MINISTRY OF EDUCATION, SCIENCE AND SPORTS

TEACHING SYLLABUS FOR BASIC DESIGN AND TECHNOLOGY

(JUNIOR HIGH SCHOOL 1-3)

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INTRODUCTION

Design and Technology is a subject that combines the elements of the former courses in Pre-Technical Skills and Pre-vocational Skills into one subject. Design is a process involving identifying of problems, investigating solution alternatives, pre-imaging or visualizing the solution, sketching the solution and making the artefact or product that solves the problem originally identified. Technology on the other hand, involves the use of tools, materials and processes for developing a product that satisfies a need or a problem. By combining Pre-Technical Skills and Pre-Vocational Skills, it is intended that pupils will learn the processes of problem identification, and then use design techniques such as drawing, free-hand sketching and colour work to design a product, and go on to select appropriate tools and materials to make a product or artefact. Basic Design and Technology adopts the design principles and processes in Pre-Technical Skills and Pre-Vocational Skills and teaches the application of these principles and processes in various aspects of the three vocational options: Pre-Technical Skills, Home Economics and Visual Arts. The subject is intended to create individuals who are versatile and creative and who are capable of combining and using a variety of knowledge and skills in product development. The subject is organized in two parts: Core Skills and Options. The Core Skills include a study of Basic Life Skills, Graphic Communication, Design, Problem Identification and Idea Development, and Entrepreneurial Skills. A pupil who selects any of the three options will be required to undertake a project, using relevant processes and a variety of materials and resources for making the product. Since the majority of pupils who enter Junior High School may terminate their formal education at this level, entrepreneurial skills and introduction to the world of work are included as part of the core knowledge and skills that pupils should acquire before completing this level of education.

RATIONALE

Development in the current world shows that nations that produce new tools, machinery and technologies are leading not only in production of goods and services, but are also in high living standards for their people. The age of agriculture is long gone. The current age belongs to industrialization and information technology. The use of information technology has revolutionalized the nature of industries. The new age calls for a new type of education and training. The emphasis in the new age is more on developing people with creative minds and multiple skills. It is no longer sufficient to train young people to make baskets using cane or raffia; it is now more important to train young people in a variety of skill areas such that a person who wishes to make baskets can now make baskets using a variety of materials such as raffia, cloth, leather and a combination of other materials to create new forms of baskets. The introduction of Basic Design and Technology in the Junior High School curriculum is intended to provide young persons with basic skills in technology education as a predisposition to technical pursuits at advanced levels. It is recognized that the advancement of the country can only be accelerated if a large number of persons are trained in science and technology, with manufacturing as the outlet. The subject therefore, offers the pupil the chance to acquire valuable skills that will open up a wide range of opportunities for productive work. It is expected that if the subject is taken seriously in schools, a new breed of pupils with creative minds and design skills will be developed as the human resource foundation for the industrial growth of the country.

GENERAL AIMS

The subject is designed to help the pupil to:

1. acquire basic life skills
2. acquire problem solving skills through the use of the design process
3. develop a creative mind capable of identifying a variety of problems within his/her environment
4. use imagination to create solutions to existing problems
5. use ICT in research and designing where applicable
6. apply practical skills, safe use of tools and judicious use of materials in the workshop
7. set up and manage a business successfully
8. apply moral principles in the conduct of business

SCOPE OF CONTENT:

Basic Design and Technology combines the principles and processes in various aspects of Pre-Technical Skills, Home Economics and Visual Arts as already indicated in the introduction. The Core Section of the syllabus covers the following:

CORE SKILLS

Basic Life Skills	Maintaining good health, cooking foods, meal service, basic processes in sewing, basic home repairs: electrical and furniture repairs
Drawing:	Free-hand drawing; perspective, isometric and oblique drawings
Designing:	Elements and principles of design; basic concepts of colour; extraction of colour from different sources; application of colour to achieve a purpose
Problem identification and solution:	Sources of problems; problem definition; investigating a problem, selecting a solution, pre-imaging the solution and developing a sketch of the solution; basic operational sequence of processes and activities in each of the subject options (Pre-Technical, Home Economics and Visual Arts) towards making a product/artefact
Entrepreneurial Skills:	Factors to consider in setting up and managing a small scale business; business risks; introduction to the job market, packaging, planning and mounting an exhibition.

