- guide learners to study effectively on their own
- objectively evaluate your own teaching and the learners' progress

**The guide covers the following aspects:**

- Syllabus interpretation
- Content
- Methodology
- Teaching and learning materials
- Class management
- Record keeping
- Evaluation

**RATIONALE**

This teachers' guide has been produced in order to guide you the teacher in interpreting the new curriculum syllabus to satisfy its objective of producing learners with the requisite skills. It helps you to unpack the topics into teachable units and how to scheme and plan for the new curriculum. You should stimulate in learners, the responsibility to care for the local and global environment and to adopt sustainable systems.

Assists in the teaching- learning of other subjects across the curriculum while also offering opportunities for lifelong learning. It helps learners to develop problem solving and critical thinking skills that are necessary for meaningful and active participation in society. Building and Technology and Design develops in learners, qualities which emphasise the learners' role in making and shaping of their environment. It fosters the learner's ability to employ problem solving skills which promotes the application of scientific and technological knowledge. The syllabus promotes entrepreneurial, recreational and other life skills relevant in the contemporary society.

The learning area enables learners to appreciate the dignity of labour, integrity (Unhu/Ubuntu) and patriotism. It also enables learners to value the use of different materials in design. This allows greater flexibility in solving practical problems encountered in everyday life. An integral part of the syllabus is the development of the learners' appreciation of the significance of the principal raw materials used in the workshop. The learners are made aware of the environmental and economic impact of the learning area and provide solutions. The syllabus seeks to inculcate a culture of maintenance and self- reliance. As such, you the teacher must of necessity be resourceful to ensure that the objectives of the syllabus and indeed those of the curriculum are achieved. It is hoped that this guide will assist you in your endeavour.

The study will enhance development of skills in

- Problem solving
- Critical thinking
- Innovativeness
- Invention
- Creativity
- Project management
- Value addition and beneficiation
- Intellectual property rights
- Research
- Decision making
- Self-management
- Enterprise

## **PART A: CRITICAL DOCUMENTS**

As a teacher you need to know the critical documents you should have to deliver the curriculum effectively. You should have the following:

- Curriculum framework
- National syllabus
- School syllabus
- Scheme-cum plan or schemes of work and lesson plans
- Learner profile guide
- Records
- Attendance register

## Unit 1

### 1.1 CURRICULUM FRAMEWORK

The Curriculum Framework for Zimbabwe, Primary and Secondary Education, is a policy document that outlines the underpinning national philosophy, principles, learning areas, descriptions and expectations of the Ministry of Primary and Secondary Education (MoPSE). It offers a vision of the education system and the kind of school graduates that Zimbabwe needs. It prescribes what the government expects you to deliver as you go about your duties. You should therefore be familiar with the document. It also informs you where Building Technology and Design as a Learning Area is placed.

It is important for you to familiarize with the curriculum framework for Zimbabwe Primary and Secondary Education 2015-2022.

#### OBJECTIVES

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

- familiarise yourself with the new curriculum framework
- use the goals of the curriculum framework to produce the desired learners
- interpret the syllabus as expected by the new curriculum
- teach as expected by the curriculum
- articulate the parameters of each topic
- break down the national syllabus into a school syllabus

**N.B** It is mandatory for you to be in possession of the new Curriculum Framework.

#### Key Elements of the Curriculum

Vision

Mission

Principles underpinning the curriculum

Pillars of the Curriculum

Aims of the curriculum

Organisation of the Curriculum

Learner exit profiles

Learning Areas for the New Learning Levels

Life-skills Orientation Programme

For details on these key elements of the curriculum you are referred to the New Curriculum Framework

## UNIT 2

### 2.1 SYLLABUS INTERPRETATION

#### SYLLABUSES

Syllabuses are key documents to you the teacher. There are two types of syllabuses: National Syllabus and the School Syllabus. A syllabus is a plan that states exactly what learners should learn at school in a particular learning area. You are required to teach from the syllabus. Examinations are set from the syllabus.

