MINISTRY OF EDUCATION, ARTS AND CULTURE

SENIOR PRIMARY PHASE

CONTINUOUS ASSESSMENT MANUAL FOR DESIGN AND TECHNOLOGY GRADES 5 - 7

2015
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FOREWORD

This manual is developed for the teachers. Its intention is to guide the teachers in how to carry out Continuous Assessment (CA) in Design and Technology. Teachers are required to do a certain number of CA tasks in the course of a year, to contribute to each learner’s CA mark. If time permits, teachers are encouraged to do as many CA tasks as possible. Teachers are also encouraged to use different activities and to develop their own activities.

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1. Introduction

1.1 Overview

The purpose of this manual is to give teachers practical guidance in how to carry out Continuous Assessment (CA) in Design and Technology. The contents of the manual conform to the policy laid down in Towards Improving Continuous Assessment in schools: A Policy and Information Guide, 1999. This document is available on the NIED website; www.nied.edu.na.

The intention here is to provide teachers with practical guidelines and examples of:

- the process within CA;
- the methodology of CA within their subject; and
- examples of good practice.

1.2 Nature of CA and its relationship to the syllabus

As the word ‘continuous’ suggests, continuous assessment is that which occurs throughout the year or duration of a course. Continuous assessment is used to evaluate a learner’s progress throughout a course of study, as well as or instead of by examinations. Continuous assessment thus serves both formative and summative purposes. ‘Good’ continuous assessment practices include the use of a variety of strategies of which tests and examinations are but one. The use of different strategies enables educators to gather evidence of learning in ways other than examinations.

CA is an important part of everyday activities in the classroom because:

- it provides regular information about teaching, learning and the achievement of learning objectives and basic competencies;
- it allows teachers to assess performance based activities which cannot be assessed by written tests;
- it provides opportunities for local environment as resource for learning and effective use of contemporary events, problems and issues;
- it enable learners to consider evidence, solve problems, make decisions, clarify their values and develop their inquiry skills;
- it provides opportunity for learners to develop new ideas and increase their understanding of aspects of Design and Technology through active consideration of a variety of sources of information
- it allows learners to demonstrate the ability to handle various kinds of information: fieldwork, data, maps, graphs, statistics, and discuss with other learners, write tasks through which they are required to evaluate ideas for improving the feedback to both learners and teachers on the effectiveness of their learning and teaching respectively.

The assessment process itself should not determine what is to be taught and learned. It should be a servant, not the master, of the curriculum. Yet, it should not simply be a bolt-on addition at the end. Rather, it should be an integral part of the education process, continually providing both ‘feedback’ and ‘feedforward’. It therefore needs to be incorporated systematically into teaching and learning strategies and practices at all levels. Since the
results of assessment can serve a number of different purposes, these purposes need to be kept in mind when arrangements for assessment are designed.

Why do we assess?
We assess to:
- enhance learning
- check whether the learning objectives have been achieved
- recognise and plan for learners’ needs
- discover what learners understand and can do
- plan future learning targets
- help learners devise personal targets
- motivate both teachers and learners.

The purpose of CA is to gather evidence about what a learner understands that is:
- **on-going**
- **integrated**
- **practical**

It follows that the CA is imbedded in the classroom teaching-learning-feedback cycle that forms most of classroom activities. CA involves the assessment of all the basic competencies of the Design and Technology syllabus.

These basic competencies are assessed:
- in written tests and examinations
- by CA only
- by both the written tests and examinations and CA

The manual provides practical guidance in a form of a model for assessing the competencies that are best assessed by CA only. However, it will become clear that other basic competencies are assessed at the same time and cannot be excluded from CA simply because they also form part of the written tests and examination. CA tasks and activities provide the opportunity for learners to “learn by doing”, develop personal attributes (self-discipline, working in a group), as well as cognitive and practical skills.

How are we to assess?
To ensure that assessment meets the objectives, the following criteria for assessment may be considered:
- The results should provide a basis for making decisions about learners’ further learning needs; they should be formative
- It should be possible to compare the results across classes and schools
- Assessment should relate to progress

**Formative assessment** is continuous assessment because it charts the learner’s progress over a period of time.
Formative assessment is based on criteria referencing and meet the following criteria for assessment, namely that:

- The results should give direct information about learners’ achievements in relation to the desired learning objectives
- The results should provide a basis for the decisions about the learners’ further learning needs
- The results should be related to the learners’ progression.
- The assessment results should give direct information about learners’ achievement in relation to the learners’ progression.

**Formal and informal continuous assessment and their relationship**

**Formal CA** is where tasks and activities are used that has been designed for the **specific purpose of assessing certain competencies**. The aim is to carry out CA in as valid step as possible by using materials that have been designed in this way. The results of learners’ performance on all formal CA tasks are **recorded** and contribute **50%** of the learner’s final **assessment**. Because these tasks and activities are carried out in the everyday classroom situation, for example at the end of teaching a topic, they can be used in a diagnostic way and help the teacher to gain evidence of learners’ understanding of particular concepts and application of skills. Assessment can also be done in an informal way through observations of each learner’s progress in class or during the activities.

**Informal CA** consists of tasks and activities that are **not specially designed for their validity as assessment tasks or activities**. Examples of informal CA are teacher’s personal day-by-day records about learners’ behaviour, class participation or motivation. These records do not have prescribed format. However, they are very important because such evidence can be particularly useful, as for example in cases where learners have been absent for formal assessment and examinations, and a judgment has to be made about their performance on the basis of other evidence.

Formal and informal CA both perform the same function, that of gathering ongoing evidence of the learner’s performance in the practical classroom situation. The only difference between the two is that:

- formal CA tasks and activities have been specially designed to achieve maximum validity possible in assessing particular basic competencies within a practical situation informal CA tasks are not usually designed in this way;
- the outcomes of the formal CA are recorded as part of the formal assessment for Design and Technology and contributes 50% towards the final mark.

It is important to remember that both kinds of CA are essentially the same in character and purpose. Formal CA and informal CA are on-going, integrated and practical and provide evidence of what the learner understands, usually within the context of the everyday classroom situation.
1.3 Diagnostic assessment as part of CA

An advantage of CA is that it enables diagnostic assessment to take place within the context of the everyday classroom situation. The purpose of diagnostic assessment is to make sure that learners are developing the skills and knowledge identified within the basic competencies of the syllabus.

Assessment should be used to enhance learning, and should be used as part of the learning process. In addition to using assessment to monitor and promote individual learners’ learning, classroom assessment should also be used to examine and improve teaching practices. This includes ongoing, informal assessments of learners; understanding to adjust one’s teaching plans.

**Diagnostic assessment** is a two way process which gives information about:
- the learners; and
- the effectiveness of the teaching/learning process.

