NATIONAL CURRICULUM STATEMENT GRADES 10-12 (GENERAL)

SUBJECT ASSESSMENT GUIDELINES

COMPUTER APPLICATIONS TECHNOLOGY

JANUARY 2008

PREFACE TO SUBJECT ASSESSMENT GUIDELINES

The Department of Education has developed and published Subject Assessment Guidelines for all 29 subjects of the National Curriculum Statement (NCS). These Assessment Guidelines should be read in conjunction with the relevant Subject Statements and Learning Programme Guidelines.

Writing Teams established from nominees of the nine provincial education departments and the teacher unions formulated the Subject Assessment Guidelines. The draft copies of the Subject Assessment Guidelines developed by the Writing Teams were sent to a wide range of readers, whose advice and suggestions were considered in refining these Guidelines. In addition, the Department of Education field-tested the Subject Assessment Guidelines in 2006 and asked for the comments and advice of teachers and subject specialists.

The Subject Assessment Guidelines are intended to provide clear guidance on assessment in Grades 10 to 12 from 2008.

The Department of Education wishes you success in the teaching of the National Curriculum Statement.

CONTENTS

1. PURPOSE OF THE SUBJECT ASSESSMENT GUIDELINES

This document provides guidelines for assessment in the National Curriculum Statement Grades 10 - 12 (General). The guidelines must be read in conjunction with *The National Senior Certificate: A Qualification at Level 4 on the National Qualifications Framework (NQF)* and the relevant Subject Statements. The Subject Assessment Guidelines will be applicable for Grades 10 to 12 from 2008.

The Department of Education encourages teachers to use these guidelines as they prepare to teach the National Curriculum Statement. Teachers should also use every available opportunity to hone their assessment skills. These skills relate both to the setting and marking of assessment tasks.

2. ASSESSMENT IN THE NATIONAL CURRICULUM STATEMENT

2.1 Introduction

Assessment in the National Curriculum Statement is an integral part of teaching and learning. For this reason, assessment should be part of every lesson and teachers should plan assessment activities to complement learning activities. In addition, teachers should plan a formal year-long Programme of Assessment. Together the informal daily assessment and the formal Programme of Assessment should be used to monitor learner progress through the school year.

Continuous assessment through informal daily assessment and the formal Programme of Assessment should be used to:
- develop learners' knowledge, skills and values
- assess learners' strengths and weaknesses
- provide additional support to learners
- revisit or revise certain sections of the curriculum and
- motivate and encourage learners.

In Grades 10 and 11 all assessment of the National Curriculum Statement is internal. In Grade 12 the formal Programme of Assessment which counts 25% is internally set and marked and externally moderated. The remaining 75% of the final mark for certification in Grade 12 is externally set, marked and moderated. In Life Orientation however, all assessment is internal and makes up 100% of the final mark for promotion and certification.

2.2 Continuous assessment

Continuous assessment involves assessment activities that are undertaken throughout the year, using various assessment forms, methods and tools. In Grades 10-12 continuous assessment comprises two different but related activities: informal daily assessment and a formal Programme of Assessment.

2.2.1 Daily assessment

The daily assessment tasks are the planned teaching and learning activities that take place in the subject classroom. Learner progress should be monitored during learning

activities. This informal daily monitoring of progress can be done through question and answer sessions; short assessment tasks completed during the lesson by individuals, pairs or groups or homework exercises.

Individual learners, groups of learners or teachers can mark these assessment tasks. Self-assessment, peer assessment and group assessment actively involves learners in assessment. This is important as it allows learners to learn from and reflect on their own performance.

The results of the informal daily assessment tasks are not formally recorded unless the teacher wishes to do so. In such instances, a simple checklist may be used to record this assessment. However, teachers may use the learners' performance in these assessment tasks to provide verbal or written feedback to learners, the School Management Team and parents. This is particularly important if barriers to learning or poor levels of participation are encountered.

The results of these assessment tasks are not taken into account for promotion and certification purposes.

2.2.2 Programme of Assessment

In addition to daily assessment, teachers should develop a year-long formal Programme of Assessment for each subject and grade. In Grades 10 and 11 the Programme of Assessment consists of tasks undertaken during the school year and an end-of-year examination. The marks allocated to assessment tasks completed during the school year will be 25%, and the end-of-year examination mark will be 75% of the total mark. This excludes Life Orientation where no end-of-year examination is required and the tasks undertaken during the school year account for 100% of the final assessment mark.

In Grade 12, the Programme of Assessment consists of tasks undertaken during the school year and counts 25% of the final Grade 12 mark. The other 75% is made up of externally set assessment tasks. This excludes Life Orientation where the internal assessment component counts 100% of the final assessment mark.

The marks achieved in each assessment task in the formal Programme of Assessment must be recorded and included in formal reports to parents and School Management Teams. These marks will determine if the learners in Grades 10 and 11 are promoted. In Grade 12, these marks will be submitted as the internal continuous assessment mark. Section 3 of this document provides details on the weighting of the tasks for promotion purposes.

2.2.2.1 Number and forms of assessment required for Programmes of Assessment in Grades 10 and 11

The requirements for the formal Programme of Assessment for Grades 10 and 11 are summarised in Table 2.1. The teacher must provide the Programme of Assessment to the subject head and School Management Team before the start of the school year. This will be used to draw up a school assessment plan for each of the subjects in each grade. The proposed school assessment plan should be provided to learners and parents in the first week of the first term.

Table 2.1: Number of assessment tasks which make up the Programme of Assessment by subject in Grades 10 and 11

SUBJECTS		TERM 1	TERM 2	TERM 3	TERM 4	TOTAL
Language 1: Home Language		4	4*	4	4*	16
Language 2: Choice of HL or FAL	HL	4	4*	4	4*	16
	FAL	4	4*	4	4*	16
Life Orientation		1	1*	1	2*	5
Mathematics or Maths Literacy		2	2*	2	2*	8
Subject choice 1**		2	2*	2	1*	7
Subject choice 2**		2	2*	2	1*	7
Subject choice 3		2	2*	2	1*	7

Note:

* One of these tasks must be an examination

** If one or two of the subjects chosen for subject choices 1, 2 or 3 include a Language, the number of tasks indicated for Languages 1 and 2 at Home Language (HL) and First Additional Language (FAL) are still applicable. Learners who opt for a Second Additional Language are required to complete 13 tasks in total: 4 tasks in term 1 and 3 tasks in each of terms 2, 3 and 4.

Two of the assessment tasks for each subject must be examinations. In Grades 10 and 11 these examinations should be administered in mid-year and November. These examinations should take account of the requirements set out in Section 3 of this document. They should be carefully designed and weighted to cover all the Learning Outcomes of the subject.

Two of the assessment tasks for all subjects, excluding Life Orientation, should be tests written under controlled conditions at a specified time. The tests should be written in the first and third terms of the year.

The remainder of the assessment tasks should not be tests or examinations. They should be carefully designed tasks, which give learners opportunities to research and explore the subject in exciting and varied ways. Examples of assessment forms are debates, presentations, projects, simulations, written reports, practical tasks, performances, exhibitions and research projects. The most appropriate forms of assessment for each subject are set out in Section 3. Care should be taken to ensure that learners cover a variety of assessment forms in the three grades.

The weighting of the tasks for each subject is set out in Section 3.

2.2.2.2 Number and forms of assessment required for Programme of Assessment in Grade 12

In Grade 12 all subjects include an internal assessment component, which is 25% of the final assessment mark. The requirements of the internal Programme of Assessment for Grade 12 are summarised in Table 2.2. The teacher must provide the Programme of Assessment to the subject head and School Management Team before the start of the school year. This will be used to draw up a school assessment plan for each of the subjects in each grade. The proposed school assessment plan should be provided to learners and parents in the first week of the first term.

Table 2.2: Number of assessment tasks which make up the Programme of Assessment by subject in Grade 12

SUBJECTS		TERM 1	TERM 2	TERM 3	TERM 4	TOTAL
Language 1: Home Language		5	5*	4*		14
Language 2: Choice of HL or FAL	HL	5	5*	4*		14
	FAL	5	5*	4*		14
Life Orientation		1	2*	2*		5
Mathematics or Maths Literacy		3	2*	2*		7
Subject choice 1**		2	2*	(2*) 3*		(6#) 7
Subject choice 2**		2	2*	(2*) 3*		(6#) 7
Subject choice 3		2	2*	(2*) 3*		(6#) 7

Note:

*   One of these tasks in Term 2 and/or Term 3 must be an examination

**   If one or two of the subjects chosen for subject choices 1, 2 or 3 include a Language, the number of tasks indicated for Languages 1 and 2 at Home Language (HL) and First Additional Language (FAL) are still applicable. Learners who opt for a Second Additional Language are required to complete 12 tasks in total: 5 tasks in term 1, 4 tasks in term 2 and 3 tasks in term 3.