It is a major curriculum document which:-

- **Prescribes** what government would like to see taught in all schools as spelt out in the curriculum framework.
- **Outlines** the experiences that learners should undergo in a particular course of study i.e. infant, junior and secondary.

Syllabus Interpretation is the process of making sense of the syllabus, finding meaning, unpacking the syllabus, analysing it, synthesising it. As a professional teacher you need to learn how to interpret the syllabus correctly. While syllabuses were developed in consultation with several teachers and experts, not every teacher is privy to what the developers intended. Syllabus interpretation therefore helps you the teacher, to share the same meaning with the developers. It also attempts to put all of you teachers at the same level since you hold different kinds of qualifications from different training institutions.

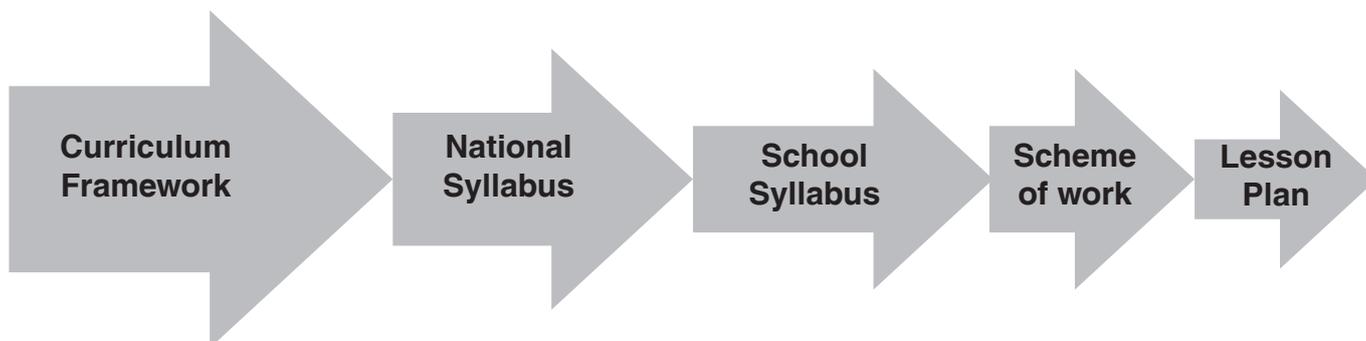
Syllabus interpretation prepares you the teacher, for effective syllabus utilization.

Syllabus interpretation focuses on the following:

- The national philosophy/vision as spelt out in the curriculum framework.
- The syllabus aims and objectives, what does the syllabus intend to achieve within the learners?
- The content, knowledge, skills and attitudes i.e. competences. Content constitutes the heart of the syllabus. Syllabus interpretation facilitates breaking down of content into teachable units.
- The nature and scope of the content
- It is organized in a spiral approach (Bruner) the same topics taught at every level but gaining in breadth and depth as one goes up the ladder.
- The methods of delivery are learner-centred, hands on approach, experimental learning and problem solving.
- As a teacher, you are a facilitator in the learning process and not the sole fountain of knowledge.
- Evaluation and assessment; as the teacher evaluation gives a basis to check whether indeed learners are benefiting from the syllabus implementation and whether objectives are being met.
- Evaluation/assessment can be in the Form of exercises, tests, projects, group tasks. There are two main types of evaluation:
  - i. Formative evaluation on-going/ continuous. Although it is not new to Building Technology and Design teachers, Continuous assessment is a major innovation in the new curriculum.
  - ii. Summative evaluation; coming at the end of the course is terminal
- As teachers, you constitute the backbone of the education system. Your ability to deliver effective lessons depends on careful planning. Planning begins with syllabus interpretation which Forms the basis for:
  - Development of school syllabus
  - Development of scheme of work