A particular activity or part of an activity within CA may be used for diagnostic purposes. The kind of activity (e.g. a project, short test etc.) and how it is used diagnostically will depend on the information that is needed. Examples of diagnostic assessment are included in the sample CA materials in Part 3 of this manual.

Diagnostic assessment can be approached in two ways:
- in a subjective, intuitive way by focusing on particular aspects of the performance of learners within a task;
- in a more rigorous way by focusing on the individual learner to look for evidence of any learning problems.

A flow diagram showing the first approach is shown on the next page. This approach is to gain **feedback** about more **general** or **process-oriented aspects of a learner's performance** in a subject, for example with respect to their ability to solve problems or to organise their work and to present it **systematically** and with **clarity**.
The second approach in diagnostic assessment is used if the purpose is to focus on a learner’s weakness in specific content areas where there may be a lack of understanding.
Model of phases in diagnostic assessment and remediation

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Screening: Is there evidence of learning problems?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 2</td>
<td>Describing: What is the nature of the problem?</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Analysing: What is the specific difficulty?</td>
</tr>
<tr>
<td></td>
<td>What are the associated factors?</td>
</tr>
<tr>
<td>Phase 4</td>
<td>Theorising: What could be the origin of the problem?</td>
</tr>
<tr>
<td></td>
<td>What remedial action might be taken?</td>
</tr>
<tr>
<td>Phase 5</td>
<td>Planning: Developing a remedial programme.</td>
</tr>
<tr>
<td>Phase 6</td>
<td>Evaluation: How effective has the remedial programme been?</td>
</tr>
<tr>
<td></td>
<td>How can the programme be improved?</td>
</tr>
</tbody>
</table>

Conclusion:

Teachers should view all forms of Continuous Assessment as a source of diagnostic help in understanding a subject. They should also ensure that they maintain a critical outlook and view Continuous Assessment as diagnostic of their own success and weakness in teaching their subject.
1.4 What the syllabus contains

Continuous Assessment in Design and Technology complements the work done by learners for the written term test or the examination towards the end of Grade 6 and 7. Work undertaken for such assessment should motivate learners to progress in their knowledge and understanding of Design and Technology and also develop qualities of creativity and innovativeness. Through a programme of Continuous Assessment learners should become more sensitive and aware in addition to becoming more capable of working independently as well as with other learners in group activities. Opportunity is provided through Continuous Assessment to assess objectives which cannot be assessed in the written tests or examinations, including discussions, role play, and practical work and using investigative skills.

At least three formal continuous assessments per term should be selected, graded and recorded. Not more than two assessments per term are to be topic tests. These continuous assessments must be carefully planned and marked according to a mark scheme or marking criteria. The criteria used to assess activities other than tests, should be given to the learner before the assessment activity. Evidence of the work produced by good, average and low-achieving candidates, as well as the written assignment and marking scheme, has to be kept at school until the end of the next year. Teachers can choose to grade and/or record more than the required continuous assessments if it is necessary for formative purposes. An end-of-year summative grade will be based only on the assessment tasks described in the syllabus. Additional assessment given by the teacher will not count. Not more than forty percent (40%) of the summative grade can be based on tests. Therefore, internal end-of-year examinations will be given in the Upper Primary examination subjects. The purpose of these examinations is to focus on how well learners can demonstrate their thinking, communication, and problem-solving skills related to the areas of the syllabus which are most essential for continuing in the next grade. Preparing for and conducting these examinations should not take up more than two weeks altogether right at the end of the year.
1.5 Relationship to written examination

The purpose of the examination is to assess how far each learner can demonstrate their achievement in reaching the competencies. Learner achievement in selected subject areas will be monitored nationally in Grade 5. The purpose of the achievement test is to evaluate to what extent the system as a whole is enabling learners to achieve optimally. A promotion grade will be awarded at the end of each year based on the average of the summative grade from continuous assessment and the grade obtained in the examination.

Informal Continuous Assessment is the essence of good teaching practice. Some will be prepared carefully by the teacher serving as valuable preparation for the formal aspects of Continuous Assessment. Other features of informal assessment will however be both unstructured and spontaneous. Illustrations might include questioning of learners in a class situation, short revision tests following the completion of lessons or topics together with the general observations made by teachers of learners in a variety of activities. The part played by an individual learner in group work might illustrate the latter, in addition to the contributions made to discussions, role play and data collection.

The significance of Continuous Assessment is to provide the teacher with a complete picture of each learner’s progress in Design and Technology. Individual strengths and weaknesses will be revealed through such assessment. In consequence appropriate remedial action may be taken if an individual learner is experiencing particular difficulties in the subject. Other learners might merit encouragement in light of progress made. In addition the teacher has the related advantage of evaluating teaching programme and work strategies. These advantages of informal assessment underpin the whole structure of teaching in Design and Technology and their importance cannot be over-emphasised. It is vital that records for some types of informal continuous assessment are kept by teachers for reporting or inspection purposes. Much however of what is gained by the teacher through this aspect of assessment will be unrecorded but will provide the teacher with a more complete profile of individual learners than if reliance was based only upon formal aspects of continuous assessment and written examination. Informal continuous assessment should give teachers more reliable information about the learners and allow them to write reports on them with greater confidence and accuracy. The marks awarded for planned and structured formal Continuous Assessment mark should be carefully recorded (see 7, Record keeping). This mark together with that given in the written examination contributes to a promotion mark.
2. **The project (design folder and product)**

2.1 **What is a project?**

A project is a longer assignment than a practical exercise and gives learners an opportunity to complete an investigation into one of the themes/topics outlined in the syllabus. This type of investigation will enable the teacher and learner to pursue a topic in greater depth and in a more lively and creative way than possible with short discrete practical exercises. A project can be done by learners as individuals and groups, in or outside the classroom. The teacher should monitor and guide learners throughout the process.

At the end of the year, the project mark will be 20 marks in grade 6 and 70 marks in grade 7. All assessment objectives should be assessed in a project. It is vital that learners know the assessment criteria before embarking on a project.

2.2 **The role of the teacher in initiating the project**

The teacher has a pivotal role to play in initiating a project, both in its design and in guiding learners to produce work which reflects their true potential. The involvement and responsibilities of the teacher in organising project work is outlined below. When stages in project work are discussed, the teacher must provide learners with a clear outline of these stages. In addition the teacher should encourage each learner to make brief notes as to the progress being made in dealing with the project.

This information, together with other notes made by the teacher, will be useful in diagnostic work when the teacher talks with learners, parents and others. The teacher should produce a planning sheet informing learners of the main features of the project to be attempted.