OPTIONS

Option 1: Home Economics

i. Tools and Equipment
ii. Health and Hygiene
iii. Food and Nutrition
iv. Fabrics for sewing
v. Food preparation
vi. Processes in sewing
vii. Food commodities
viii. Garment construction
ix. Meal and menu planning
x. Clothing maintenance

Option 2: Pre-Technical Skills

i. Metalwork
ii. Brickwork
iii. Plastics
iv. Woodwork
v. Basic Electrical and Electronic Circuits
vi. Technical Drawing

Option 3: Visual Arts

i. Visual Communication
ii. Weaving and Stitching
iii. Modeling, Casting and Carving
iv. Construction and Assemblage
v. Fabric and Leather Decoration

ORGANIZATION AND STRUCTURE OF SYLLABUS

The syllabus is organized in two parts. Part 1 presents the syllabus for the Core Skills. Part 2 presents the syllabus for each of the three optional areas. Part 1 will be taught in the first two terms of Year 1 of JHS. Part 2 will be taught from the third term of Year 1 through to the end of the second term of Year 3, stopping just before the start of BECE.

SELECTION OF OPTIONS

Each pupil will be expected to indicate his/her option of interest before the end of the second term of JHS1 after having gone through almost two terms of instruction in the core principles and skills of the three optional areas.

STRUCTURE AND ORGANIZATION OF THE SYLLABUS

CORE SKILLS: The structure of the Core Skills is as follows:

JHS 1 - TERM 1

SECTION 1: BASIC LIFE SKILLS
Unit 1: Nutrition
Unit 2: Maintaining good health
Unit 3: Cooking foods
Unit 4: Meal service
Unit 5: Basic processes in sewing

SECTION 2: GRAPHIC COMMMUNICATION
Unit 1: Drawing
Unit 2: Development of Surfaces

JHS 1 - TERM 2

SECTION 3: DESIGNING
Unit 1: Elements and Principles of Design
Unit 2: Colourwork

SECTION 4: PROBLEM IDENTIFICATION AND IDEA DEVELOPMENT

Unit 1: Identification of Problem(s)
Unit 2: Making of articles/artifacts

SECTION 5 : BASIC HOME MAINTENANCE:
Unit 1: Basic electricity and electrical repairs
Unit 2: Furniture repairs

SECTION 4: ENTREPRENEURIAL SKILLS
Unit 1: Small Scale Enterprise
Unit 2: Introduction to the Job Market
Unit 3: Packaging
Unit 4: Exhibition

Option 1: HOME ECONOMICS

Home Economics at this level is an integration of catering and sewing. The structure of the syllabus is as follows:

JHS 1	JHS 2	JHS 3
SECTION 1: TOOLS AND EQUIPMENT **Unit 1:** Tools and Equipment for catering - identification - choice and use - care, maintenance and storage **Unit 2**: Tools and Equipment for sewing -identification -choice and use -care, maintenance and storage **SECTION 2: HEALTH AND HYGIENE** **Unit 1**: Food Spoilage and Preservation **Unit 2:** Safety in the kitchen **SECTION 3: FOODS AND NUTRITION** **Unit 1**: The three food groups **SECTION 4: TEXTILES AND FIBRES** **Unit 1**: Natural fibres - identification - sources - characteristics **Unit: 2**: Man-made fibres - identification - sources - characteristics	**SECTION 1: FOODS AND NUTRITION** **Unit 1**: Nutrients - sources - functions - deficiency, signs and symptoms - balanced diet **SECTION 2: FOOD PREPARATION** **Unit 1**: Cooking Food - heat transfer - moist methods of cooking **SECTION 3: PROCESSES IN SEWING** **Unit 1**: Basic stitches - identification - functions - specimen making **Unit 2**: Crocheting - tools and materials - abbreviations - basic crochet stitches **Unit 3**: Basic seams - Plain and French **SECTION 4: FOOD COMMODITIES** **Unit 1:** Food Commodities - selection	**SECTION 1: COOKING FOOD** **Unit 1:** Dry method **-** baking **-** grilling **-** roasting **Unit 2:** Flour mixtures **SECTION 2: MEAL/MENU PLANNING** **Unit 1:** Meal planning **Unit 2**: Menu planning **Unit 3:** Meal service - table laying - table etiquette **SECTION 3: RENOVATING/REMODELING** (Practical work and project)