- Development of lesson plans

Development of a school syllabus involves re-organising the national syllabus, taking into account local factors. Schemes of work are derived from the school syllabus. The daily lesson plan is, in turn, derived from the scheme of work. To interpret the syllabus, you need to identify its components and establish links between and among them



**Figure 1 Chain development of key documents.**

## (a) NATIONAL SYLLABUS

The national syllabus is developed centrally by the Ministry to give direction to the learning process. It is a policy document that outlines and specifies the learning area philosophy, aims and objectives, Learning/teaching content, suggested methodology and assessment criteria at every level. Every teacher must have it to make sure the national goals on education are uniformly achieved. The syllabus consists of:

- Cover page
- Acknowledgements
- Contents page
- Preamble
- Aims
- Syllabus Objectives
- Syllabus Topics
- Scope and Sequence
- Competence Matrix
- Assessment

### 1. Preamble

The preamble consists of introductory notes to the syllabus. It has five sub-titles.

- Introduction: Gives a brief introduction to the learning area.
- Rationale: This is a justification of why this particular learning area is included in the curriculum.
- Summary of content: This is a summary of what should be learnt in a particular learning area.
- Assumptions: This is the knowledge that the learners are assumed to already have.
- Cross-cutting themes: These are emerging and contemporary issues that cut across all learning areas. As a teacher you should find ways of incorporating them in your teaching whenever possible. These are:
  - Gender
  - Children rights and responsibilities

- Disaster risk management
- Financial literacy
- Life Skills,( HIV and AIDS)
- Child protection
- Heritage Studies
- Collaboration
- Environmental issues
- Inclusivity
- Respect (Unhu/Ubuntu/Vumunhu)

**NB** Not all cross cutting themes can be applied in all topics, some are more applicable to particular topics than others.

## 2. Presentation of the syllabus

This is a description of how the syllabus is presented.

## 3. Aims

These are general statements of what the learning area intends to achieve (major outcomes). They are long term therefore broad. They generally cover the whole learning area e.g. from Form 1-4. They may differ from level to level for the same learning area. They cover all domains of Bloom's Taxonomy and should cater for all learners. (Inclusivity)

## 4. Syllabus Objectives

These are specific competencies of the learning area and are derived from the Aims. The learning area syllabus objectives are SMART (Specific, Measurable, Achievable, Result oriented and Time framed). These should also guide you to develop topic and lesson objectives.

## 5. Methodology and Time allocation.

This syllabus takes into account learner centred approaches and methods. The choice of teaching methods and approaches should be guided by the principles of inclusivity, relevance, specificity and respect. They are guided by the curriculum framework's thrust i.e. skills or competency based, promoting critical thinking and problem solving.

### Time allocation

This reflects the number of periods and their duration allocated for the learning area. Ten (10) forty minute (40) periods per week for Forms 5 to 6, Eight (8) forty minute (40) periods per week for Forms one to four, for adequate coverage of the syllabus. The eight periods are sub divided into six (6) block periods for practical work and two (2) block periods for theory work. Learners should go for an educational tour once a year and should exhibit their artefacts at least once a year as prescribed by the syllabus. It is your responsibility to plan for the educational tours and exhibitions and time for these should be provided for within the school calendar.

## 6. Topics

These are the main pillars of the content for the levels given in itemized Form. They Form the core of a given learning area. In a practical learning area, some topics are based on broad skills. Topics are broken down into sub-topics in the competency matrix. There are Thirteen (13) topics in the Form 1-4 syllabus, whilst the form 5-6 has nine (9) topics

## 7. Scope and Sequence

This shows you the breadth and depth of the content. Sequence refers to the ordering of the information. Information is arranged according to logical ordering of the subject matter from simple to difficult concepts. Generally the same concept cuts across all levels differing in depth as learners progress to higher levels. You should understand this spiral approach as it helps you in developing the school syllabus as well as scheming and planning for your work. However, take note that not all concepts cut across from Form one to six. Some concepts may be covered in Forms one and two only therefore may not appear in Forms three and four, five and six.