It is important for the teacher to explain both the importance and the structure of continuous assessment to learners. The teacher should ensure the safety of learners by making sure learners know how to behave responsibly for groups to keep together and first aid should be available. When away from school premise, one teacher should have a cellular phone and emergence number. It is the duty of the teacher to ensure sufficient adult and authority back-up, including knowing where you will be, when you will be there and when you will return.
**Project:** All the relevant stages in the design folder should be taken into account

**Grade 5:** Learners are expected to experiment with the concepts using wood/burnt match sticks for example. This informal Continuous Assessment activity does not contribute towards the CA mark.

**Grade 6:** Learners are expected to experiment with the concepts of the design folder individually. This contributes 20 marks towards the CA mark.

**Grade 7:** Learners should have a completed design folder plus a finished product based on the specific design folder. These two components contribute 70 marks towards the CA mark.

**NB:** It is not compulsory to use the design folder compiled in grade 6, meaning if a learner opted for another product in Grade 7, he/she should complete a new and appropriate design folder for that specific product. Should a learner move to another school, the continuous assessment mark for the work already completed should accompany the learner.

### 2.3 Learner’s perspective

Learners need to be made aware of:

- the definition of a project - how it differs from other assignments attempted during previous grades – its length, the time-scale for its completion (2-3 weeks)
- their responsibilities in contributing to information gathering/data collection, the making of individual decisions as to how the project is to be presented, interpretations and conclusions to be made;
- techniques to be used for acquiring and presenting information;
- how the project is to be assessed with reference to assessment of knowledge and skills.
- an opportunity to gain feedback on progress, setting of further learning targets and actions.
## 2.4 Stages within a project/product

### STAGES IN DESIGN: Example: Key Rack

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analysis and Brief</td>
<td>Refer to:</td>
</tr>
<tr>
<td></td>
<td>- situation(keys get lost, misplaced)</td>
</tr>
<tr>
<td></td>
<td>- need(for a device to keep keys in one place)</td>
</tr>
<tr>
<td></td>
<td>- user(everybody)</td>
</tr>
<tr>
<td></td>
<td>- possible solution</td>
</tr>
<tr>
<td>2. Specifications</td>
<td>Refer to:</td>
</tr>
<tr>
<td></td>
<td>- number of keys it must keep</td>
</tr>
<tr>
<td></td>
<td>- cost(e.g. not more than N$10)</td>
</tr>
<tr>
<td></td>
<td>- material used(wood/metal/plastic)</td>
</tr>
<tr>
<td></td>
<td>- size; shape(e.g. not longer than 30cm)</td>
</tr>
<tr>
<td></td>
<td>- colour; aesthetics; ergonomics</td>
</tr>
<tr>
<td>3. Exploration of Ideas</td>
<td>Should include:</td>
</tr>
<tr>
<td></td>
<td>- at least 3 ideas of possible key racks communicated</td>
</tr>
<tr>
<td></td>
<td>- preferably enhanced free hand sketches</td>
</tr>
<tr>
<td></td>
<td>- preferably 3-dimensionsional sketches</td>
</tr>
<tr>
<td></td>
<td>- show the construction of each idea</td>
</tr>
<tr>
<td></td>
<td>- evaluate each idea in terms of advantages and disadvantages</td>
</tr>
<tr>
<td></td>
<td>- <strong>ONE</strong> idea of the key rack must be chosen</td>
</tr>
<tr>
<td></td>
<td>(the selection of the chosen idea should be justified)</td>
</tr>
<tr>
<td></td>
<td><strong>NB! ALL sketches should be supplemented with labels and notes</strong></td>
</tr>
<tr>
<td>4. Development</td>
<td>Should include:</td>
</tr>
<tr>
<td></td>
<td>- basic exploded views of the construction, assembly, joining of the idea.</td>
</tr>
<tr>
<td></td>
<td>- reference to specific materials and tools/equipment used</td>
</tr>
<tr>
<td></td>
<td>- a 3-D freehand presentation of the intended key rack</td>
</tr>
<tr>
<td></td>
<td>- freehand working drawings with main dimensions</td>
</tr>
<tr>
<td>5. Planning for Production</td>
<td>Should include and refer to:</td>
</tr>
<tr>
<td></td>
<td>- time frame with processes in making the key rack</td>
</tr>
<tr>
<td></td>
<td>- flow chart of processes</td>
</tr>
<tr>
<td></td>
<td>- material and tool lists</td>
</tr>
<tr>
<td>6. Product Realisation (making)</td>
<td>Deals with the actual &quot;making&quot; of the key rack, using the planning schedule</td>
</tr>
<tr>
<td></td>
<td>Consideration of skill level of learner</td>
</tr>
<tr>
<td>7. Evaluating and Testing</td>
<td>- The completed key rack should be tested against <strong>ALL</strong> requirements stated in the Design Brief and all Specifications</td>
</tr>
<tr>
<td></td>
<td>- Improvements and/or modifications should be suggested</td>
</tr>
</tbody>
</table>

It should be noted that the teacher may give guidance to all learners with steps 1-7. Learning support should be given to individual learners who obtained lower than a D symbol. When
devising project it is important that both the teacher and learners are clear about the purpose of the assignment/project. From the learners’ point of view it enables them to respond appropriately to the various tasks. The teacher also needs to define the objectives the work is intended to assess.

The project should be structured to help learners to organise their efforts and responses. With this structuring the teacher is able to allocate marks to the work undertaken by learners in relation to each stage of the inquiry.

2.5 Selection of a project

The teacher may decide upon the project to be studied. Alternatively a concept may be suggested by the teacher and learners may have an input in the selection of the topic to be investigated. A class discussion may develop a suggested topic into an agreed line of inquiry. Before reaching a conclusion a number of related aspects may be suggested.

The teacher needs to ensure that the projects are relevant to the syllabus and are appropriate to the level of knowledge and understanding of, for example Grade 7 learners.

3. Topic tests

After completing a topic in the syllabus, it is necessary to conduct a test, indicating the achievement of learners in these topics. The results could be used to analyse mastery of learners’ achievement and to do remedial work as it required.

This assesses learners’ level of understanding of Technology concepts and mastery of skills. It is imperative that questions cover all assessment objectives. Questions should be resource based and be drawn up in line with the specification grid as outlined in the syllabus statements. A test can be given after every topic or theme and this should be carried out by learners as individuals. Feedback should be given immediately after the marking in order to provide more help to learners.

3.1 Purpose of a topic test

The two term tests conducted towards the end of the terms 1 and 2 are designed to present to both teachers and learners an opportunity to assess the progress made in understanding the themes and topics studied during the term. Learners should show the ability to demonstrate knowledge with understanding (assessment objective A), and Design problem solving (assessment objective B). The test will be made of short answer questions and structured questions which are resource based. The total mark for each test should be 20 marks except in the third term where it is 10 marks, and entered on the CA form.
3.2 The role of the teacher

The teacher needs to cover a representative sample of questions selected from the basic competencies of the theme or topics covered. Each test should last a single period (40 minutes) or an alternative can be arranged for the afternoon, where possible. Learners should be informed of the structure and date of the tests. In order to do justice, there should be a balance of the learning content covered across the question paper.