JHS 1	JHS 2	JHS 3
	SECTION 5: GARMENT CONSTRUCTION: **Unit 1**: Freehand cutting - shirt/blouse **Unit 2**: Garment features - sleeves - collars - pockets **Unit 3**: Openings and Fastenings - overlap - fixing of button	

Option 2: PRE-TECHNICAL SKILLS

The Pre-Technical Skills syllabus is planned as an integration of knowledge and skills in woodwork, metalwork, plastics, brickwork and electricity/electronics. The structure of the syllabus is as follows:

JHS 1	JHS 2	JHS 3
SECTION 1: MATERIALS UNIT 1: Metals: Ferrous and Non-ferrous UNIT 2: Timber UNIT 3: Building materials UNIT 4: Abrasives **SECTION 2: TOOLS AND PROCESSES** UNIT 1: Safety precautions UNIT 2: Measuring tools UNIT 3: Setting-out and Marking-out tools UNIT 4: Cutting tools UNIT 5: Holding tools UNIT 6: Removing and driving tools UNIT 7: Striking tools UNIT 8: Digging tools	**SECTION 1: TECHNICAL DRAWING** UNIT 1: Isometric Drawing UNIT 2: Oblique Drawing UNIT 3: Perspective Drawing UNIT 4: Principles of Orthographic Projection UNIT 5: Drawing of Orthographic Views UNIT 6: Development of Prisms UNIT 7: Development of Pyramids **SECTION 2: MATERIALS** UNIT 1: Metals: Medium carbon steel and Non- ferrous alloys UNIT 2: Aggregates UNIT 3: Adhesives UNIT 4: Finishes	**SECTION 1: MATERIALS** UNIT 1: Metals – cast iron UNIT 2: Plastics **SECTION 2: TOOLS AND PROCESSES** UNIT 1: Cutting tools UNIT 2: Laying tools UNIT 3: Setting-out a straight wall UNIT 4: Walling UNIT 5: Fastenings UNIT 6: Sheet Metalwork **SECTION 3: BASIC ELECTRICAL AND ELECTRONIC CIRCUITS** UNIT 1: Basic Electrical Circuits UNIT 2: Basic Electronic Circuits

Option 2: PRE-TECHNICAL SKILLS (Cont'd)

JHS 1	JHS 2	JHS 3
	SECTION 3: TOOLS AND PROCESSES UNIT 1: Measuring tools UNIT 2: Setting-out and marking-out tools UNIT 3: Cutting tools UNIT 4: Moulding bricks	

OPTION 3: VISUAL ART

The Visual Arts option comprises five sections, namely, Visual Communication, Weaving and Stitching, Modelling, Casting and Carving, Construction and Assemblage, Fabric and Leather Decoration. Section 1, Visual Communication, is compulsory for all pupils. In addition to the compulsory section, each pupil is expected to offer one of the four remaining sections according to their interest and capability.

JHS 1	JHS 2	JHS 3
SECTION 1: VISUAL COMMUNICATION **Unit 1**: Importance of Visual Communication **Unit 2**: Tools/Equipment, Materials and Techniques **Unit 3**: Making Items by Composing	**SECTION 1: VISUAL COMMUNICATION** **Unit 1**: Designing and making items to communicate	**SECTION 1: VISUAL COMMUNICATION** **Unit 1**: Designing and Making Items to Solve a National Problem
SECTION 2: WEAVING AND STITCHING **Unit 1**: Importance of Weaving and Stitching Unit 2: Characteristics of Tools and Materials UNIT 3: Designing and Making Items	**SECTION 2: WEAVING AND STITCHING** **Unit 1:** Loom and Off-loom Weaving	**SECTION 2: WEAVING AND STITCHING** **Unit 1**: Combination of Techniques and Materials to make items