\#   The number of internal tasks per subject differs from 6 to 7 as specified in Section 3 of this document.

Schools can choose to write one or two internal examinations in Grade 12. Should a school choose to write only one internal examination in Grade 12, a scheduled test should be written at the end of the term to replace the other examination. Internal examinations should conform to the requirements set out in Section 3 of this document. They should be carefully designed and weighted to cover all the Learning Outcomes of the subject.

Two of the assessment tasks for all subjects, excluding Life Orientation, should be tests written under controlled conditions at a specified time.

The remainder of the assessment tasks should not be tests or examinations. They should be carefully designed tasks, which give learners opportunities to research and explore the subject in exciting and focused ways. Examples of assessment forms are debates, presentations, projects, simulations, assignments, case studies, essays, practical tasks, performances, exhibitions and research projects. The most appropriate forms of assessment for each subject are set out in Section 3.

2.3   External assessment in Grade 12

External assessment is only applicable to Grade 12 and applies to the final end-of-year examination. This makes up 75% of the final mark for Grade 12. This excludes Life Orientation which is not externally examined.

The external examinations are set externally, administered at schools under conditions specified in the *National policy on the conduct, administration and management of the assessment of the National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework (NQF)* and marked externally.

In some subjects the external assessment includes practical or performance tasks that are externally set, internally assessed and externally moderated. These performance tasks account for one third of the end-of-year external examination mark in Grade 12 (that is 25% of the final mark). Details of these tasks are provided in Section 3.

Guidelines for the external examinations are provided in Section 3.

2.4   Recording and reporting on the Programme of Assessment

The Programme of Assessment should be recorded in the teacher's portfolio of assessment. The following should be included in the teacher's portfolio:
- a contents page;
- the formal Programme of Assessment;
- the requirements of each of the assessment tasks;
- the tools used for assessment for each task; and
- record sheets for each class.

Teachers must report regularly and timeously to learners and parents on the progress of learners. Schools will determine the reporting mechanism but it could include written reports, parent-teacher interviews and parents' days. Schools are required to provide written reports to parents once per term on the Programme of Assessment using a formal reporting tool. This report must indicate the percentage achieved per subject and include the following seven-point scale.

RATING CODE	RATING	MARKS %
7	Outstanding achievement	80 – 100
6	Meritorious achievement	70 –79
5	Substantial achievement	60 – 69
4	Adequate achievement	50 – 59
3	Moderate achievement	40 – 49
2	Elementary achievement	30 – 39
1	Not achieved	0 – 29

2.5   Moderation of the assessment tasks in the Programme of Assessment

Moderation of the assessment tasks should take place at three levels.

LEVEL	MODERATION REQUIREMENTS
School	The Programme of Assessment should be submitted to the subject head and School Management Team before the start of the academic year for moderation purposes. Each task which is to be used as part of the Programme of Assessment should be submitted to the subject head for moderation before learners attempt the task. Teacher portfolios and evidence of learner performance should be moderated twice a year by the head of the subject or her/his delegate.
Cluster/ district/ region	Teacher portfolios and a sample of evidence of learner performance must be moderated twice during the first three terms.
Provincial/ national	Teacher portfolios and a sample of evidence of learner performance must be moderated once a year.

3. ASSESSMENT OF COMPUTER APPLICATIONS TECHNOLOGY IN GRADES 10–12

3.1 Introduction

3.1.1 Assessment of Learning Outcomes

Learning Outcome 1

Assessment should concentrate on the software, hardware, network and communication technologies (ICTs) that an end-user would typically encounter. The learner should understand the concepts of these technologies to make informed decisions in a real-life end-user scenario, ranging from choices of technology to its responsible use.

Learning Outcome 2

Assessment of this Learning Outcome concentrates on application and communication software so that learners will be able to solve problems using a variety of application packages effectively and efficiently.

Learning Outcome 3

Assessment in Learning Outcome 3 should focus on the research process i.e. the learner's ability to recognise information needs, find, access, use (analyse, process, manipulate, organise) synthesise, create present, communicate and present information using end-user application skills to function in an information-driven society.

3.1.2 Weighting of Learning Outcomes

- All Learning Outcomes and Assessment Standards are equally important and must be achieved. However, some skills take longer to acquire. This factor influences the time spent on the various skills in the classroom.
- There is no specific weighting for the different Learning Outcomes and Assessment Standards in the Programme of Assessment. For example, Learning Outcome 3 is best assessed in a project, such as the Practical Assessment Task, whilst the practical paper will mainly assess Learning Outcome 2. However, when the entire assessment programme is considered, it more or less, reflects the time spent in class.
- Even though all Learning Outcomes and Assessment Standards are taught in an integrated manner, the teacher can choose to focus on one or two Assessment Standards at a time.

3.1.3 Criteria-driven assessment

Assessment in Computer Applications Technology is derived from the Learning Outcomes and Assessment Standards in the National Curriculum Statement, for example:

Learning Outcome 2: The learner is able to apply and integrate end-user computer applications skills and knowledge to solve problems related to the processing, presentation and communication of information.

Learning Outcome 2 is divided into eight Assessment Standards that lead to the achievement of the Learning Outcome. Assessment Standard 2 (Grade 12) *measures the application of* advanced word processing skills.

The Assessment Standard should be broken down into criteria to measure this skill. The criteria which lead to the Assessment Standard being achieved can be as follows:

- The learner applies styles to a document. The learner uses styles when working in applications such as a word processor, a presentation or web-authoring program.
- The learner uses the automatic referencing functions of a word processor.
- The learner applies mail merging from sources such as a spreadsheet, database, text file document or word processor tables.
- The learner uses hyperlinks to documents created in various programs and to the Internet in the word processing document.
- The learner creates an electronic form using various form fields.
- The user creates macros to help solve simple input problems, such as the easier input of often-used symbols.

Practical skills need to be assessed using real-life, integrated assessment tasks. Furthermore, assessment tasks should be accompanied by a criterion-based assessment sheet on which the evidence of the attainment of the criteria is recorded. (See examples of assessment sheets in Annexure 1)

Evidence of practical skills can, as a rule, only be verified in the electronic format of the documents produced by the learner. This implies that all practical work must be marked from the computer and indicated on the assessment sheet.

Assessment tasks can be very time consuming. Teachers should decide which parts, such as planning, can be done at home, and which parts, such as the production of the product, should be done in the computer centre.

The knowledge and understanding that supports the practical application of skills needs to be tested in a written form to assess the knowledge component of the curriculum.

Computer Applications Technology is a practically orientated subject and to be able to fully assess all the knowledge, skills and values of the subject a Practical Assessment Task is necessary. The Practical Assessment Task should showcase the learners' broad range of knowledge, skills and values that they have acquired during the learning process.

3.2 Daily assessment in Grades 10, 11 and 12

Daily assessment is part of the process of learning that takes place in the classroom and should be taken into account when designing the Learning Programme. When learners are provided with an assessment sheet based on a list of criteria they can use the assessment task as a formative learning experience. Daily assessment tasks should be used to scaffold the attainment of Assessment Standards and should be the stepping-stones to the tasks in the Programme of Assessment.

Daily assessment should be reflected in the lesson planning and should not be seen as separate from the learning activities taking place in the classroom. The same criteria that are used to plan the Learning Programme should be used to assess learners every day. As learners measure their knowledge and skills against these criteria, their strengths and weaknesses are reflected and should be used to enhance the learning process.

To fully meet the demands of teaching and learning, including daily assessment, each learner must have access to his/her own computer each period and for the full duration of the allocated time (i.e. 4 hours per week).

3.3 Assessment in Grades 10 and 11

3.3.1 Annual Programme of Assessment for Grades 10 and 11

All assessment tasks for Grades 10 and 11 are internal or school-based and collectively provide evidence of the learner's achievement of the Learning Outcomes and Assessment Standards in Computer Applications Technology.

The Programme of Assessment for Computer Applications Technology in Grades 10 and 11 consists of 7 tasks which are all internally assessed. Of the 7 tasks, the 6 tasks which are completed during the school year make up 25% of the total mark for Computer Applications Technology, while the end-of-year assessment is the 7th task and makes up the remaining 75%.