It is anticipated that teachers will introduce short informal tests when individual topics are completed. This will form part of informal continuous assessment. A record should be kept of the marks obtained by individual learners for these tests. However, these marks should not be added to the record sheet for formal continuous assessment. Another advantage of informal tests is that they provide the teacher with a record of progress being made in case a learner misses the formal term test. Test should not take away too much teaching time.

3.3 Tips to prepare and answer questions in tests and exams

Learners should practice source based skills using a variety of different sources. The teacher should use a variety of sources which have been used in previous examinations or tests.

Learners should be exposed to as many past question papers as possible. This is not for learners to predict questions but to find out what sort of questions are asked. Sometimes it is useful to practice writing out the answers in test conditions. Explain to learners how the test or exams are marked. Learners can ask to see questions and their mark schemes from previous examinations. Learners can look particularly at those answers which are worth a lot of marks to discover how they can earn more marks by giving details and examples. When answering the questions in the examination learners should be informed to make sure to use time carefully. It is no good writing a page if the question is only worth 2 marks; an answer worth 2 marks should take no more than 1 minute to write. If a learner spends too long on questions which are not worth many marks it could mean he/she don’t have enough time to answer the questions which are worth 5 marks or more.

Learners should read the questions carefully. They should try to learn how to respond to command words like IDENTIFY, DESCRIBE, EXPLAIN and COMPARE. It is important that they answer the question and do not fall into the trap of just writing down everything they know. “Answer the questions in order of how confident you are – leave the one you are not confident about until last.” Learners should be discouraged not to repeat the same answer in different sections.

Teachers should not set questions which require identical answers, if they find themselves repeating an answer; they have not read the question properly. When learners are asked to use a written resource they will not be given marks for copying out sections from it. Learners should look at the question which is set and try to show their understanding by answering in their own words. If learners are asked to compare or describe the differences between two sources it is no good just writing about one. They could use words like ´bigger´ or ´more´ to help them compare or a word like ´whereas´ in the middle of sentence. Learners should try to be as precise as possible as vague statements are unlikely to get many marks.
3.4 Example: Grade 5 topic test

**Reference to syllabus:** Theme/Topic: Safety precautions

**Learning objective 1:** Learners will be introduced to safety precautions

**Competencies:** Learners should be able to list certain dangers:
- When working with electrical household appliances
- When being negligent and lacking concentration.

**Learning objective 2:** Learners will be introduced to the dangers concerning HIV and AIDS.

**Competencies:** Learners should be able to:
- Identify certain dangers related to injuries with emphasize on HIV and AIDS precautions.

**Question 1**

Fig. 1 shows three household appliances

Give a safety rule for each of the three appliances below in the table Fig. 1.

<table>
<thead>
<tr>
<th>APPLIANCES</th>
<th>SAFETY RULE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="fan.png" alt="Fan" /></td>
<td>(a) ..................................................................................</td>
</tr>
<tr>
<td><img src="iron.png" alt="Iron" /></td>
<td>(b) ..................................................................................</td>
</tr>
<tr>
<td><img src="microwave.png" alt="Microwave" /></td>
<td>(c) ..................................................................................</td>
</tr>
</tbody>
</table>

Fig. 1
Question 2

Fig. 2 shows a disorganised kitchen

(a) Identify three dangerous usages of electrical appliances used in this picture.

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

(3)

(b) Explain what negligence in the picture can cause fire in the kitchen.

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

(2)

Question 3

Choose the correct words to make the sentence true.

(open wound, shocks, concentrate)

(a) AIDS can be transmitted when an .................................. comes into contact infected blood.

(1)

(b) Avoid spilling water on electrical appliances it can cause electric .......................  

(1)

[10x2 = 20]
3.5 Example: Grade 6 topic test

Reference to syllabus: Theme/Topic: Safety precautions

Learning objectives: Learners will follow safety precautions and correct handling of Tools and Equipment.

Competencies: Learners should be able to:
- Name general safety measures towards the care and storage of tools and equipment.
- Apply appropriate safety gear
- Identify: hazards, breakages and accidental spillages
- Organise/manage workplace to maximise safety and output.

1. State one safety measure for each of the following tools:
   - Hammer……………………………………………………………………………………………………
   - Screwdriver……………………………………………………………………………………………
   - Saw……………………………………………………………………………………………………
   (3)

2. Name three possible dangers that could happen in the workshop

   ………………………………………………………………………………………………………………
   ………………………………………………………………………………………………………………
   ………………………………………………………………………………………………………………
   (3)

3. List two safety acts that could be practiced to maximise safety at the work place.

   ………………………………………………………………………………………………………………
   ………………………………………………………………………………………………………………
   (2)
4. Complete the following table concerning safety

<table>
<thead>
<tr>
<th>Safety Gear</th>
<th>Purposes/uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>..................</td>
<td>Protect your eyes</td>
</tr>
<tr>
<td>Helmet</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>..................</td>
<td>Prevent injuries on your feet from falling heavy objects</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>..................</td>
<td>Prevent the inhalation (breathing in) of dust and dangerous gases</td>
</tr>
</tbody>
</table>

(5)

5. Imagine that one child has been hurt and is bleeding. Indicate the procedures on how such a situation should be handled to prevent the spread of HIV/AIDS in the workplace.

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

(5)

6. Explain how a person living with HIV and AIDS can be supported.

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

(2)

[20]
### 3.6 Example: Grade 7 topic test

**Reference to syllabus:** Themes/Topics: Safety Precautions and Basic Hand tools

**Learning objective:** Learners will understand:
- the correct use of tools,
- apply safety measures (NOSA),
- understand the dangers of open wounds and bleeding with emphasis on HIV and AIDS,
- revise kinds of basic hand tools
- revise correct application (demonstration)
- revise care and maintenance and use

**Competencies:** Learners should be able to:
- inspect and maintain tools regularly store tools and equipment correctly (files, planes, saws).
- apply appropriate safety measures when working with hand tools and electrical power tools.
- recognise the need for precautionary measures by:
  - using gloves
  - use of running water during treatment of wounds
  - dealing with open wounds
  - properly dispose of waste material after treatment
  - explain how personal health affects business productivity

1. Fig 1. shows hand tools used in a Design and Technology workroom.

![Fig. 1](image)

(a) Identify the tools labelled:

A……………………………………………………….
B……………………………………………………….
C………………………………………………………..
D………………………………………………….…….

(4)
(b) Describe how to maintain the tool labelled A.