JHS 1	JHS 2	JHS 3
SECTION 3: MODELLING, CASTING AND CARVING **Unit 1**: Importance of Modelling, Casting and Carving **Unit 2:** Tools, Equipment and Materials **Unit 3:** Making Decorative and Sculptural Items	**SECTION 3: MODELLING, CASTING AND CARVING** **Unit 1:** Design and Making Items to solve Community Problems.	**SECTION 3: MODELLING, CASTING AND CARVING** **Unit 1** Designing and Making of Items to Solve a National Problem.
SECTION 4: CONSTRUCTION AND ASSEMBLAGE **Unit 1**: Importance of Construction and Assemblage **Unit 2:** Tools, Materials and Equipment **Unit 3**: Designing and Making Items	**SECTION 4: CONSTRUCTION AND ASSEMBLAGE** **Unit 1:** Paper Making **Unit 2**: Binding Repair Binding **Unit 3:** Construction and Assemblage of a System	**SECTION 4: CONSTRUCTION AND ASSEMBLAGE** **Unit 1**: Designing and Making Items with a Variety of Materials
SECTION 5: FABRIC AND LEATHER DECORATION **Unit 1:** Importance of Fabric and Leather Decoration **Unit 2:** Characteristics of Leather, Cotton and Linen **Unit 3:** Identification and Extraction of Dyes -dyeing pieces of fabric and leather	**SECTION 5: FABRIC AND LEATHER DECORATION** **Unit 1:** Resist dyeing **Unit 2:** Block Printing	**SECTION 5: FABRIC AND LEATHER DECORATION** **Unit 1:** Decorative Techniques **Unit 2:** Combining Decorative Techniques

PRE-REQUISITE SKILLS FOR BASIC DESIGN AND TECHNOLOGY

Good performance in English Language, Mathematics, Integrated Science and Creative Arts is necessary for success in this subject.

TIME ALLOCATION

Basic Design and Technology is allocated seven (7) periods a week on the time table. The first two terms of JHS1 will be used for completing the syllabus for the Core Skills. Teaching the optional subjects will start in the third term of JHS1.

SUGGESTIONS FOR TEACHING THE SYLLABUS

General Objectives

General Objectives have been listed at the beginning of each section of the syllabus, that is, just below the theme of the section. The general objectives flow from the general aims for teaching Basic Design and Technology listed on page (iii) of this syllabus. The general objectives form the basis for the selection and organization of the unit topics. Read the general objectives very carefully before you start teaching. After teaching all the units, go back and read the general aims and general objectives again to be sure you have covered both of them adequately in the course of your teaching.

Sections and Units: Each section of the syllabus is divided into units, where a unit consists of a body of knowledge and skills that form a logical aspect of the section.

Column I - Units: The Units in Column 1 provide the major topics of the section. You are expected to follow the unit topics according to the linear order in which they have been presented. However, if you find at some point that teaching and learning of a unit will be more effective if you branched to another unit before coming back to the unit in the sequence you are encouraged to do so.

Column 2 - Specific Objectives: Column 2 shows the Specific Objectives for each unit. The 'specific objectives begin with numbers such as 1.2.2 or 2.2.1. These numbers are referred to as "Syllabus Reference Numbers. The first digit in the syllabus reference number refers to the section; the second digit refers to the unit, while the third digit refers to the rank order of the specific objective. For instance, 1.2.2 means: Section 1, Unit 2 (of Section 1) and Specific Objective 2. In other words, 1.2.2 refers to Specific Objective 2 of Unit 2 of Section 1. Similarly, the syllabus reference number 2.2.1 simply means Specific Objective number 1, of Unit 2 of Section 2.

You will note also that specific objectives have been stated in terms of the pupil i.e. "*what the pupil will be able to do after instruction and learning in the unit.* Each specific objective hence starts with the following: "The pupil will be able to.. " This in effect, means that you have to address the learning problems of each individual pupil. It means individualizing your instruction as much as possible such that the majority of pupils will be able to master the objectives of each unit of the syllabus.

As has been said already, the order in which the unit topics appear should not necessarily be the teaching order. There should however, be a linkage

in the order in which the units and specific objectives are treated. The teacher will have to study the syllabus carefully and plan ahead the activities the pupils will carry out during a particular lesson. Knowing the requirements of a lesson, the teacher should assemble the tools and materials required for the activities well in advance. The collection of tools and materials must be done by both the teacher and pupils. Other regular materials may be continually collected and stored to be used when needed. When materials are not available in the school or in the immediate environment, the teacher should try to contact persons in higher institutions and in the community for help.

As pupils begin work on activities of each lesson, the teacher should serve as a facilitator and motivate the pupils in various ways to sustain their interest. As much as possible, resource persons may be invited to carry out demonstrations and talk about their work to the class. Field trips may be organized to the community.

Column 3 - Content: The "content" in the third column of the syllabus presents a selected body of information that you will need to use in teaching the particular unit. In some cases, the content presented is quite exhaustive. In some other cases, you could add more information to the content presented. In any case, try to find more information through reading and personal investigations, to add to the content provided. The use of resource persons will in many cases, help to provide your class with more information and skills. The column also suggests tools and materials that can be used for the unit or lesson.