The Programme of Assessment consists of:

- Two tests (first and third term)
- Two exams (mid-year and end-of-year, where the end-of-year examination includes a Practical Assessment Task)
- Three other assessment tasks (one per term 1 – 3)

PROGRAMME OF ASSESSMENT			
ASSESSMENT TASKS	**END-OF-YEAR ASSESSMENT**		
25%	**75%**		
	PAT	**EXAM PAPERS 50%**	
	25%	**50%**	
2 tests 1 exam (midyear) 3 other assessment tasks	1 Integrated project including research LO2 & LO3 Main focus LO3	Written exam Operational Knowledge LO1, LO2 & LO3 Main focus LO1	Practical exam LO1, LO2 & LO3 Main focus LO2

In Computer Applications Technology, the Practical Assessment Task (PAT) is a project and should be administered through terms three and four using set class time e.g. one or two periods per week or a continuous period of time in the third / fourth term e.g. the last 4 – 5 weeks (16 – 20 hours), according to set due dates for the completion of each stage of the project.

The table below provides a detailed example of the Programme of Assessment for Grade 10. The suggested marks and weighting as well as the term and assessment activities are provided.

Example of a Programme of Assessment for Grade 10

TERM	ITEM	ASSESSMENT ACTIVITY OUTLINE	GRADE.LO.AS	ASSESSMENT FORM	MARK (±)	Convert to	WEIGHT
1	1	Test – I/O and storage devices (including installation and use) and the impact on health	10.1.1 10.1.2 10.1.3 10.1.5 10.2.1	Test	30		25% (100 marks)
1	2	Word Processing and file management task	10.1.3 10.2.1 10.2.2 10.2.7	Task	40		
2	3	Task on hardware and software including legal, ethical, social and environmental impact issues	10.1.1 10.1.4 10.1.5	Task	40		
2	4	Paper 1: 2 or 3 hour practical paper[1]	ALL covered to this point	Exam (midyear)	100	200 (P1+P2)/175 * 200	
2	4	Paper 2: 1 hour written paper	ALL covered to this point	Exam (midyear)	75		
3	5	Spreadsheet test, assessing basic formatting, functions and formulae	10.2.1 10.2.3	Test	50		
3	6	Task on communication modes and tools (more advanced word processing skills to be assessed) presented as a newsletter	10.1.4 10.1.5 10.2.1 10.2.2 10.3.1 – 10.3.3	Task	40		
3 & 4		Practical Assessment Task	LO 2 LO 3	Practical Assessment Task	180	100	25% (100 marks)
4	7	Paper 1: 3 hour practical paper	ALL	Exam (end-of-year)	180	200 (P1+P2)/280*200	50% (200 marks)
4	7	Paper 2: 2 hour written paper	ALL	Exam (end-of-year)	100		

As teachers work from different textbooks and from different Work Schedules, please note that these items are only examples and that teachers may change the order or the form of the task as well as the content it covers as long as the Programme of Assessment covers the Assessment Standards and adheres to the following:

---

[1] The length of the paper will depend on the level of competence of the learners at this stage.

First term: one test and one other assessment task
Second term: one examination and one other assessment task
Third term: one test and one other assessment task
Fourth term: one examination, including the PAT

Further note that a task in the Programme of Assessment should not be made up of several smaller items. Each task should cover a substantial amount of content and tests should be set for 45 – 60 minutes each.

The table below provides a detailed example of the Programme of Assessment for Grade 11. The suggested marks and weighting as well as the term and activity are provided.

Example of a Programme of Assessment for Grade 11

TERM	ITEM	ASSESSMENT ACTIVITY OUTLINE	GRADE.LO.AS	ASSESSMENT FORM	MARK (±)	Convert to	WEIGHT
1	1	Assignment using utility software for troubleshooting	11.1.1 11.1.2	Task	30		
	2	Practical test on database	11.2.1 11.2.4	Test	40		
2	3	Assignment on application software including integration as well as file management	11.1.3 11.2.1 11.2.2 11.2.3 11.2.6	Task	50		25% (100 marks)
	4	Paper 1: 3 hour practical paper	ALL covered to this point	Exam (midyear)	180	200 $(P1+P2)/280 *$ 200	
		Paper 2: 1½ hour written paper			100		
3	5	Task using additional package on legal, ethical, social and environmental issues of ICTs	11.1.4 11.1.5 11.2.1 11.2.5 – 12.8 11.3.1 – 11.3.3	Task	40		
	6	Test –Networks and relevant issues	11.1.1 11.1.4 11.1.5	Test	40		
3 & 4		Practical Assessment Task	LO2 LO3	Practical Assessment Task	200	100	25% (100 marks)
4	7	Paper 1: 3 hour practical paper	ALL	Exam (end-of-year)	200	200 $(P1+P2)/350*200$	50% (200 marks)
		Paper 3: hour written paper			150		

As teachers work from different textbooks and from different Work Schedules, please note that these items are only examples and that teachers may change the order or the form of the task as well as the content it covers as long as the Programme of Assessment covers the Assessment Standards and adheres to the following:

First term: one test and one other assessment task
Second term: one examination and one other assessment task
Third term: one test and one other assessment task
Fourth term: one examination, including PAT

Further note that a task in the Programme of Assessment should not be made up of several smaller tasks. Each item should cover a substantial amount of content and tests should be set for 45 – 60 minutes each.

Assignments, practical tasks and projects should be done under controlled conditions, managed, facilitated and monitored by the teacher during class time. Certain aspects can be done at home e.g. sourcing and gathering information, planning, etc.

3.3.2   The Practical Assessment Task

- **Motivation for Practical Assessment Task in Computer Applications Technology**

  Bearing in mind that assessment provides the evidence of the learner's skill, knowledge and values the Practical Assessment Task assesses a range of Learning Outcomes and Assessment Standards for the subject in a real-life project.

  The project allows learners to demonstrate their information management, integrated end-user computer applications skills and problem-solving skills in an authentic scenario. Although learners demonstrate their end-user computer applications skills, the Practical Assessment Task assesses their information management skills in depth.

- **Composition of the Practical Assessment Task**

  The task clearly assesses two distinct aspects:

  - Information management skills (Research process)
  - End-user application skills to find, use and present information

- **Management and assessment of the Practical Assessment Task**

  This project spans more than one term. The research process as described in Annexure 1 outlines the time for the submission of the draft documents. Teachers should set due dates for each phase of the project. Teachers should also facilitate each phase of the research project through formative assessment but once a task is submitted according to due dates, it is assessed summatively.

  Assessment must be done in phases and according to criteria derived from the Learning Outcomes and Assessment Standards as specified in the National Curriculum Statement. An assessment tool based on the criteria must be designed. The learner's performance is measured against the criteria. See Annexure 1 for an example.

- **Moderation of the Practical Assessment Task**

  The project is set and marked internally and is moderated internally for Grades 10 and 11. In grades 10 and 11, the Practical Assessment Task should be seen as part

of the learning process to complete the Practical Assessment Task for Grade 12. A smaller project can be done in Grade 10 to help the learners start the information management process.

A detailed description of the Practical Assessment Task, including examples can be found in Annexure 1.

3.3.3 Mid-year and end-of-year examination papers for Grades 10 and 11

To assess the Learning Outcomes and Assessment Standards in depth two exam papers are required. The practical paper assesses Learning Outcome 2 in depth with aspects of Learning Outcome 1 and Learning Outcome 3, while the written paper assesses Learning Outcome 1 in depth and also assesses the knowledge and understanding that supports the skills in Learning Outcome 2 and Learning Outcome 3. Both the examinations and the Practical Assessment Task are necessary to fully assess all the Learning Outcomes.

The structure of the examination papers should follow the same format as for Grade 12.

3.4 Assessment in Grade 12

In Grade 12, assessment consists of two components: a Programme of Assessment which makes up 25% of the total mark for Computer Applications Technology and an external assessment which makes up the remaining 75% (including the Practical Assessment Task). The Programme of Assessment for Computer Applications Technology consists of 6 tasks which are all internally assessed. The external assessment is externally set and moderated.

In Computer Applications Technology, the Practical Assessment Task is a project. While the Practical Assessment Task is part of the external assessment, it should be administered on a continuing basis through terms two to four using scheduled class time e.g. one or two periods per week or a continuous period of time in the third / fourth term e.g. the last 6 – 8 weeks (24 – 32 hours), according to set due dates for the completion of each stage of the project.

(See Annexure 1 for a description and example of a Practical Assessment Task in Grade 12.)

PROGRAMME OF ASSESSMENT ASSESSMENT TASKS	EXTERNAL ASSESSMENT		
25%	75%		
	PAT	EXAM PAPERS 50%	
	25%	50%	
2 tests 2 exams 2 other assessment tasks	1 integrated project including research LO2 & LO3 Main focus LO3	Written exam Operational knowledge 3 hour – 150 marks LO1, LO2 & LO3 Main focus LO1	Practical exam 3 hour –200 marks LO1, LO2 & LO3 Main focus LO2

In Grade 12 one of the tasks in Term 2 and/or Term 3 must be an internal examination. In instances where only one of the two internal examinations is written in Grade 12, the other examination should be replaced by a test at the end of the term.