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

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

(1)

(c) Explain the importance of maintaining tools shown in Fig. 1

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

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

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

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

(2)

2. Fig. 2 shows a file / rasp.

(a) Identify **one** unsafe condition in Fig. 2

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

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

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

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

(1)

(b) State **one** possible accident that could be caused by the unsafe condition identified in (i).

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

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

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

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

(1)
3. Fig. 3 shows materials or items used to clean an open wound.

![Fig. 3](image)

(a) (i) List **two** items needed for treating open or bleeding wounds in Fig. 3.

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

(2)

(ii) Explain the safe disposal of the waste material after treatment of wounds in Fig. 3

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

(2)

(iii) Explain how personal health affects business productivity.

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

(2)
(b) What is the difference between:
(i) HIV and

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

(2)

(ii) AIDS

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

(2)

(c) Blood could be dangerous when one comes in contact with it. Give one reason to support this statement.

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

(1)
3.7 Example of end-of-term term test

The end-of-term test should be of the same standard as to that of the end of year examination.

Information on construction of test items is given in the syllabus on page 26. End of term tests give learners an opportunity to practice answering similar questions to those appearing in the semi-national examination at the end of Grade 7.

Example: End-of-term test

Section A

Question 1

(a) Fig. 1 shows a dangerous situation

Fig 1.

Identify three dangers when working with the electrical household appliance in fig. 1

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

(3)
(b) Fig 2 shows an open wound.

![Fig 2](image)

Identify **two** dangers relating to injuries and open wounds.

………………………………………………………………………………………………………

………………………………………………………………………………………………………

(2)

(c) Fig. 3 shows a hand tool.

![Fig 3](image)

Identify the tool in Fig.3.

………………………………………………………………………………………………………

(1)

(d) True or false:

(i) There is no difference between HIV and AIDS.

………………………………………………………………………………………………………

(1)

(ii) Negligence can cause serious accidents when working with sharp tools.

………………………………………………………………………………………………………

(1)

(e) Identify **two** successful entrepreneurs in Namibia.

………………………………………………………………………………………………………

………………………………………………………………………………………………………

(2)
**Section B**

**Question 2**

Fig X shows pictures of hand tools.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

![Fig. X](image)

(a) Identify the tools numbered A-D in fig. X:

A:……………………………………………………………………
B:……………………………………………………………………
C:……………………………………………………………………
D:…………………………………………………………………… (4)

(b) Identify:

(i) **Two** family home-based businesses and small & medium scale enterprises (SME’s) in your area.

........................................................................................................................................ (4)

(ii) Any **two** employment positions within the Namibian society.

........................................................................................................................................ (2)
(iii) **Two** successful Namibian entrepreneurs within the Namibian society

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

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

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

.................................................................................................................”

(iv) **Any two** useful skills when implementing business ideas

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

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

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

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

Fig X shows different structures.

<table>
<thead>
<tr>
<th>Structure</th>
<th>Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="A" /></td>
<td><img src="image2" alt="B" /></td>
</tr>
<tr>
<td><img src="image3" alt="C" /></td>
<td><img src="image4" alt="D" /></td>
</tr>
<tr>
<td><img src="image5" alt="E" /></td>
<td><img src="image6" alt="F" /></td>
</tr>
</tbody>
</table>

(i) Only encircle natural structures from the diagram in fig. X

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

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

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

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

(ii) Give **three** simple properties of natural structures.

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

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

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

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

[Section A 10+Section B 20=30]

Total: 30
4. **Practical investigations**

These are assessments of practical skills done during a practical activity where learners are required to plan and carry out investigations and collect report, and analyse information. Except for one major investigation or project during the first or second term, activities should assess not more than two skills and should count 20 marks in the first, second and third term.

4.1 **What is a practical investigation?**

A practical investigation is concerned with methodology in Design and technology, especially with investigation, analysis and presentation of data. It is expected that lessons are given to each practical activity with additional time for its completion by the learner at home, if required. These are hands on activities where learners are expected to plan an investigation using appropriate tools such as instruments, surveys, apparatus, to make appropriate measurements, and to draw conclusions from the data gathered. These are assessment of practical skills done during a practical activity where learners are required to plan, and carry out investigations, collect, report on and analyse information. Questions regarding the interpretation of sources (information) should be formulated along the specifications of Assessment Objectives A and B. Exercises should be kept short (10-30 marks). At least 2-3 exercises should be done per term.

4.2 **The role of the teacher in initiating a practical investigation**

As with project, the teacher needs to prepare the learners by:

- revising techniques for data collection and those which can be used in presentation;
- Communicating to learners by means of a planning sheet title, basic competencies and the skills being assessed.

4.3 **Learner’s perspective**

Learners need to be aware of:

- the definition of practical investigations– how it differs from a project - its length, the time-scale for its completion (2 lessons + time at home for its completion if necessary);
- their responsibilities in contributing to information gathering / data collection, the making of individual decisions as to how the practical exercise is to be presented;
- techniques to be used for acquiring and presenting information;
- how the practical exercise is to be assessed in that reference should be made to the skills.

4.4 **Practical investigations and data response/techniques**

Practical investigations will be used to prepare and test learner’s ability to understand techniques and interpret data. The information may come in a variety of forms. These can be tables with associated data, graphs, photographs, etc. The questions which are set usually contain a combination of materials on a theme, so that learners can exhibit their skills of analysis and interpretation alongside the knowledge they gained in their studies.
Photographs are often used to see if learners can interpret what they see. This is the nearest of being a test of learner’s ability to use their eyes and understand sources.

4.5 **Tips on how to prepare for questions dealing with handling of data**

Learners should try to be as accurate as they can with interpreting and evaluating sources. Any questions ask to ‘use the evidence’ in the sources provided such as maps, photographs and graphs. Learners must make sure that they do so rather than using background knowledge.

4.6 **Examples of practical investigation**

These are only examples of short and targeted practical exercises; teachers are urged to develop their own in order to afford learners the opportunity to develop appropriate understanding of syllabus concepts and skills.
4.7 Example: Grade 5: Practical activity/investigation

Reference to syllabus: Topic/theme: Business in Namibia

Learning objectives: Learners will explore business opportunities in Namibia with regard to Design and Technology.

Competencies: Learners should be able to identify business opportunities within Design and Technology:
- gather business information
- do market research
- list characteristics of a successful business
- justify the selection of a specific business idea from their environment

Practical Investigation: Business in Namibia
(a) Identify any three businesses in your community.

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

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

(3)

(b) List four characteristics of a successful business in your community.

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

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

(4)

(c) Give reasons why one of the businesses identified can benefit Design and Technology learners.