Column 4 -Teaching and Learning Activities (T/LA): T/LA that will ensure maximum pupil participation in the lessons is presented in Column 4. The teaching of this subject should be activity oriented. The major portion of class work and other assignments should emphasize practice. Group work and other participatory methods should be emphasized in the teaching and learning process. In this particular subject, pupils are expected to acquire valuable basic practical skills to serve as a foundation for further skill development. Observe and also ensure that pupils exhibit skills and values in their behaviour and in creative activities.

Column 5 - Evaluation: Suggestions and exercises for evaluating the lessons of each unit are indicated in Column 5. Evaluation exercises can be in the form of oral questions, quizzes, class assignments, project work; etc. Try to ask questions and set tasks and assignments that will challenge your pupils to apply their knowledge to issues and problems, and that will engage them in creating new and original items, and developing positive attitudes as a result of having undergone instruction in this subject. Evaluation should also include observation of processes pupils go through in performing various activities, and the products pupils make. Processes and products are both equally important and need observation and correction. The suggested evaluation tasks are not exhaustive. You are encouraged to develop other creative evaluation tasks to ensure that pupils have mastered the instruction and behaviours implied in the specific objectives of each unit.

Lastly, bear in mind that the syllabus cannot be taken as a substitute for lesson plans. It is therefore necessary that you develop a scheme of work and lesson plans for teaching the units of this syllabus.

Note "Practical Skills" must be given 70 per cent of the teaching and learning time to emphasize the point that Basic Design and Technology is more toward the acquisition of practical skills at the JHS level. The remaining 30 per cent can be used for theoretical aspect of the subject such as observing, listening, responding, talking, reporting, describing, brainstorming and discussion.

The explanation and words involved in each of the dimensions are as follows:

Knowledge and Understanding (KU)

Knowledge The ability to:
remember, recall, identify, define, describe, list, name, match, state principles, facts and concepts. Knowledge is simply the ability to remember or recall material already learned and constitutes the lowest level of learning.

Understanding The ability to:
explain, summarise, translate, rewrite, paraphrase, give examples, generalise, estimate or predict consequences based upon a trend. Understanding is generally the ability to grasp the meaning of some material that may be verbal, pictorial, or symbolic.

Application of Knowledge (AK)

Ability to use knowledge or apply knowledge, as implied in this syllabus, has a number of learning/behaviour levels. These levels include application, analysis, synthesis, and evaluation. These may be considered and taught separately, paying attention to reflect each of them equally in your teaching. The dimension "Use of Knowledge" is a summary dimension for all four learning levels. Details of each of the four sub-levels are as follows:

Application The ability to:
apply rules, methods, principles, theories, etc. to concrete situations that are new and unfamiliar. It also involves the ability to produce, solve, operate, plan, demonstrate, discover etc.

Analysis The ability to:
Break down materials into its component parts; to differentiate, compare, distinguish, outline, separate, identify significant points etc, recognize unstated assumptions and logical facilities, recognize inferences from facts etc.

Synthesis The ability to:
Put parts together to form a new whole. It involves the ability to combine, compile, compose, devise, plan, revise, design, organize, create, generate, discuss etc.

Evaluation The ability to:
appraise, compare features of different things and make comments or judgments, contrast, criticize, justify, support, discuss, conclude, make recommendations etc. Evaluation refers to the ability to judge the worth or value of some materials based on some criteria.

Practical Skills (PS)

Practical skills involve demonstration of manipulative skills using tools/equipment and materials to carry out practical operations, pre-imaging to solve practical problems, and produce items. The teaching and assessment of practical skills should involve projects, case studies and creative practical tasks.

Skills required for effective practical work are the following:

1. Handling Tools/Equipment/Materials
2. Observation
3. Craftsmanship/Draftsmanship
4. Perception
5. Creativity
6. Communication

Tools/Equipment/Material Handling: Pupils should be able to handle and use tools/equipment/materials properly for practical work to acquire the needed manual skills

Observation: The pupil should be able to use his/her senses to make accurate observation of skills and techniques during demonstrations. The pupil in this case should be able to imitate the techniques he/she has observed for performing other tasks.

Craftsmanship/Draftsmanship: This involves the skilful and efficient handling of materials and tools for accomplishing specific tasks according to the level of the pupils.