3.4.1 Programme of Assessment for Grade 12

The internal or school-based Programme of Assessment (25%) should consist of
- Two tests (first and third term)
- Two exams (second and third term)
- Two other assessment tasks (one per term 1 and 2)

The table below provides a detailed example of an annual assessment plan for grade 12. The suggested marks and weighting as well as the terms and assessment activities are provided.

Example of annual assessment for Grade 12

TERM	ITEM	ASSESSMENT ACTIVITY OUTLINE	GRADE.LO.AS	ASSESSMENT FORM	MARK (±)	Convert to	WEIGHT
1	1	Test on hardware, software and networks including trouble shooting	12.1.1 12.1.2 12.1.3 12.1.4 12.1.5	Test	60		
1	2	Assignment: Integration of spreadsheet and database including importing / exporting data	12.1.1 12.2.1 – 12.2.7	Task	40		
2	3	Survey conducted on a limited topic, processed and analysed using appropriate applications and presented using the 4th package	12.2.1 – 12.2.8 12.3.1 – 12.3.3	Task	60		25% (100 marks)
2	4	Paper 1: 3 hour practical paper	ALL covered to this point	Exam (mid year)	200	200 (P1+P2)/350 * 200	25% (100 marks)
2	4	Paper 2: 3 hour written paper	ALL covered to this point	Exam (mid year)	150	200 (P1+P2)/350 * 200	25% (100 marks)
3	5	Test: Communication modes and tools including legal, ethical and security issues and impact of ICT on societies and environment	12.1.4 12.1.5 12.2.8	Test	40		
3	6	Paper 1: 3 hour practical paper	ALL	Trial exam	200	200 (P1+P2)/350 * 200	
3	6	Paper 2: 3 hour written paper	ALL	Trial exam	150	200 (P1+P2)/350 * 200	
2 to 4	External Assessment	Practical Assessment Task – spans three terms, to be completed before the trial exam (progress documents to be handed in during the year on specified dates)	LO2 LO3	Practical Assessment Task	350	100	25% (100 marks)
4	External Assessment	Paper 1: 3 hour practical paper	ALL	External Exam	200	200 (P1+P2)/350 * 200	50% (200 marks)
4	External Assessment	Paper 2: 3 hour written paper	ALL	External Exam	150	200 (P1+P2)/350 * 200	50% (200 marks)

As teachers work from different textbooks and from different Work Schedules, please note that these items are only examples and that teachers may change the order or the form of the task as well as the content it covers as long as the Programme of Assessment covers the Assessment Standards and adheres to the following:

First term: one test and one other assessment task
Second term: one examination and one other assessment task
Third term: one test and one examination
Fourth term: external examination, including PAT

Further note that a task in the Programme of Assessment should not be made up of several smaller tasks. Each task should cover a substantial amount of content and tests should be set for 45 – 60 minutes each.

Assignments and projects should be done under controlled conditions, managed, facilitated and monitored by the teacher during class time. Certain aspects can be done at home e.g. sourcing and gathering information, planning, etc.

3.4.2   Practical Assessment Task in Grade 12

The criteria for the Practical Assessment Task in Grade 12 are externally set, internally administered and marked and externally moderated. The requirements and format will be provided to schools in January of the Grade 12 year.

3.4.3   External assessment for Grade 12

External assessment in Grade 12 comprises TWO papers.

To assess the Learning Outcomes and Assessment Standards in depth two exam papers are required. The practical paper assesses Learning Outcome 2 in depth with aspects of Learning Outcome 1 and Learning Outcome 3, while the written paper assesses Learning Outcome 1 in depth and also assesses the knowledge and understanding that supports the skills in Learning Outcome 2 and Learning Outcome 3. Both the examinations and the Practical Assessment Task are necessary to fully assess all the Learning Outcomes.

Paper 1: Practical paper – 3 hours – 200 marks

This paper mainly assesses the practical skills pertaining to Learning Outcome 2, in other words the three compulsory application packages as well as some practical skills from Learning Outcome 1 and Learning Outcome 3. These skills will be assessed in an integrated manner based on a given real-life scenario.

The learner will not be required to enter large amounts of data or text. The required data or text could be retrieved from the data disk or imported from other documents such as a text file, word processing document, a database table or a spreadsheet.

To successfully complete this paper, each learner must have access to his or her own computer in the exam room. Provision will need to be made for sufficient computers to enable the examination to be completed in **at most two sittings**.

See Annexure H of the *NATIONAL POLICY ON THE CONDUCT, ADMINISTRATION AND MANAGEMENT OF THE NATIONAL SENIOR CERTIFICATE: A QUALIFICATION AT LEVEL 4 ON THE NATIONAL QUALIFICATIONS FRAMEWORK (NQF)* for conducting practical examinations in Computer Applications Technology regarding:

- Preparations for the practical examination (Laboratory certification process)
- Procedures during the practical examination sessions including managing two sittings
- Procedures in the event of breakdowns or power failures
- Responsibilities of candidates

- Procedures after the examination session

Paper 2: Written paper – 3 hours – 150 marks

Section A

Short questions based on all three Learning Outcomes.

Section B

A variety of questions based on given real-life end-user scenarios that assesses the operational knowledge of Learning Outcome 1 and the underlying knowledge and understanding that supports the skills in Learning Outcome 2 and Learning Outcome 3.

3.5 Content to be assessed

Assessment addresses the content (which is derived from the Learning Outcomes and Assessment Standards in the Subject Statements) as set out in the Content Framework. See Annexure 1 of the Computer Applications Technology Learning Programme Guidelines (January 2008) on the content to be covered in the teaching, learning and assessment of Computer Applications Technology.

Note that due to the conceptual progression of Assessment Standards across the grades, content and skills from Grade 10 – 12 will be assessed in the external papers at the end of Grade 12.

3.6 Optional speed endorsement for Grades 10, 11 and 12

An **optional** endorsement of the highest typing speed level attained by learners is **additional** to the assessment programme. The final measurement of this speed level will take place with the end-of-year exam practical paper but could be measured throughout the year to encourage proficiency.

See example of the speed endorsement in Annexure 2.

3.7 Administrative issues relating to School Based Assessment (SBA)

If a learner fails to present a component or components of the internal assessment, and valid reasons are provided (e.g. valid doctor's certificate), the learner should be allowed the opportunity to redo the task. Where it is not possible, the mark for that component of the internal assessment should not be taken into consideration, and the maximum mark in this particular case must be re-calculated on the remaining number of tasks.

If a learner fails to present a component or components of the internal assessment, without a valid reason, the learner must be awarded a zero mark (0) for such a component or components.

See Annexure B par (1) of the *NATIONAL POLICY ON THE CONDUCT, ADMINISTRATION AND MANAGEMENT OF THE NATIONAL SENIOR CERTIFICATE: A QUALIFICATION AT LEVEL 4 ON THE NATIONAL QUALIFICATIONS FRAMEWORK (NQF)* for an example.

3.8   Recording and Reporting in Computer Applications Technology

In Grades 10 to 12 the teacher records in marks against the assessment tasks, using a record sheet and report in percentages against the subject using report cards.

See Annexure 3 for an example of a record sheet

3.9   Requirements for offering Computer Applications Technology

To meet the demands of teaching, learning and assessment in Computer Applications Technology schools should meet the following requirements:

- Each learner must have access to his/her own computer each period and for the full duration of the allocated time (i.e. 4 hours per week)
- Software requirements (latest version of software is recommended)
    o   Operating system
    o   Word Processing program
    o   Spreadsheet program
    o   Database program
    o   Presentations or Web Authoring program
- Hardware
    o   PCs – networked
    o   Printer (high speed)
    o   Data Projector
    o   Scanner
    o   Specifications to meet the requirements of the software (minimum 1 GHz; 256 MB RAM – recommended 2.4 GHz; 512 MB RAM)
- Internet access
- Technical support for servicing and maintenance of computers so that the number of working computers is never lower than the number of learners per class

See Circular S7 of 2006

3.7   Promotion

For promotion and certification purposes learners should achieve at least a level 2 rating (Elementary Achievement: 30-39%) in Computer Applications Technology.

ANNEXURE 1

PRACTICAL ASSESSMENT TASK IN COMPUTER APPLICATIONS TECHNOLOGY

The Practical Assessment Task is an assessment of the learner's individual interaction with information and the way in which he or she presents that information. The information will finally be presented in a number of documents. These must be made in the four application programs, studied. The length of the final report should be about ten pages.