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

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

(3)

[10x2=20]
4.8 Example: Grade 6: Practical activity/investigation

**Reference to Syllabus:** Topic/Theme: Safety Precautions

**Learning objectives:** Learners will follow safety precautions and correct handling of:
- tools
- equipment

**Competencies:** Learners should be able to: name general safety measures towards the care and storage of tools and equipment.
- apply appropriate safety gear
- identify:
  - hazards
  - breakages
  - accidental spillages
- organise/manage workplace to maximise their safety and output

---

1. Identify **two** possible hazards that could be caused by the unsafe situation in Fig.1

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

   (2)

2. List **two** possible ways to prevent the hazards mentioned in Fig.1.

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

   (2)
3. Give **two** reasons why a workshop should be well organised.

- ...
- ...

(2)

4. Design a safety poster that should be displayed in the workshop. (7)

5. Name a suitable method to store:
   
   (i) files...

   (ii) saws...

(2)

[15x2=30]
4.9 Example: Grade 7 Practical activity/investigation

Reference to syllabus: Topic/theme: practice

Learning objectives: Learners will revise:
- kinds of basic hand tools
- correct application (demonstration)
- care and maintenance

Competencies: Learners should be able to:
- identify the hand tools required for a given practical activity
- apply the safe application of the hand tools during the practical activity
- apply care and maintenance of the hand tools during and after practical activity

1. It is required to drill an 8mm hole on a piece of hard wood and square it off.

(a) Tool selection (5)
(b) Measuring and marking (2)
(c) Testing for squareness (3)
(d) Holding/securing in vice (2)
(e) Drilling of hole (4)
(f) Safe application and handling of tools (4)

[20]
5. **Topic tasks**

These are activities that most teachers already use in day-to-day teaching. These are assessed and recorded activities that could introduce a topic or be used during the teaching of a topic and/or revising a topic. Topic tasks may well involve locating information, conducting surveys, analysing information or presenting information. However, not all assessment objectives need to be present in every topic task. The greatest emphasis should be placed on assessment objectives A and C to meet the weighting shown in the specification grid. The topic task should count 15 marks when entered into the mark sheet.

**Topic tasks** include tasks which develop and cultivate the learner’s ability to locate, analyze and present information. Topic tasks are an excellent method of reinforcing topics covered in class. Topic tasks can be used to introduce material to the learners, or for checking for understanding before moving on to the next topic. Two-Six formal continuous assessments must be recorded for topic tasks, though teachers are encouraged to give the learners as many tasks as is reasonable. A topic task will generally require one period to complete, or can be assigned as homework, as appropriate.
5.1 Example: Grade 5 topic task

Reference to syllabus: Theme/Topic: Safety rules

Learning objectives: Learners will be introduced to safety precautions

Competencies: Learners should be able to:
- List certain dangers:
  - when working with electrical household appliances
  - during a role play in a class situation
  - when being negligent and lacking concentration
- Identify certain dangers relating to injuries, with emphasize on HIV and AIDS

Questions
1. Fig. 1 shows household appliances.

   ![Fig. 1](image)

   A. Pressure cooker  
   B. Gas stove  
   Fig. 1

(a) List **two** safety hazards that could happen/occur when working with the appliances in Fig.1.

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

(2)
2. Fig. 2 shows a role play being carried out in a kitchen.

(a) List any three possible safety hazards in Fig 2.

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

(3)

(b) State two possible dangers that could occur when person A loses concentration.

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

(3)
(c) Dangers can occur due to negligence.

State any **four** safety precautions to be observed in order to prevent the situation in Fig. 2.

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

(4)

3. Fig. 3 shows a wound caused by a screwdriver.

![Fig. 3](image)

(a) List **one** danger that one is at risk of when handling open wounds.

..................................................................................................................................................  (1)

(b) What does the abbreviation **AIDS** stand for?

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

(2)

(c) State the protective clothing one needs to wear when handling open wounds.

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

(1)  

[15]
5.2 Example: Grade 6 topic task

**Reference to Syllabus:** Theme/Topic: Safety Precautions

**Learning objectives:** Learners will follow safety precautions and correct handling of:
- tools
- equipment

**Competencies:** Learners should be able to:
- identify:
  - hazards
  - breakages
  - accidental spillages
- organise/manage workplace to maximise their safety and output.

1. Fig.1 shows a Grade 6 learner using a hacksaw in the school workshop.

![Image of a learner using a hacksaw](image-url)

**Fig.1**

(a) Name one way on how to:
   (i) care and maintain the hacksaw in Fig.1

................................................................................................................................................................................. (1)

(ii) store the hacksaw in Fig.1 safely.

................................................................................................................................................................................. (1)

(b) State one suitable safety gear to be worn when working with a hacksaw.

................................................................................................................................................................................. (1)
(c) It is important to minimize accidents in a workshop. Give two reasons to support the statement.

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

(2)

2. The Grade 6 learner in Fig.1 accidently cut his/her finger while busy sawing. State two reasons why it could be dangerous to come into contact with blood.

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

(2)

3. List possible dangers that could be caused by spilled oil on the floor in a school workshop.

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

(3)

[10]
5.3 1st Example: Grade 7 topic task

Reference to syllabus: Theme/Topic: Structures
Learning objectives: Learners will understand different forms and properties of man-made and natural structures
Competencies: Learners should be able to:
- identify man-made and natural structures
- give various properties of man-made and natural structures
- construct basic structures

1. Fig. 1 shows two types of structures.

   ![Eiffel tower in France](image1.png)  ![Bee nest](image2.png)

   A. Eiffel tower in France  B. Bee nest

   **Fig. 1**

   Identify the two types of structures labelled A and B in the diagram in Fig. 1.

   A: ..............................................
   B: ..............................................  (2)

2. (a) Complete the table by filling one property of each structure.

<table>
<thead>
<tr>
<th>Structure</th>
<th>Properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg shell</td>
<td>(i)..................................</td>
</tr>
<tr>
<td>Spider web</td>
<td>(ii)...............................</td>
</tr>
<tr>
<td>Ladder</td>
<td>(iii)..............................</td>
</tr>
<tr>
<td>Burglar door</td>
<td>(iv)...............................</td>
</tr>
</tbody>
</table>

   (4)
(b) Use sketches and notes to construct a small yard gate in the space provided below.