Perception: The pupil should be able to respond to his/her environment using all the senses i.e. seeing, hearing, smelling, touching and tasting. The pupil should be encouraged to apply these senses to every project he/she undertakes.

Originality/Creativity Pupils should be encouraged to be creative or original and be able to use new methods in carrying out projects. Encourage them to be original in making works of art and not copy existing work. You can help them to be creative and original by encouraging any little creative effort, technique and product they may develop.

Communication: Pupils should be guided to develop effective oral and written communication skills necessary for group work, reporting and appreciation etc.

The action verbs provided under the various profile dimensions should help you to structure your teaching such as to achieve the set objectives. Select from the action verbs provided for your teaching, in evaluating learning before, during and after the instruction.

DEFINITION OF PROFILE DIMENSIONS

The concept of profile dimensions was made central to the syllabuses developed from 1998 onwards. A 'dimension' is a psychological unit for describing a particular learning behaviour. More than one dimension constitutes a profile of dimensions. A specific objective may be stated with an action verb as follows: The pupil will be able to describe….. etc. Being able to "describe" something after the instruction has been completed means that the pupil has acquired "knowledge". Being able to explain, summarize, give examples, etc. means that the pupil has understood the lesson taught.

Similarly, being able to develop, plan, solve problems etc. means that the pupil can "apply" the knowledge acquired in some new context. Each of the specific objectives in this syllabus contains an "action verb" that describes the behaviour the pupil will be able to demonstrate after the instruction. "Knowledge", "Application", etc. are dimensions that should be the prime focus of teaching and learning in schools.

Basic Design and Technology is a practical subject and the learning required is best achieved by practical application of skills learnt. The profile dimensions required in this subject and their respective weights are as follows:

Knowledge and understanding	30%
Application of knowledge	70%

MODE OF ASSESSMENT

The Core Skills will be assessed as a written paper with some practical aspects at the end of each of the first two terms of Year 1. School Based Assessments (SBA) will also be given for assessing pupils' progress in the core skills. The Optional sections of the subject will be assessed by practical projects at the end of each term. Assessment of the products/artefacts will follow these guidelines:

Originality	20%
Design	40%
Craftsmanship	40%

Knowledge and Competence in Core Skills and Options

In marking project work, note that for a pupil to earn Grade A, the project output must show a combination of knowledge and skill in the pupil's selected option and in at least one of the other two options. Grade A should therefore be reserved for only outstanding work that combines knowledge and skill in at least two of the optional areas.

Practical activities should be used in School-Based Assessment (SBA) and for end-of- term examination. The practical assessment should cover:

(a) Processes
(b) Products.

Assessment of processes: Look for creative and critical thinking, originality of ideas in the work; the design, correct handling and use of tools, materials and equipment. The degree of involvement, attitude to the work (including group work), understanding of the process, procedure, techniques and problem solving ability of the pupils must also be assessed.

Assessment of end product: The following preliminary question will be helpful when assessing an end product as a requirement for a lesson, task, activity/exercise: Is the pupil able to compose, develop, perform, stitch, draw and paint as required by the objectives? Assessment of finished products or performance also includes the pupils' verbal response or discussion/comments about the work/performance.

Theory and Practicals: Assessment of the theory and practical aspects of each option should be weighted 30:70 to reflect the importance of the practical nature of the options.

GUIDELINES FOR SCHOOL BASED ASSESSMENT

A new School Based Assessment system (SBA), formally referred to as Continuous Assessment, will be introduced into the school system from September 2008. SBA is a very effective system for teaching and learning if carried out properly. The new SBA system is designed to provide schools with an internal assessment system that will help schools to achieve the following purposes:

-Standardize the practice of internal school-based assessment in all schools in the country
-Provide reduced assessment tasks for each of the primary school subjects
-Provide teachers with guidelines for constructing assessment items/questions and other assessment tasks
-Introduce standards of achievement in each subject and in each class of the school system
-Provide guidance in marking and grading of test items/questions and other assessment tasks
-Introduce a system of moderation that will ensure accuracy and reliability of teachers' marks
-Provide teachers with advice on how to conduct remedial instruction on difficult areas of the syllabus to improve pupil performance