**Table 1: Scope and Sequence Chart Sample**

TOPIC	FORM 1	FORM 2	FORM 3	FORM 4
<b>7.1 Building Technology</b>	<ul style="list-style-type: none"> <li>● Introduction to Building Technology and Design as a learning area</li> <li>● Importance of shelter</li> <li>● Careers in the construction industry</li> </ul>	<ul style="list-style-type: none"> <li>● Indigenous technology</li> <li>● Building as an enterprise</li> </ul>	<ul style="list-style-type: none"> <li>● Structure of the construction industry</li> <li>● Contracts and tendering procedures</li> <li>● Building as an enterprise</li> </ul>	<ul style="list-style-type: none"> <li>● Contracts and tendering procedures</li> <li>● Building as an enterprise</li> </ul>
<b>7.2 Health and Safety</b>	<ul style="list-style-type: none"> <li>● Common accidents in workshops and construction sites</li> <li>● Causes of accidents</li> <li>● Prevention of accidents</li> <li>● Protective clothing</li> <li>● Application of First Aid</li> </ul>	<ul style="list-style-type: none"> <li>● Safety on construction sites</li> <li>● Application of First Aid</li> </ul>	<ul style="list-style-type: none"> <li>● Regulations and acts governing safety and health at work places</li> <li>● Safety on scaffolds and ladders</li> <li>● Application of First Aid</li> </ul>	<ul style="list-style-type: none"> <li>● Personnel involved in safety and health in the workplace</li> <li>● Handling of hazardous substances</li> <li>● Application of First Aid</li> </ul>
<b>7.3 Building Tools and Equipment</b>	<ul style="list-style-type: none"> <li>● Hand tools</li> <li>● Care of tools and storage</li> <li>● Classification and maintenance of hand tools</li> </ul>	<ul style="list-style-type: none"> <li>● Scaffolding and safety</li> </ul>	<ul style="list-style-type: none"> <li>● Introduction to building equipment</li> <li>● Use, service and maintenance of building equipment</li> <li>● Care of equipment</li> <li>● Designs of storage shelves</li> </ul>	<ul style="list-style-type: none"> <li>● Servicing of ladders and scaffolds</li> </ul>

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## 8. COMPETENCE MATRIX

It is a table that presents you with the concepts/content to be taught or competencies to be acquired. It is developed from the Scope and Sequence. It includes Topic/Skill, Objectives, unit/competence content, suggested learning activities and suggested resources. Table 2 below shows a sample of the Competence Matrix as it is presented in the syllabus.