Evidence of the research process must be provided in a series of draft documents outlining the following:

- Definition of the problem – explain what the project is about
- Statement of the questions that will provide the type and amount information that will satisfy the definition of the problem and solve the problem
- A draft document showing:
  - What sources you will use
  - What keywords you will use when you use electronic sources
  - How information will be accessed, gathered and recorded
  - How information / sources will be evaluated
  - How information and data will be organised
- A scheme showing the planning of the final presentation
  - The relevance of the information
  - How the information will be used
  - Extract, summarise information
  - Which data / information needs to be processed or analysed
- Use information (analyse, process, manipulate, organise)
  - Use word processing documents to present the notes (paraphrase, summarise, quote), ideas, opinions, etc.
  - Use database application to store and process data and information
  - Use spreadsheet documents to record, process and analyse data gathered
  - Use the 4th package and techniques of integration to present aspects and / or results pertaining to the problem
- Create final documents and present / communicate the information and your solution, conclusion, recommendation or idea
  - Use appropriate application(s) to compile final report / documents using techniques of integration where appropriate
- A checklist for evaluating the project
  - Does the project satisfy all the elements of the problem statement?
  - Spelling, typing, grammatical errors
  - Format, layout, design
  - Content
  - Legal principles and ethical conduct such as copyright and plagiarism
  - Acknowledgment of sources
- Evaluation of the product and the process

THE PRACTICAL ASSESSMENT TASK FOR GRADE 10

Research does not necessarily mean an academic search for information but refers to any information gathering to solve a problem. Although learners may wish to choose their own topics, many learners find this very difficult in Grade 10 and 11. Therefore, a specific scenario or a list of possible topics should be given to these learners. In Grade 10, the scope of the Practical Assessment Task is not as great as in Grade 12 and it could be completed during the third and fourth terms.

Information Management in Grade 10 is the use of technology to

- Find information
- Manipulate or change information – change the information to represent what the learner wants to say
- Present information

The information will finally be presented in a number of documents. In Grade 10, at least one of these must be made in a word processing program, and one in a spreadsheet program. The learners will have a choice in which program they want to make the other document(s). The length of the final report should be about eight pages.

- Examples of topics for the Practical Assessment Task in Grade 10
  - Your class wants to tour to a town on the coast of the Eastern Cape. You need to arrange the journey and accommodation on the tour. See example for detail.
  - Organise an event, such as a prize giving ceremony, at your school.
    - What are the information needs? For example
      - Academic achievement of learners
      - Achievement in sport, culture, etc.
    - Where can one find the information?
      - Academic records of the school
      - Sports administrator of the school
      - Learners fill out CVs or questionnaires
    - Processing and analysing information using a spreadsheet e.g. the dux learner, sports person of the year, etc.
    - Compiling budget, programme, etc.
  - Cell phone options
    - What are the information needs? For example
      - Different options and contracts from different companies.
    - Where can one find the information?
      - Websites or brochures from different cell phone companies.
    - Processing and analysing information using a spreadsheet e.g. to compare different options, etc.
    - Present most economic option
- **Focus of the Practical Assessment Task for Grade 10**

  In Grade 10 the focus of the Practical Assessment Task is understanding the problem to be solved by finding and gathering relevant information, using technology and then presenting that information in a suitable electronic document.

- **Process of the Practical Assessment Task in Grade 10**

The research process should be facilitated and monitored by the teacher. For this reason the documentation for each phase is specified in the task. Progress reports are submitted at specified intervals. These documents are assessed as they are submitted.

Definition of the problem

The topic suggests the problem to be solved. The learners must outline the problem thoroughly. The ability to collect relevant information depends to a large extent on the definition of the problem. Learners should define the problem by asking a series of questions.

- **Progress document 1**:
  This document describes the problem that will be solved by gathering information, including the questions that should be answered in the project. This document should not be longer than two pages.

  Example:

First Stage: Progress document 1   **Due date** ....

Prepare a word processing document (maximum two pages) on the following:

1. Consider the theme / list of topics given for this project
   - What do I know about this topic?
   - How does the topic relate to people, to me, to the world we live in?
   - What type of audience am I aiming to present my topic to?

2. Decide on the topic of your project (within the theme or from the list of topics)
   - Balance the criteria of personal interest, project requirements, information available and time allotted.

3. Identify and formulate a problem statement on your topic
   - Where will I go?

4. Consider all the aspects of your topic and define questions that will have to be answered in solving the problem.

Teacher assesses the first stage and then the learner reflects on the process thus far to improve the quality of the next stage:

   - o List the steps completed in the task
   - o List the steps still to be completed
   - o List things that you did not understand about the task
   - o Do I have enough for the next step in the process?
   - o List the questions that you want to / are going to change / correct / add / remove

---

Example of assessment for the first stage:

STAGE 1: Criteria				Max Mark	Mark obtained
Information Management Skills:					
The problem is well described					
4	2	1	0		
The purpose is clearly stated and unambiguous and clearly indicates where the learner will go	The purpose is vague, leaving the reader unsure of where the learner will go	The description is so vague that no discernable purpose can be found	No description of problem	4	
The purpose shows an information need				1	
A variety of questions are formulated:					
3	2	1	0		
More than two categories	Two categories	Only one category	No questions formulated	3	
Questions direct the amount of information needed				1	
Questions indicate the type of information needed				1	
Total:				10	
Word Processing Skills (1st progress document)					
The layout and formatting of the document enhance readability					
Give marks for any four of the following techniques used appropriately and correctly					
Spacing Font size, type Bullets / Numbering	Columns Alignment Borders and shading	Tabs Tables		4	
Clear distinction between headings, sub-headings and body text				1	
Text are entered correctly, e.g. word wrapping, single spaces between words, etc				1	
The document is submitted free of typing, spelling and grammatical errors					
2		0		2	
Yes		No			
Any word processing / other functions not specifically taught in class (Grade 10) / listed above or creative ideas / utilising the word processor appropriately and correctly used				2	
List these:					
Total:				10	
TOTAL FOR STAGE 1:				20	

Finding and accessing information

- **Progress document 2:**

    This document outlines the methods used to gather the information. This document should list the various sources (minimum of two sources of which at least one source must be an electronic source) used to find the information, the search word(s) used for an Internet search and a description of the use of browsers and other tools used for the search. This document should not be longer than two pages.

    Example:

Second Stage: Progress document 2   **Due date ....**

Start identifying sources and collecting data / information that will be required to solve your problem and prepare a word processing document (maximum 2 pages) for the following:

1. Decide on all the sources where you can find information and the methods that you will use to find and collect data. For example:

    o Describe how you will use the computer to find and access information on the Internet. Give names of browsers and search engines that will be used. Submit copies, examples, etc.
    o List all the key words that you will use for searches on the Internet.
    o List all the URLs of the websites that you intend to visit.
    o Name all other sources that you might use (e.g. newspapers, magazines, brochures, etc. Give full details and submit copies, examples, etc.
    o Show how the information / data gathered will be evaluated

2. Draft any questionnaires / questions for interviews that you might need in your r

Teacher assesses the second stage and then the learner reflects on the process thus far to improve the quality of the next stage:

    o List the steps completed in the task
    o List the steps still to be completed
    o List things that you did not understand about the task
    o Do I have enough for the next step in the process?

Example of assessment for the second stage

STAGE 2: Criteria				Max Mark	Mark obtained
Information Management Skills:					
At least two appropriate sources were used				1	
Electronic Sources e.g. Internet / Encarta:					
5	3	1	0		
Search words / strategies are specific and implies an effective search to cover the information need and will result in all[2] relevant and up-to-date information needed to solve the problem	Some search words / strategies are too general for an effective search to produce sufficient or up-to-date information	All search words are poor and will result in little or irrelevant information	No search words indicated	5	
Other sources used – assess any one other source					
	5	3	1	0	
Questionnaire	Enough questions to cover the information need and all questions are clear, well thought through and formulated and will result in all relevant information needed to solve the problem	Most, but not all questions are well thought through and formulated and will result in appropriate and almost all information needed to solve the problem	Some questions are vague, ambiguous or irrelevant and will only produce little of the information needed	Too few questions and all questions are irrelevant or vague and ambiguous and will not produce answers to solve the problem	
Interview	Enough questions put together for the interview to cover the information need and all are clear, well thought through and formulated and will elicit all information needed to solve the problem	Most, but not all questions are well thought through and formulated and will result in appropriate and almost all information needed to solve the problem	Some questions are vague, ambiguous or irrelevant and will only produce little of the information needed	Too few questions and all questions are irrelevant or vague and ambiguous and will not produce answers to solve the problem	5	
Printed media e.g. Magazines, Articles, Brochures, Books, etc	Enough relevant, up-to-date information covered in the source to satisfy all information needs to solve the problem	Relevant, up-to-date information covered in the source to satisfy most of the information needed to solve the problem	Little information covered in the source or information is outdated	Very little information covered in source or information is not relevant to the problem to be solved.		