The new SBA system will consist of 12 assessments a year instead of the 33 assessments in the previous continuous assessment system. This will mean a reduction by 64% of the work load compared to the previous continuous assessment system. The 12 assessments are labeled as Task 1, Task 2, Task 3 and Task 4 etc. Task 1-4 will be administered in Term 1; Tasks 5-8 will be administered in Term 2, and Tasks 9-12 administered in Term 3. Task 1 will be administered as an individual test coming at the end of the first month of the term. The equivalent of Task 1 will be Task 5 and Task 9 to be administered in Term 2 and Term 3 respectively. Task 2 will be administered as a Group Exercise and will consist of two or three instructional objectives that the teacher considers difficult to teach and learn. The selected objectives could also be those objectives considered very important and which therefore need pupils to put in more practice. Task 2 will be administered at the end of the second month in the term. Task 3 will also be administered as individual test under the supervision of the class teacher at the end of the 11^{th} or 12^{th} week of the term. Task 4 (and also Task 8 and

Task 12) will be a project to be undertaken throughout the term and submitted at the end of the term. Schools will be supplied with 9 project topics divided into three topics for each term. A pupil is expected to select one project topic for each term. Projects for the second term will be undertaken by teams of pupils as Group Projects. Projects are intended to encourage pupils to apply knowledge and skills acquired in the term to write an analytic or investigative paper, write a poem (as may be required in English and Ghanaian Languages), use science and mathematics to solve a problem or produce a physical three-dimensional product as may be required in Creative Arts, Natural Science and in Basic Design and Technology.

Apart from the SBA, teachers are expected to use class exercises and home work as processes for continually evaluating pupils' class performance, and as a means for encouraging improvements in learning performance.

The marks derived from projects, the end of month tests and home work specifically designed for the SBA should together constitute the School Based Assessment component marked out of 60 per cent. The emphasis is to improve pupils' learning by encouraging them to do more practice in the subject. The teacher should AVOID asking pupils to bring purchased items for assessment for the SBA. The teacher must also AVOID, criticizing or comparing one pupil's work with another's work in both the teaching and assessment processes. The SBA will consist of:

End-of-month tests
Home work assignments (specially designed for SBA)
Project

Combining SBA marks and End-of-Term Examination Marks

The SBA system is important for raising pupils' school performance. For this reason, the 60 marks for the SBA will be scaled to 50. The total marks for the end of term test will also be scaled to 50 before adding the SBA marks and end-of-term examination marks to determine pupils' end of term results. The SBA and the end-of-term test marks will hence be combined in equal proportions of 50:50. The equal proportions will affect only assessment in the school system. It will not affect the 30:70 proportional weighting at the BECE.

GRADING PROCEDURE

In marking your class examination scripts, it is very important that you develop a marking scheme. A marking scheme, as you may be aware, consists of the points for the best answer you expect for each question or activity, and the mark(s) allocated for each point raised by the pupil as well as the total marks for the question or activity.

To improve assessment and grading and also introduce uniformity in schools, it is recommended that schools adopt the following grade boundaries for assigning grades:

Grade A:	80 - 100%	-	Excellent
Grade B:	70 - 79%	-	Very Good
Grade C:	60 - 69%	-	Good
Grade D:	45 - 59%	-	Credit (Satisfactory)

Grade E:	35 - 44%	-	Pass
Grade F:	≤ 34%	-	Fail

The grading system presented above shows the letter grade system and equivalent grade boundaries. In assigning grades to pupils' test results, or any form of evaluation, you may apply the above grade boundaries and the descriptors. The descriptors (Excellent, Very Good etc) indicate the meaning of each grade. For instance, the grade boundary for "Excellent" consists of scores between 80 - 89. Writing "80%" for instance, without writing the meaning of the grade, or the descriptor for the grade i.e. "Excellent", does not provide the pupil with enough information to evaluate his/her performance in the assessment. You therefore have to write the meaning of the grade alongside the score you write. Apart from the score and the grade descriptor, it will be important also to write a short diagnosis of the points the pupil should consider in order to do better in future tests etc. Comments such as the following may also be added to the grades:

Keep it up
Has improved
Could do better
Hardworking
Not serious in class
More room for improvement, etc.

Note that the grade boundaries above are also referred to as grade cut-off scores. When you adopt a fixed cut-off score grading system as in this example, you are using the criterion-referenced grading system. By this system a pupil must make a specified score to earn the appropriate grade. This system of grading challenges pupils to study harder to earn better grades. It is hence very useful for achievement testing and grading. To repeat what has been said already, ensure that Grade A is awarded only to creative projects/products that show combination of skills from the different optional areas.