(c) A plate is an example of a…………………structure.
5.3  2\textsuperscript{nd} Example: Grade 7 topic task

1. Study the table and fill in the missing information.

<table>
<thead>
<tr>
<th>Diagram</th>
<th>Name</th>
<th>Care and Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Diagram 1]</td>
<td>………………</td>
<td>……………………………………</td>
</tr>
<tr>
<td>![Diagram 2]</td>
<td>………………</td>
<td>……………………………………</td>
</tr>
<tr>
<td>![Diagram 3]</td>
<td>………………</td>
<td>……………………………………</td>
</tr>
<tr>
<td>![Diagram 4]</td>
<td>………………</td>
<td>……………………………………</td>
</tr>
<tr>
<td>![Diagram 5]</td>
<td>………………</td>
<td>……………………………………</td>
</tr>
</tbody>
</table>

[10]
6. Assessment

6.1 Grade descriptors

The learner’s level of achievement in relation to the competencies in the subject syllabus is shown in letter grades. When letter grades are awarded, it is essential that they reflect the learner’s actual level of achievement in relation to the competencies. In grades 1 to 3, letter grades are related to a six-point performance scale, while in grade 4 to 12, letter grades are related to percentages. The relation between the grades awarded and competencies are shown below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>% Range (Gr. 4-12)</th>
<th>Grade Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>80%+</td>
<td><strong>Achieved competencies exceptionally well.</strong> The learner is outstanding in all areas of competency.</td>
</tr>
<tr>
<td>B</td>
<td>70-79%</td>
<td><strong>Achieved competencies very well.</strong> The learner’s achievement lies substantially above average requirements and is highly proficient in most areas of competency.</td>
</tr>
<tr>
<td>C</td>
<td>60-69%</td>
<td><strong>Achieved competencies well.</strong> The learner has mastered the competencies and can apply them in unknown situations and contexts.</td>
</tr>
<tr>
<td>D</td>
<td>50-59%</td>
<td><strong>Achieved competencies satisfactorily.</strong> The learner’s achievement corresponds to average requirements. The learner may be in need of learning support in some areas.</td>
</tr>
<tr>
<td>E</td>
<td>40-49%</td>
<td><strong>Achieved the minimum number of competencies to be considered competent.</strong> The learner may not have achieved all the competencies, but the learner’s achievement is sufficient to exceed the minimum competency level. The learner is in need of learning support in most areas.</td>
</tr>
<tr>
<td>U</td>
<td>0-39%</td>
<td><strong>Ungraded.</strong> The learner has not been able to reach a minimum level of competency, even with extensive help from teacher. The learner is seriously in need of learning support.</td>
</tr>
</tbody>
</table>
6.2 Assessment Objectives

The Design and technology Syllabus lists four assessment objectives.

The Design and Technology assessment objectives are:

<table>
<thead>
<tr>
<th>A. Knowledge with understanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Design problem solving</td>
</tr>
<tr>
<td>C. Design communication</td>
</tr>
<tr>
<td>D. Realisation</td>
</tr>
</tbody>
</table>

A. Knowledge with understanding
Learners should be able to:
- Demonstrate the ability to state facts, recall and name items, recall and describe processes;
- Demonstrate the ability to apply and relate knowledge to basic design and manufacturing;
- Make reasoned arguments and anticipate consequences about outcomes of the design and realisation process;
- Demonstrate a crucial awareness of the interrelationship between design and the needs of society.

B. Design problem solving
Learners should be able to:
- design issues and draw up a design specification;
- Generate a range of outlined solutions to a design problem, giving consideration to the constraints of time, Identify clearly, from a particular situation, a specific need for which a solution is required and compose a design brief;
- Analyse a problem by considering any relevant functional, aesthetic, human, economic and environmental skills and resources;
- Test and refine the functional and aesthetic effectiveness of design solutions.

C. Design communication
Learners should be able to:
- recognise information in one form and where necessary change it into a more applicable form;
- prose and communicate ideas graphically;
- develop ideas and represent details of form, shape, construction, movement, size and structure through graphical presentation.

D. Realisation
Learners should be able to:
- plan and organise the work procedure involved in the realisation of a solution;
- select from a range of resources, those appropriate for the realisation of the product;
- demonstrate appropriate manipulative skills by showing an understanding of materials and their characteristics in relation to their use;
- demonstrate appropriate manipulative skills by showing the ability to correctly and efficiently use instruments and tools in the realisation of a product.
Continuous Assessment: Detailed Guidelines

Types of continuous assessment
Continuous assessment should be planned and programmed at the beginning of the year, and kept as simple as possible. Marks given for class and homework activities should be recorded for continuous assessment.

6.3 Summary of continuous assessment tasks

In Design and Technology, in the Senior Primary phase, the continuous assessment tasks are as follows:

<table>
<thead>
<tr>
<th>Continuous assessment Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Components</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Practical investigations</td>
</tr>
<tr>
<td>Topic tasks</td>
</tr>
<tr>
<td>Topic tests</td>
</tr>
<tr>
<td>End-of-term test</td>
</tr>
<tr>
<td>Term mark</td>
</tr>
<tr>
<td>Weighted term marks</td>
</tr>
</tbody>
</table>

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### Continuous assessment Grade 6

<table>
<thead>
<tr>
<th>Components</th>
<th>Term 1</th>
<th></th>
<th></th>
<th>Term 2</th>
<th></th>
<th></th>
<th>Term 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number &amp; marks</td>
<td>Total</td>
<td></td>
<td>Number &amp; marks</td>
<td>Total</td>
<td></td>
<td>Number &amp; marks</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td><strong>Practical investigations</strong></td>
<td>1×30</td>
<td>30</td>
<td></td>
<td>1×30</td>
<td>30</td>
<td></td>
<td>1×30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Design folder</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analysis and brief</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specification</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exploration of ideas</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
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<td>(80÷8x10)</td>
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6.4 Examinations guidelines

Internal end-of-year examinations will be written. The purpose of these examinations is to focus on how well learners can demonstrate their thinking, communication and problem-solving skills related to the areas of the syllabus which are most essential for continuing in the next grade. Preparing for and conducting these examinations should not take up more than two weeks altogether right at the end of the year. The purpose of the examination is to assess how far each learner can demonstrate their achievement in reaching the competencies.

The end of year examination for Grade 5 should consist of work done in the second and third terms only, while the end of year examination for Grades 6 and 7 will consist of all work done during the whole year.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description of papers</th>
<th>Duration</th>
<th>Marks</th>
</tr>
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<tbody>
<tr>
<td>5</td>
<td>Section A: Short answer compulsory questions (25 marks)</td>
<td>1½ hours</td>
<td>100</td>
</tr>
<tr>
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<td>Section B: Question 1: Structured questions (25 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question 2: Graphic questions (25 marks)</td>
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</tr>
<tr>
<td></td>
<td>Question 3: Structured questions (25 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Section A: Short answer compulsory questions (25 marks)</td>
<td>1½ hours</td>
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<td>Section B: Question 1: Structured questions (25 marks)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Question 2: Graphic questions (25 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question 3: Graphic questions (25 marks)</td>
<td></td>
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</tr>
<tr>
<td>7</td>
<td>Section A: Short answer compulsory questions (25 marks)</td>
<td>1½ hours</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Section B: Question 1: Structured questions (25 marks)</td>
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<tr>
<td></td>
<td>Question 2: Graphic questions (25 marks)</td>
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<td></td>
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<tr>
<td></td>
<td>Question 3: Design questions (25 marks)</td>
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</tr>
</tbody>
</table>
6.5 Promotion marks

A promotion mark will be awarded at the end of each year based on the average of the continuous assessment mark and the mark obtained at the end of year examination. In Grades 5 – 7, continuous assessment contributes 50% and end of year examination 50% of the summative mark.