---

[2] ALL could mean the complement of the information needed considering the information found in the other source.

Indicated how the information gathered will be evaluated (source 1)				
2	1	0	2	
All criteria are appropriate to the source and will give a clear indication of how to evaluate the information	Not all criteria are appropriate to the source and may not give a clear indication of how to evaluate the information	No criteria listed		
Indicated how the information gathered will be evaluated (source 2)				
2	1	0	2	
All criteria are appropriate to the source and will give a clear indication of how to evaluate the information	Not all criteria are appropriate to the source and may not give a clear indication of how to evaluate the information	No criteria listed		
		Total:	15	
Word Processing Skills (2nd progress document)				
The layout and formatting of the document enhance readability			4	
Give marks for any four of the following techniques used appropriately and correctly				
Spacing Font size, type Bullets / Numbering	Columns Alignment Borders and shading	Tabs Tables		
Clear distinction between headings, sub-headings and body text			1	
Text are entered correctly, e.g. word wrapping, single spaces between words, etc			1	
The document is submitted free of typing, spelling and grammatical errors			2	
2		0		
Yes		No		
Any word processing / other functions not specifically taught in class (Grade 10) or creative ideas / utilising the word processor			2	
List these:				
		Total:	10	
		TOTAL FOR STAGE 2:	25	

Deciding on the relevance of information

▪ **Progress document 3:**

This document should briefly outline the process used to decide whether information is relevant. This should be decided by comparing the information with the questions asked in the first document, and deciding whether the sources are trustworthy. This document should not be longer than two pages.

Example:

Third Stage: Progress document 3   Due date ....

Deciding on the relevance of information and how it will be presented and prepare a word processing document (not longer than 2 pages) in which you clearly indicate:

1. How you will go about to evaluate all the data / information you have collected in the second stage. You should list all the sources and indicate and determine if the sources are trustworthy.

2. How you will determine which data / information is relevant to solve your problem. Indicate why you reject some of the data / information.

3. Establish the authenticity of the data / information that will be used to solve the problem:

- Determine if the data / information is still valid or outdated

- Make a survey of notes and present / submit the information gathered

4. Indicate what data / information will be presented in a word processing document and what will be presented in a spreadsheet.

Teacher assesses the third stage and then the learner reflects on the process thus far to improve the quality of the next stage:

- o List the steps completed in the task
- o List the steps still to be completed
- o List things that you did not understand about the task
- o Does my information fit my questions?
- o Do I have enough for the next step in the process?
- o List things that you want to / are going to change/correct/add/remove

Example of assessment for the third stage

STAGE 3: Criteria			Possible Mark	Mark obtained
Information Management Skills:				
Learner determined trustworthiness of sources – Source 1			1	
Learner determined trustworthiness of sources – Source 2			1	
Learner used criteria listed in second stage to evaluate the information gathered and to determine the relevance of the information			4	
4	2	0		
Clear indication of which information will be used and which was rejected and why	Indication given of which information will be used and which was rejected but no reasons given	Information not evaluated or no indication given		
Relevance of information compared to questions posed			4	
4	2	0		
All information indicated as relevant satisfies the questions posed to solve the problem and all information indicated as rejected will not contribute to solving the problem	Not all information indicated as relevant satisfies the questions posed to solve the problem or some information indicated as rejected could contribute to solving the problem	No indication given		
Planning the spreadsheet			4	
4	2	0		
All content is suitable for a spreadsheet and the purpose of the spreadsheet is clearly stated and appropriate	Some content not suitable for a spreadsheet or the purpose of the spreadsheet is not clear or appropriate	No planning or the use of a spreadsheet is totally inappropriate		
Planning the final presentation in Word			6	
5	2	0		
Extensive planning that covers all aspects of the research and clearly indicates the sequence of the information	Some key aspects of the research is not included in the planning	No planning		
		Total:	20	

Word Processing Skills (3rd progress document)				
The layout and formatting of the document enhance readability			4	
Give marks for any four of the following techniques used appropriately and correctly				
Spacing Font size, type Bullets / Numbering	Columns Alignment Borders and shading	Tabs Tables		
Clear distinction between headings, sub-headings and body text			1	
Text are entered correctly, e.g. word wrapping, single spaces between words, etc			1	
The document is submitted free of typing, spelling and grammatical errors			2	
2		0		
Yes		No		
Any word processing / other functions not specifically taught in class (Grade 10) / listed above or creative ideas / utilising the word processor appropriately and correctly used			2	
List these:				
Total:			10	
TOTAL FOR STAGE 3:			30	

Presenting the information found

▪ **In the final document** to be handed in, the learner provides the solution to the problem that has been defined in the first progress document. This document should be approximately eight pages long. In this final presentation of the information, the learner should show his/her skills in the word processing package and the spreadsheet package. The assessment of the final document will assess the learner's ability to change / process data / information to demonstrate his or her ability to communicate the solution, conclusion, recommendation or idea as well as the skills applied using the application packages to do so.

Example:

Forth Stage: Final presentation   (Due date ....)

In this stage you must prepare a word processing and a spreadsheet document that will give a solution to the problem and questions stated in the first progress document.

1. The word processing document should not exceed 8 pages and should consist of a title page, a table of contents, an introduction, some paragraphs / information that address the different sections of the problem and a solution / conclusion / recommendation.

2. A bibliography must give a full reference to any resources like web pages, articles from magazines and newspapers, interviews and questionnaires.

3. Spreadsheet document(s) must be used to provide calculated information that will be part of the solution to the problem.

4. The word processing and spreadsheet documents should be integrated.

5. Use a checklist for evaluating the project:

- Spelling, typing and grammatical errors
- Format, layout and design of documents
- Content
- Acknowledgement of sources and correct citing procedures
- Legal and ethical conduct

Teacher assesses the final product and then the learner reflects on the process:

Reflect on the process and product
- Have I solved the problem / answered the questions?
- List some concepts that you have learned from this project
- List the SKVs (criteria) that you have demonstrated in completing this project
- Evaluate the appropriateness of the technology used to research or solve the problem
- List how you can improve your work

Example of assessment for the final stage

FINAL STAGE: Criteria				Possible Mark	Mark obtained
Information Management Skills:					
Solving the problem - Introduction				1	
1		0			
Clearly states what the problem is about – problem statement		No introduction			
Solving the problem – Body / Paragraphs / Information addressing the problem				5	
5	3	1	0		
Well motivated information (e.g. table with statistics, calculated information e.g. budget, facts obtained from more than one source) that leads to and supports the final solution / conclusion / recommendation / idea, enhanced by evidence such as using quotes, graphics e.g. graphs, etc	Information given but not always motivated and does not fully lead to or support the final solution / conclusion / recommendation / idea and evidence not always clear	Information given but irrelevant and does not lead to or support the final solution / conclusion / recommendation / idea with little or no evidence given	No paragraphs / information that lead to or support the final solution / conclusion / recommendation / idea		
Solving the problem – Conclusion / Solution / Recommendation / Idea				5	
5	3	1	0		
Original and well formulated conclusion / solution / recommendation / idea that effectively addresses the original problem stated and demonstrates insight and meaning	Conclusion / solution / recommendation / idea that combines a mixture of solutions from sources and addresses the original problem stated	Presents conclusion / solution / recommendation / idea that others have created directly from a source	No conclusion / solution / recommendation / idea presented		
Manipulation / Quality of content				3	
3		2	1		
Learner collated / manipulated the information gathered and is able to retell information or remodel concept maps		Learner collated / manipulated the information gathered to some extent and is able to retell some information to a certain extent	Unable to collate / manipulate the information gathered and little change of information gathered		
Format and language used are appropriate for the intended audience				1	

Organisation of content				2	
2	1	0			
Well organised, demonstrating synergy and logic flow	Organised but with little synergy or logic flow	Not organised			
Report				5	
5	3	1			
Creates and presents an original product and demonstrates creative insight	Some original elements and some insights are demonstrated	Presents the work or thoughts of others (copied and pasted from sources)			
Title page present				1	
Table of contents				2	
2	1	0			
Complete with correct reference to sections and pages	Table of contents but not complete or correct	No table of contents			
Bibliography				2	
2	1	0			
Complete bibliography, sources correctly cited	Bibliography, but not complete or correctly cited	No bibliography			
Evaluation / Reflection				3	
3	2	0			
Shows constant reflecting skills and can make suggestions for future changes to improve final product	Is able to identify some areas for future improvements	Cannot see any areas that need change in what they have done			
			Total:	30	