**Table 2: Competence Matrix sample**

**FORM 1**

**COMPETENCY MATRIX**

**TOPIC 1: HEALTH AND SAFETY**

<b>KEY CONCEPTS</b>	<b>OBJECTIVES Learners should be able to:</b>	<b>CONTENT (ATTITUDES, SKILLS AND KNOWLEDGE)</b>	<b>SUGGESTED NOTES AND ACTIVITIES</b>	<b>SUGGESTED RESOURCES</b>
<b>8.1.1 Causes of accidents at a building site</b>	<ul style="list-style-type: none"> <li>● Identify causes of accidents at building sites</li> <li>● Perform fire drills periodically</li> </ul>	<ul style="list-style-type: none"> <li>● Causes of accidents at building sites, such as fall, defective tools, horse play, carelessness, slippery floors, long sleeves</li> <li>● Emergency call for help</li> <li>● Fires drills</li> </ul>	<ul style="list-style-type: none"> <li>● Identifying causes of accidents at construction sites and workshops</li> <li>● Listing accidents that may occur at construction sites</li> <li>● Demonstrating emergency call and fire drills</li> <li>● Performing mock fire drills</li> </ul>	<ul style="list-style-type: none"> <li>● Reports and statistics on accidents</li> <li>● Recommended textbooks and materials</li> <li>● Print media</li> <li>● ICT tools</li> </ul>
<b>8.1.2 Methods of Accidents Prevention at Construction Sites</b>	<ul style="list-style-type: none"> <li>● Describe methods of accidents prevention at construction sites</li> <li>● Carry out awareness campaigns in and outside the school</li> </ul>	<ul style="list-style-type: none"> <li>● Sensitisation on accidents regulations</li> <li>-Prevention methods</li> <li>-Sites working rules</li> <li>-Inspection of tools and equipment prior to work</li> <li>● Safe health practices (HIV-AIDS and other diseases)</li> </ul>	<ul style="list-style-type: none"> <li>● Discussing on methods of accident prevention and self health practices</li> <li>● Identifying appropriate protective clothing for given tasks</li> <li>● Designing awareness campaign materials</li> <li>● Campaigning in and outside the school</li> </ul>	<ul style="list-style-type: none"> <li>● First Aid kits</li> <li>● Stretcher beds</li> <li>● Print media</li> <li>● ICT tools</li> <li>● Realia such tools and equipment</li> <li>● Placards</li> <li>● Flyers</li> </ul>
<b>First Aid Equipment at Work Sites</b>	<ul style="list-style-type: none"> <li>● Identify First Aid equipment and materials at work sites</li> <li>● Outline procedures to be taken for treatment of accident victim</li> <li>● Perform First Aid procedures</li> </ul>	<ul style="list-style-type: none"> <li>● First Aid equipment</li> <li>● First Aid procedures</li> </ul>	<ul style="list-style-type: none"> <li>● Identification of First Aid equipment at work places</li> <li>● Role play of accident scenes</li> </ul>	<ul style="list-style-type: none"> <li>● First Aid kit</li> <li>● Stretcher beds</li> <li>● Resource persons</li> </ul>

## 9. ASSESSMENT

This section gives you information on how the learning area will be assessed, the weighting and skills to be tested, types of questions and duration of each paper. It gives information on how the forms of assessments, namely Formative/Continuous, and Summative will be conducted and the percentages allocated to each. It contains information on profiling, assessment objectives, scheme of assessment, specification grid and assessment model.

The assessment of learners will be based on 40% Continuous assessment and 60% Summative assessment.

### (b) SCHOOL SYLLABUS

This is the breakdown of the national or official syllabus drafted at the school and derived from the national syllabus. It is influenced by the following factors:

- level of learner performance
- facilities and funds available
- time allocation in the official syllabus
- local conditions that affect choice and sequencing of topics
- supply of textbooks and other teaching materials
- education technology
- community influence

### Conclusion

A comprehensive understanding of the syllabus is mandatory to you so that you facilitate learning and teaching process effectively for the achievement of syllabus objectives as well as learner competencies.

## UNIT 3

### SCHEMES OF WORK

A scheme of work is a plan for something. Your scheme of work is therefore a plan of action which should enable you to organize teaching activities ahead of time. It is a summarized forecast of work which you consider adequate and appropriate for the class to cover within a given period from those topics which are already set in the syllabus. This important document is drawn from the school syllabus which in turn is drawn from the national syllabus. It outlines what you ought to execute on your day to day teaching and learning activities. The document should therefore be clear in terms of objectives, activities, content and methodologies to be employed. You should draw your scheme of work/scheme-cum plan at least two weeks in advance of the lesson delivery date. (Use of I.C.T tools in drawing up the document is encouraged).

#### Components of a scheme of work

The scheme of work has the following components which should help you deliver with less challenges.