The weighting of each assessment component is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Marks</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written examination</td>
<td>Section A: Question 1, Section B: Question 2, Question 3</td>
<td>25</td>
<td>12,5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>12,5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>12,5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25</td>
<td>12,5%</td>
</tr>
<tr>
<td>Continuous assessment</td>
<td>Topic tasks, Topic tests, Practical investigations, Project, End-of-term test</td>
<td>100</td>
<td>50%</td>
</tr>
<tr>
<td>Total marks</td>
<td></td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

The promotion mark is calculated as follows:

<table>
<thead>
<tr>
<th>Promotion mark for Grades 5, 6 and 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
</tr>
<tr>
<td>Weighted term mark</td>
</tr>
<tr>
<td>CA mark</td>
</tr>
<tr>
<td>End-of-year examination</td>
</tr>
<tr>
<td>Promotion mark</td>
</tr>
</tbody>
</table>
## 6.6 Assessment Rubrics/Criteria

The following table outlines the assessment rubrics/criteria for the final portfolio (and product) in Grades 6 and 7:

<table>
<thead>
<tr>
<th>Low Range</th>
<th>Medium Range</th>
<th>High Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analysis and Brief:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An analysis with aspects of the problem considered and a skeleton brief only</td>
<td>Relatively sound analysis with a range of aspects of the problem considered and a full brief</td>
<td>A wide ranging analysis with many of the aspects of the problem considered and a clearly expressed brief</td>
</tr>
<tr>
<td>0 - 1</td>
<td>2 - 3</td>
<td>4 - 5</td>
</tr>
<tr>
<td><strong>Specifications:</strong> List certain specifications that you’d need in your final product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An unclear specification</td>
<td>A statement of some of the specific requirements</td>
<td>A concise and comprehensive specification</td>
</tr>
<tr>
<td>0 - 1</td>
<td>2 - 3</td>
<td>4 - 5</td>
</tr>
<tr>
<td><strong>Exploring Ideas:</strong> Look at existing products in a local environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little variety of ideas with a tendency to concentrate on a single concept</td>
<td>A fair range of ideas with some ideas examined.</td>
<td>A wide range of ideas combined with imaginative interpretation.</td>
</tr>
<tr>
<td>0 - 3</td>
<td>4 - 5</td>
<td>7 - 10</td>
</tr>
<tr>
<td><strong>Developing Solutions:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An undeveloped idea lacking in attention to detail</td>
<td>A developed idea with sufficient attention to detail only</td>
<td>Through and thoughtful development with attention to fine detail</td>
</tr>
<tr>
<td>0 - 3</td>
<td>4 - 6</td>
<td>7 - 10</td>
</tr>
<tr>
<td><strong>Planning for Production:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consideration of processes, lacking in detail, no overall plan</td>
<td>Some awareness of main processes involved a single plan</td>
<td>Good insight into processes involved, clear and detailed planning</td>
</tr>
<tr>
<td>0 - 3</td>
<td>4 - 6</td>
<td>7 - 10</td>
</tr>
<tr>
<td>Low Range</td>
<td>Medium Range</td>
<td>High Range</td>
</tr>
<tr>
<td><strong>Quality of Product:</strong> Overall judgement required how range of skills contained has been applied.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product marred by limited skills</td>
<td>Competent, some minor inaccuracies, blemishes, some degree of mastery</td>
<td>Precise, accurate, well finished. Mastery of most aspects, refinement of detail</td>
</tr>
<tr>
<td>0 - 7</td>
<td>8 - 13</td>
<td>14 - 20</td>
</tr>
</tbody>
</table>
### Evaluation and Testing:

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>General overall appraisal with little reverence to specification</td>
<td>0 - 1</td>
</tr>
<tr>
<td>Main aspects of specification critically appraised some objectivity</td>
<td>2 - 3</td>
</tr>
<tr>
<td>Detailed appraisal related to specification, objective tests applied where possible, and modifications proposals</td>
<td>4 - 5</td>
</tr>
</tbody>
</table>

### Fitness for Purpose:

<table>
<thead>
<tr>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>An incomplete solution failing to satisfy the brief</td>
<td>0 - 1</td>
</tr>
<tr>
<td>Completed solution fulfilling the brief in part only</td>
<td>2 - 3</td>
</tr>
<tr>
<td>Completed solution fulfilling the brief</td>
<td>4 - 5</td>
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</tbody>
</table>
7. Record keeping

7.1 Example of assessment record sheet for Grade 5

<table>
<thead>
<tr>
<th>Name of learner</th>
<th>Term</th>
<th>Practical Investigation</th>
<th>Topic task</th>
<th>Topic test</th>
<th>End-of-term test</th>
<th>Term mark</th>
<th>Weighted term mark</th>
<th>Total</th>
<th>CA mark (300/3)</th>
<th>End-of-year examination</th>
<th>Promotion mark (200/2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>30</td>
<td>15</td>
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<td>20</td>
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<td>100</td>
<td>70</td>
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<td>70</td>
<td>100</td>
<td>300</td>
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</tbody>
</table>

Done by: .................................................................
Checked by: .............................................................

SP Design and Technology Continuous Assessment Manual, NIED 2015
### Example of assessment record sheet for Grade 6

#### ASSESSMENT RECORD SHEET: DESIGN AND TECHNOLOGY

<table>
<thead>
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<th>Topic test</th>
<th>End-of-term test</th>
<th>Design folder</th>
<th>Term mark</th>
<th>Weighted term mark</th>
<th>Total</th>
<th>End-of-year examination</th>
<th>CA mark (300/3)</th>
<th>Promotion mark (200/2)</th>
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Done by: ...........................................  Checked by: ...........................................
### 7.3 Example of assessment record sheet for Grade 7

**ASSESSMENT RECORD SHEET: DESIGN AND TECHNOLOGY**

<table>
<thead>
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<th>Name of learner</th>
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<td>Promotion mark(200/2)</td>
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</table>

<table>
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<tr>
<th>Term</th>
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<th>Topic test</th>
<th>End-of-term test</th>
<th>Analysis brief</th>
<th>Specifications</th>
<th>Ideas</th>
<th>Development</th>
<th>Planning</th>
<th>Quality</th>
<th>Evaluation</th>
<th>Term mark</th>
<th>Weighted term mark</th>
<th>Total</th>
<th>CA mark (300/3)</th>
<th>End-of-year examination</th>
<th>Promotion mark(200/2)</th>
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*SP Design and Technology Continuous Assessment Manual, NIED 2015*
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