Criteria				Possible Mark	Mark obtained
Application Package skills demonstrated in final documents					
Spreadsheet Skills (Final documents)					
The layout and formatting of the document enhance readability				4	
Give 1 mark each for the following techniques used appropriately and correctly					
Alignment Borders and shading		Text wrapping Merging of cells			
Clear distinction between headings, sub-headings and body text				1	
Cell reference				3	
3	2	1	0		
Relative and absolute references used appropriately and effectively	Relative and absolute references used but not always appropriately	Only relative references	No reference used		
Data types e.g. text, date&time, currency, etc.				3	
3	2	1	0		
More than two types used appropriately and correctly	Two types used appropriately and correctly	Used, but not always appropriate or correctly used	Clear that only default types were used		
Basic functions used				3	
3	2	1	0		
More than two types used appropriately and correctly	Two types used appropriately and correctly	Used, but not always appropriate or correctly used	Not used		

Basic calculations					
2		**1**		**0**	**2**
Used appropriately and correctly		Used, but not always appropriate or correctly used		Not used	

The document is submitted free of typing, spelling and grammatical errors			
2		**0**	**2**
Yes		No	

The document is submitted free calculation errors e.g. no error messages displayed, etc.			
2		**0**	**2**
Yes		No	

Any spreadsheet / other functions not specifically taught in class (Grade 10) / listed above or creative ideas utilising the spreadsheet, used appropriately and correctly used e.g. use of conditional formatting (if not taught), etc.	
List these:	**2**

Total:	**22**

Word Processing Skills (Final documents)

All text are entered correctly, e.g. word wrapping, etc	**2**

Font type, style, size, colour					
2		**1**		**0**	**2**
Used appropriately and effectively		Used but not always appropriately or effectively		Only default values used or very few variations and mostly inappropriate	

Bullets and numbering					
3		**2**	**1**	**0**	**3**
Used correctly, appropriately and effectively		Used correctly, but not always appropriate	Not correctly used	Not used	

Borders and shading					
3		**2**	**1**	**0**	**3**
Used correctly, appropriately and effectively		Used correctly, but not always appropriate	Not correctly used	Not used	

Tabs					
3		**2**	**1**	**0**	**3**
Used correctly, appropriately and effectively		Used correctly, but not always appropriate	Not correctly used	Not used	

Basic tables					
3		**2**	**1**	**0**	**3**
Used correctly, appropriately and effectively		Used correctly, but not always appropriate	Not correctly used	Not used	

Columns					
3		**2**	**1**	**0**	**3**
Used correctly, appropriately and effectively		Used correctly, but not always appropriate	Not correctly used	Not used	

Graphics					
3		**2**	**1**	**0**	**3**
Used correctly, appropriately and effectively		Used correctly, but not always appropriate	Not correctly used	Not used	

Integration with spreadsheet				
2	1	0	**2**	
Integration live (e.g. hyperlink), appropriate and effective	Only copy and past	No integration		
The document is submitted free of typing, spelling and grammatical errors			**2**	
2		0		
Yes		No		
Any word processing / other functions not specifically taught in class (Grade 10) / listed above or creative ideas / utilising the word processor appropriately and correctly used List these:			**2**	
		Total:	28	
		TOTAL FOR FINAL STAGE:	80	

Final Evaluation : Criteria				Possible Mark	Mark Obtained
Time Management:				10	
10	6	2	0		
All deadlines met	Most deadlines met	Less than 50% of deadlines met	No deadlines met		
Time and effort:				5	
5	3	2	1		
Excellent Wow!	Proficient Yes, looking good	Adequate Yes, but some room for improvement	Limited No, lacking in many areas		
Overall impression:				5	
5	3	2	1		
Shows insight Logical Clear justification / motivation Meets all requirements and goes beyond requirements in some instances	Justification / motivation not always convincing Some small flaws / minor errors Meets all requirements	Justification / motivation not always convincing Some serious flaws / errors Meets most of the requirements	Little evidence of understanding and logic No justification / motivation Meets less than 50% of requirements		
Appropriateness of solution in the context of the scenario				5	
5	3	2	1		
Most appropriate Good application for scenario The proposal is a working solution that can be applied in a real-life situation	Appropriate Application in scenario not always convincing The proposal is a solution that can be applied in a real-life situation with some fine tuning	Inappropriate Application in scenario not convincing Some parts can be applied in the real–life situation	Totally inappropriate No application for scenario No value for real–life situation		
			Total:	25	

FINAL MARKSHEET	Possible Mark	Mark obtained
Information Management Skills Stage 1 + Stage 2 + Stage 3 + Final stage	75	
Application Package Skills[3] Stage 1 + Stage 2 + Stage 3 + Final stage	80	
Final Evaluation criteria	25	
Total:	180	
CONVERT TO 100:	100	

- **Example of a Practical Assessment Task for Grade 10**

Chosen topic: A class tour to a town on the coast of the Eastern Cape

Definition of the problem

The learner must arrange a tour for the class to a town on the coast of the Eastern Cape. Some possible questions to guide the search are:

- Where does the class want to go?
- How many learners want to go?
- Which bus services are available to take the class?
- How do the prices between the different bus services differ?
- Which is the cheapest resort the learners could go to?
- Do all the resorts offer the same facilities?
- How long should the booking be for?
- Which arrangements will be made for food?
- How many meals should the resort provide? Etc.

Accessing information

The learner should provide answers to the following questions in this progress document:

- Where will the learners find information?
- The Internet, travel agencies, other people who undertook successful trips to the sea and magazines consulted.
- Which search words were used to look for the needed information on the Internet?

Deciding on the relevance of information

In this progress document learners describe how they decided whether the information found was valid, for example, they checked the dates on the websites, when it was last updated, who uploaded the site and whether all the links work. Learners should also have checked information found, for example dates in the magazines.

---

[3] Application package skills in Grade 10 account for ± 50% of the marks for the PAT. Towards Grade 11 and 12 this should be reduced

Presenting the final document

Learners should present information in a word processing document in such a way that they demonstrate their word processing skills. They should also show formatting in a document can enhance content. Learners could present the travel and accommodation arrangements in a word processing document and provide a comparison between the price structures of different resorts or bus companies using the information from the spreadsheet and make a recommendation. . The budget for the journey could also be presented in the spreadsheet program.

THE PRACTICAL ASSESSMENT TASK FOR GRADE 12

This task is externally set, internally marked and externally moderated. This task is assessed as it is submitted according to due dates in the first three terms.

Computer Applications Technology is a practically oriented subject, which focuses primarily on an end-user perspective for information, problem-solving, creative, collaborative and lifelong learning skills. The Practical Assessment Task calls on the problem-solving skills of the learner and allows the learner to demonstrate creative and independent thinking. Learning Outcome 3 can only be assessed in depth if the information management skills are demonstrated through a project that demands that these skills be used at a high level.

The fourth package that a learner must master can differ from school to school. For this reason the fourth package is also assessed in the Practical Assessment Task and not in the final practical paper.

This project will form 25% of the overall Grade 12 assessment.

- **Composition of the project**

  The project has two distinct components:

  - Research process: applying skills for finding, accessing, retrieving, processing and managing information
  - Presentation: applying the end-user skills using the four application packages studied.

  As this project has a large scope, much of the research work will have to be done outside of class time. The research process should be facilitated and monitored by the teacher. For this reason the documentation for each phase is specified in the task. Progress reports are submitted at specified intervals. These documents are assessed as they are submitted. The assessment tools are based on criteria derived from the Learning Outcomes and Assessment Standards given in the National Curriculum Statement. The final project will be assessed when it is presented.

  Detailed assessment tools facilitate the external moderation of the papers as they stipulate the evidence required from the project. The project should be moderated as the phases are completed to ensure the learner does the work independently.

- **Exemplar of Practical Assessment Task Grade 12**

General information

The Practical Assessment Task (PAT) in Grade 12 should showcase learners' broad range of skills in the use of application programs along with the knowledge, values and attitudes that they have acquired during the course. However, part of the emphasis of this project is on the research process. The criteria for this task will be nationally set, evaluated internally by the teacher and moderated externally by provincially determined structures.

This task is given as an open-ended structured research project. The research for this project should not necessarily be academic in nature, but the search for information to solve a problem such as the organisation of an event. The learner will need to conduct research, make choices as to which are the most appropriate tools with which to implement a solution to the task and present the final product. This project is an individual interaction with information and the success of the project can be measured against the learner's ability to conduct research, analyse and interpret information and present information clearly in electronic format.

Although learners may require support and guidance throughout the project, the learners need to develop independent working habits and skills so that the task is a product of their own explorations and labours.