- **Week ending:** which usually falls on a Friday as the last day of the week. For example 27 January, 2017.
- **Topic/Content:** this constitutes the main concept to be covered. For example, Safety Pre cautions at a Building Site.
- **Objectives:** these are specific teaching/learning objectives. Good objectives provide you with clear delivery focus, provide a means of assessing learner performance, and also allow for your self-evaluation. They should address the 3 Domains that is the Affective, Cognitive and Psychomotor.
- **Competencies:** these are lifelong qualities and skills you want to see in your learners. They include critical thinking, problem solving, creativity, modelling, communication, collaboration, Unhu/Ubuntu/Vumunhu, leadership and technological competencies.
- **Methods and Activities:** learning and teaching methods and activities should be learner centred and should encourage learner creativity.
- **Source of Material (S.O.M) / Reference/Media:** this is an indication of where you are getting your content and the media you are going to use during lesson delivery.
- **Evaluation:** it is a reflection on you, how you have delivered, successes and challenges faced and as well as learner performance.

#### STRUCTURE OF A SCHEME-CUM PLAN

Below is an example of a Form one Scheme-cum plan on a particular topic.

#### Form One Schemes of Work

**Topic: Health and Safety**

**Key-concept: Building Site/Workshop safety**

Layout of the Schemes of Work is usually horizontal and comprise the following columns:

Week ending	Topic/Content	Aims: By the end of the week, pupils should be able to:	Competencies	Methods/Activities	Sources/References/Media	Evaluation
27/01/17	<b>Health and safety</b>	<ul style="list-style-type: none"> <li>● Identify causes of accidents at a construction site</li> <li>● State personal safety rules to be observed at building sites and in workshops</li> <li>● Demonstrate practically how to safely carry tools.</li> <li>● Identify protective clothing worn at a site</li> </ul>	<ul style="list-style-type: none"> <li>● Communication</li> <li>● Problem solving</li> <li>● Unhu/Ubuntu/Vumunhu</li> <li>● Collaboration</li> <li>● Creativity</li> </ul>	<ul style="list-style-type: none"> <li>● learners/teacher discussing safety precautions/rules in groups</li> <li>● learners/teacher taking part in practical demonstrations on how to handle and arrange tools safely at a site</li> <li>● Role-play by learners on how to move/walk around at a building site</li> </ul>	Syllabus page 6 Building Technology and Design Focus on book 1 by Earnest Sitshebo page 14-15 Charts ICT tools Protective clothing Reports on Accidents Statistics	

## UNIT 4

### LESSON PLAN

This is a detailed daily plan of what you intend to deliver during the lesson. This is to be used in the event of you having drawn a scheme of work rather than a scheme cum plan. It is your immediate translation of the scheme of work into action, showing what you are going to teach, for how many minutes, to whom, how and why.

#### EXAMPLE OF A LESSON PLAN

**CLASS:** Form 1A

**LEARNING AREA:** BUILDING TECHNOLOGY AND DESIGN

**DATE:** 27 January, 2017

**TIME:** 10:30am – 11:40am

**TOPIC:** Health and Safety

**Key concept:** Safety Precautions at a Building Site

**Sub-concept:**

- Causes of accidents at a building site and workshop
- Safety precautions at a building site
- Personal safety
- Tools safety

**S.O.M.:** - National syllabus (Form 1-4) page 60-61  
- Teachers' Guide Book page 15  
- Focus on Building Technology and Design book 1, Earnest Sitshebo page 14-16

**MEDIA:** chart illustrating safety, realia such as sharp edged tools, containers of paint, empty bottles of different chemicals, bricks, safety clothing.

#### ASSUMED KNOWLEDGE:

Learners have knowledge on safety from their primary school Science and Technology learning area

#### LESSON OBJECTIVES

By the end of the lesson learners should be able to:

- Identify causes of accidents at a building site and workshop/ tools storeroom
- State regulations and precautions to be observed when working at a building site, and handling/using of different types of tools and equipment
- Identify safety clothing that is worn at a building site

**INTRODUCTION:** Learners brainstorm the need for safety precautions i.e. rules and regulations at a building site

**ACTIVITIES**

- Identification of causes of accidents at a building site and tools store room/workshop
- Demonstrating safe movement at a building site and safe conduct in a tools storeroom e.g. no running about at a site
- Demonstrating the safe use of tools and equipment
- Discussion on safety precautions to be observed at a building site and in a tools storeroom
- Writing notes in note books.

**Stage 1:** Learners identify the advantages and disadvantages of using tools properly.

**Stage 2:** Learners in groups demonstrate on how to carry sharp tools from the storeroom.

**Stage 3:** Learners arrange tools/equipment and bricks properly for easy movement at a building site

**Stage 4:** The teacher to emphasise on strengths demonstrated by learners, correct any mistakes done by the same

**Conclusion:** Learners and the teacher summarise their discoveries by discussing the importance of observing safety at a building site and in a tools storeroom/workshop

Task: Learners take down notes from chalkboard/textbook. Learners are assigned with questions for further research on health and safety issues.

**LESSON EVALUATION:**

Strength: .....

.....  
.....

Weaknesses: .....

.....  
.....

Way forward: .....

.....  
.....  
.....

## UNIT 5

### RECORDS

Records are critical documents about the teaching-learning process, which you must keep as a teacher. They should be accurate and up to date because you will need them to interpret information to promote learning. They must be kept safely so that the next teacher to take that class will be well and correctly informed. The following are some of the reasons why you should keep records.

- Records guide you on your day to day operations
- Help you track learner performance
- Planning and readjustment of plans
- Source documents for reference
- Basis for profiling
- Basis for counselling
- Basis for remediation and extension

#### Types of Records

- Curriculum Framework for Primary and Secondary Education 2015-2022
- Syllabuses (national and school)
- Staff and pupil details
- Schemes of work, lesson plans/scheme cum plans
- Class attendance register
- Performance Lag Address Programme (PLAP) record (where applicable)
- Social record
- Progress record
- Remedial record
- Test record
- Supervision record
- Asset and stock control registers
- Teacher's Guide
- Circulars
- Minutes

## **PART B: CONTENT, METHODOLOGIES, ASSESSMENT AND EVALUATION**

### **2.1 METHODOLOGIES**

As a teacher it is important for you to use problem solving and learner-centred approaches. You are the facilitator and the learner is the doer. You should select appropriate teaching methods for your lessons. They should be varied and motivating. The following methods are suggested for you and you should select one or several depending on:

- The subject matter
- Instructional objectives
- The learner
- The teacher
- The time
- Instructional materials
- The environment

It is advisable that the learner be exposed to more than one method in a lesson. Teaching methods can be grouped under three main categories:

- a) Cognitive development methods**
- b) Affective development methods**
- c) Psychomotor development methods**

#### **a) COGNITIVE DEVELOPMENT METHODS**

These are mainly didactic

- Debate
- Problem solving
- Discussion Method
- Questioning/Socratic Method
- Team Teaching Method
- Recitation Method
- Field Trip/Educational tours

#### **b) AFFECTIVE DEVELOPMENT METHODS**

- Modelling Method
- Imitation and Simulation Method
- Dramatic Method
- Role-Playing Method
- Story telling
- Songs

#### **c) PSYCHOMOTOR DEVELOPMENT METHODS**

These are more learner activity based and heuristic Story telling

- Imitating or simulation
- Exploration
- Research
- Projects
- Games and quizzes
- Problem solving
- Educational tours
- Drama, song, poetry
- Demonstration

- Group discussion
- Debate
- Gallery walk

## **2.2 INSTRUCTIONAL (TEACHING-LEARNING) AIDS**

These are materials that enhance the teaching- learning process. They assist you the teacher to achieve desired objectives while in learners they help in concretising the concepts. They help learners learn better and faster, motivating them and stimulating interest.

### **2.2.1 SELECTING APPROPRIATE INSTRUCTIONAL AIDS**

When selecting instructional aids, you have to consider the following;

- topic
- level of learners
- available resources
- environment
- number of learners

These teaching-learning aids should be of good quality and user friendly considering the available resources in the school. Examples of teaching-learning aids appropriate in teaching are;

- Charts
- ICT tools
- Textbooks
- Newspapers
- Magazines
- Models
- Mock –ups/Lash-ups
- Prototypes
- Realia such as tools, furniture, roofs, joinery fittings and other installations.