Purpose of the Practical Assessment Task

Computer Applications Technology is a practically oriented subject, which focuses primarily on an end-user perspective for information, problem-solving, creative, collaborative and lifelong learning skills. The Practical Assessment Task calls on the problem-solving skills of learners and allows learners to demonstrate creative and independent thinking. The learners should be challenged to demonstrate excellence and perform at their highest possible level and not merely to adhere to the minimum requirements for the task.

The assessment task is given as an open-ended project to:

- allow the learners the best opportunity to display their problem-solving skills, creativity and independent thinking;
- provide learners with the opportunity to demonstrate that they can select the most effective tools of communication and information seeking;
- provide an opportunity for the learner to demonstrate abilities above and beyond the minimum required criteria; and
- afford learners the opportunity to display advanced techniques in the presentation of information.

Approach to the Practical Assessment Task

The learner will conduct a study and present the information in a set of documents and in electronic format. The learner will hand in progress documents at regular intervals, so that the process and the finished product can be assessed. Learners should be given the assessment tools for each of the stages of the project in advance.

The criteria for the elements for each part of the project will be set. These criteria need to be incorporated into the assessment tool. Learners can use the assessment tools to guide the project.

Phases of the PAT

The PAT is completed and assessed in phases, summarised as follows:

Phase
Phase 1: Task Definition
Phase 2: Information finding strategies
Phase 3: Access information and determine relevance
Phase 4: Use information - planning
Phase 5: Use information – processing / analysing
Phase 6: Use information – create final presentation / synthesis
Final evaluation: Judge the process and the product

The documentation / evidence of what is done in each phase is submitted at specified intervals on dates set by the teacher. These documents are assessed as they are submitted and the marks for the phase are recorded.

After the teacher has returned the assessment sheet for the phase, the learner should study the feedback from the marked assessment tool and reflect as follows:

- Revise the steps completed so far

- Look at the steps that the learner still have to complete

- List things that the learner did not or still do not understand about the task

- Ask himself / herself whether he/she has enough material and information for the next step / phase in the process

- List questions that he/she can ask the teacher / others that can help to complete the task

This will help the learner to improve the next phases and the final product. However, note that the phases will not be re-assessed.

What the learner will need to complete the task

- Access to a computer with the following programs:
    - Word processing such as Word
    - Spreadsheet such as Excel
    - Database such as Access
    - Fourth (additional) package e.g. Presentation program such as PowerPoint

- Access to the Internet and a search engine such as Google

- Access to electronic reference material such as Encarta

- Any other material / people that will help you to find the information that he/she will need

The task should be completed under controlled conditions in the classroom / at school and facilitated and monitored by the teacher. Certain aspects could be done at home such as sourcing / collecting information or specific tasks pertaining to the PAT assigned by your teacher.

Requirements of the task

In order to develop the report, the learner needs to complete the following broad, minimum criteria:

1. Provide a broad description of the task that he/she needs to complete in his/her own words (Task definition).

2. Write down questions that he/she will ask to determine the type of information that he/she will need (i.e. that will help you to understand how the event works, what processes are involved, what processing needs to be done, etc.) and the amount of information required to complete the task or solve the problem.

3. Search, locate, access, extract, use and manipulate / process information / data

    a. Demonstrate the use of at least three types of sources of which one should be the Internet.
    b. Process / manipulate data / information using appropriate application programs.

4. Complete the task / solve the problem

5. Present your idea / plan / recommendation / conclusion / solution for the problem.

6. Demonstrate the appropriate use of the following application programs:

    a. Word processing program
    b. Spreadsheet program
    c. Database program
    d. The fourth application program that you studied e.g. presentations program

Progress documents

As learners are doing independent research, it is necessary to ensure that learners are working continually over a period of time. When work is assessed in phases over time, it encourages learners to work progressively and also ensures that learners do their own work. Having learners complete parts of the work in class will help ensure that learners provide proof of their own work and the teacher will also be able to provide assistance to learners who need it.

The progress documents should be presented in the most appropriate application program that the learners have mastered.

See Practical Assessment Task for Computer Applications Technology 2008 for instructions and assessment tools

ANNEXURE 2

OPTIONAL SPEED ENDORSEMENT IN COMPUTER APPLICATIONS TECHNOLOGY

Example of speed endorsement

Timed accuracy could be practised and measured throughout the year, and in each examination.

To allow for uniformity in speed endorsement the following method must be used:

- Words vary in length; therefore, a standard number of keystrokes per word must be used when calculating the speed level. Five keystrokes would be counted as one word.
- For daily assessment the time used for practising timed accuracy should be varied, for example one minute, two minutes, four minutes, five minutes and ten minutes. Time should not exceed ten minutes.
- The examination must always be 10 minutes. The highest speed attained during the ten-minute examination will be taken as the speed endorsement.

Guidelines:

Five depressions = one word; a depression includes the space after a word as well as spaces after punctuation; upper case characters count two depressions.

20 wpm @ 5 depressions per word for 5 minutes = 20 x 5 x 5 = 500 strokes to be keyed in
25 wpm @ 5 depressions per word for 5 minutes = 25 x 5 x 5 = 625 strokes to be keyed in
30 wpm @ 5 depressions per word for 5 minutes = 30 x 5 x 5 = 750 strokes to be keyed in
35 wpm @ 5 depressions per word for 5 minutes = 35 x 5 x 5 = 875 strokes to be keyed in
40 wpm @ 5 depressions per word for 5 minutes = 40 x 5 x 5 = 1 000 strokes to be keyed in
45 wpm @ 5 depressions per word for 5 minutes = 45 x 5 x 5 = 1 125 strokes to be keyed in
50 wpm @ 5 depressions per word for 5 minutes = 50 x 5 x 5 = 1 250 strokes to be keyed in
55 wpm @ 5 depressions per word for 5 minutes = 55 x 5 x 5 = 1 375 strokes to be keyed in
60 wpm @ 5 depressions per word for 5 minutes = 60 x 5 x 5 = 1 500 strokes to be keyed in

Calculations of words per minute:

Example 1 – two minutes
Number of depressions keyed in two minutes   350
Gross words (number of depressions keyed divided by average characters (5) per word) ÷ 5 =   70
Less number of words with errors   -   3
Equals net number of correct words   =   67
Divided by the time (two minutes)   ÷   2
Equals net correct words per minute   33,5 wpm

Example 2 – ten minutes
Number of depressions keyed in ten minutes   2 125
Gross words (number of depressions keyed divided by average characters (5) per word) ÷ 5 =   425
Less number of words with errors   -   7
Equals net number of words without errors   =   418
Divided by the time (ten minutes)   ÷   10
Equals net correct words per minute   41,8 wpm

ANNEXURE 3

EXAMPLE OF A RECORD SHEET FOR GRADE 10 and 11

SUBJECT: COMPUTER APPLICATIONS TECHNOLOGY 　　　　　　　　　**GRADE: _____   CLASS: _____**

TERM		Term 1			Term 2			Term 3			Tasks during year	Term 4			Final Mark X + Y
NAME OF TASK				Total		Exam (mid-year)	Total			Total	Total A+B+C		Exam (end-of-year)	Total	
DATE OF ASSESSMENT	Task	Test1	Task1		Task2	Exam P1 + P2		Test2	Task3			PAT	Exam P1 + P2		
LEARNERS' NAMES	MARK					(P1+P2)/Tot						Tot 6	(P1+P2)/Tot		
	Convert to	Tot1	Tot2	Test1 + Task1 (A)	Tot2	200	Task2 + Exam (B)	Tot4	Tot5	Test2 + Task3 (C)	100 (X)	100	200	300 (Y)	100
1 Soap, Joe		15	28	43	37	179.2	216.2	28	38	66	65	78	148.5	226.5	72.8
2															
3															
N															

Term 1:
If Total mark for Test 1 is 35 and the Total mark for Task 1 is 45, the percentage for reporting at the end of the first term is: 15/35 + 28/25 = 43/80 = 54%

Term 2:
If the Total mark for Task 2 is 50, and the total mark for the two papers is 280, the percentage for reporting at the end of the second term is: 37/50 + (95+156)/280*200 = 216.2/330 = 65.5%

Term 3:
If the Total mark for Test 2 is 50 and the Total mark for Task 3 is 40, the percentage for reporting at the end of the third term is: 28/50 +38/40 = 66/90 = 73%

Term 4:
If the Total mark for the two papers in term 4 is 350, the percentage for reporting on the fourth term is: 78/100 + 148.5/200= 226.5/300 = 75.5%

Mark for tasks during the year (Year Mark) at end of term 3 (X): 43/80 + 216.2/330 + 66/90 = 325.2/500 = 65%
Promotion Mark (X + Y): 65/100 + 226.5/300 = 291.5/400 = 72.8%