Instructional aids should be used effectively, they must serve the purpose they are meant for rather than be mere window dressing. You should design your media with the topic in mind. Charts and cards must be clearly written, with visible colours and correct size of script for the level of learners. Electronic equipment should be checked before the lesson so that it is in good working order. If using complicated technical aids, make sure you practice beforehand so that you do not embarrass yourself in front of the class.

## **2.3 CLASS MANAGEMENT**

This is the process of planning, organizing, controlling and leading the class activities to facilitate learning.

### **CREATING AN EFFECTIVE LEARNING ENVIRONMENT**

This covers classroom organization from:

- Physical environment  
Clean, tidy and airy workshops/classroom and workbenches/furniture arranged carefully for safety, and teaching aids that are visible to learners.
- Emotional environment
- You need to be firm yet warm and pleasant. As a teacher you must set the right tone, telling

your learners what behaviour you expect from them.

- Grouping

You may group your learners according to needs, abilities, but never by sex. Encourage them to share ideas in groups.

- Class control and discipline

You must be knowledgeable of the school policy on discipline. A teacher must always be firm but fair. Good behaviour must be acknowledged and punishments must be corrective not cruel. You should create an atmosphere of trust and honesty in your class and aim for intrinsic discipline.

- Motivation

As a teacher you must make your learners feel important through recognizing and rewarding achievements, and encouraging those who are lagging behind. You should encourage learners to show pride in their work. Rewards should not be food, but positive remarks, or items related to learning like pencils and crayons or even displaying their work. Calling pupils by their names creates good rapport with your class. You should also be a role model to your learners by producing exemplary work which enables learners to see that what you are teaching is achievable.

- Supervision

You must check learners' work in order to guide and correct them in all areas from individual projects, group work, assignments, exhibitions, field trips and soft skills.

## 2.4 EVALUATION

This is the measuring of the success of teaching in terms of teacher and learner performance. It provides you with feedback on the acquisition of knowledge, skills and attitudes by learners. At secondary level, learners will be assessed through continuous assessment and summative assessment. Specific tasks, assignments and projects will be administered throughout the course and the marks collated. Assessment tasks are outlined at the end of the syllabus and include theory, drawing, practical and design exercises and any other appropriate ones depending on your school syllabus.

### 2.4.1 EVALUATION METHODS

- Assignments
- Creative work
- Checklists
- Rating Scale
- Observation Guide
- Written Exercises
- Theory Tests
- Projects
- Design work

**2.5 TOPICS COVERED IN THE SYLLABUS**

<ul style="list-style-type: none"> <li>● Building Technology</li> <li>● Safety and Health</li> <li>● Building Tools and Equipment</li> <li>● Materials</li> <li>● Bonding</li> <li>● Site Works</li> <li>● Sub Structure</li> <li>● Super Structure</li> <li>● Design and Drawing</li> <li>● Quantities</li> <li>● Finishes</li> <li>● Services</li> <li>● Science of materials</li> </ul>	<ul style="list-style-type: none"> <li>● Site surveying</li> <li>● Quantity surveying and estimation</li> <li>● Structural analysis</li> <li>● Architecture</li> <li>● Management of construction projects</li> <li>● Maintenance and renovation</li> <li>● Building control and development</li> <li>● Renewable energy</li> <li>● Intellectual property</li> </ul>
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**CONCLUSION**

We hope this guide will help you make a breakthrough into the new curriculum. It should guide you on interpreting the syllabus, making your own school syllabus; deriving a scheme of work and a lesson plan or scheme-cum plan; choosing appropriate methods and instructional aids, managing your class and making and maintaining records and finally evaluating yours and your learners' progress.

