Every child is a National Asset

2021 RECOVERY CURRICULUM AND ASSESSMENT PLANS

INFORMATION TECHNOLOGY (IT)
GRADE 10

Implementation: January 2021

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Presentation Outline

Purpose

Amendments to the Annual Teaching Plan (ATP)

Amendments to School Based Assessment (SBA)

Conclusion

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Purpose

- To mediate the amendments of the recovery 2021 Annual Teaching Plan (ATP) including School Based Assessment (SBA) for **Information Technology Grade 10** for implementation in January 2021.

- To ensure that **meaningful teaching proceeds** during 2021 as per the 2021 school calendar.

- To assist teachers with **guided pacing and sequencing** of curriculum content and assessment.

Purpose (continued)

To enable teachers to **cover the essential core content /skills** in each grade within the available time.

To assist teachers with **planning** for the different forms of **assessment**.

To ensure learners are **adequately prepared** for the **subsequent year/s** in terms of content, skills, knowledge, attitudes and values

"

The 3-year Curriculum Recovery Guideline outlines the development of the 3-year recovery ATPs to manage learning losses. **Recovery ATPs as stipulated in Circular S13 of 2020**.

"

Introduction

COVID-19 led to losses in teaching and learning time due to:

- the lockdown period and **phased reopening** of schools,
- Alternating time tabling models and
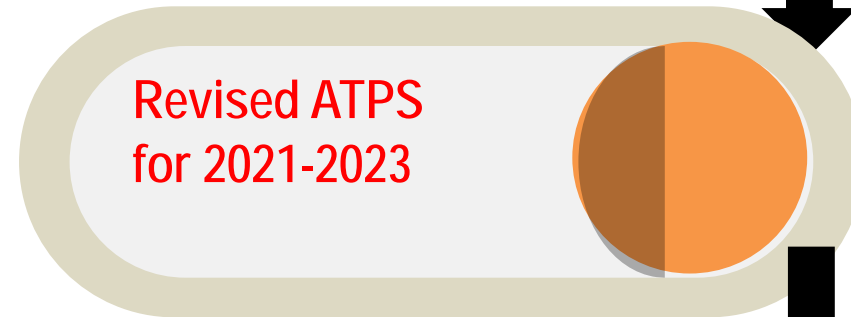- the related health and safety **protocols.**

Furthermore, the revision of the school calendar **and** intermittent closure of many schools negatively **impacted** the **ability of teachers to implement the revised 2020 ATPs** as envisioned.

To mediate the impact and support teachers in managing teaching, assessment and learning within the reduced **time**, the DBE in 2020 implemented:

- **Circular S3 that outlined and guided teachers to conduct context specific subject trimming**, in consultation with subject advisors.
- **National Assessment Circular 02** and **Circular E 11** to guide school-based assessment in phases and subjects

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Vision 2024

Learning Losses 3-year Recovery Plan:

Revised ATPS for 2021-2023

Curriculum Modernisation Implemented in 2024

- Conceptualisation of a Curriculum Strengthening process that encompasses Competencies required for the Changing World;

- Develop Revised Modernised Curriculum Policy Statements in alignment with amended CAPS Section 4 and 2020 Assessment Circulars;

- Develop an Assessment for Learning pedagogical strategy, and

- Develop Educator Mediation Programmes.

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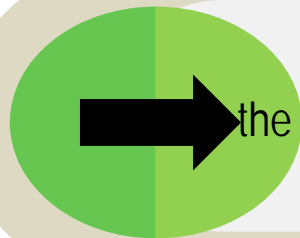
Rationale for the Guideline

To outline the **process to develop** the 3-year Recovery Plan in managing the learning losses over a period of three years

Rationale for Guideline
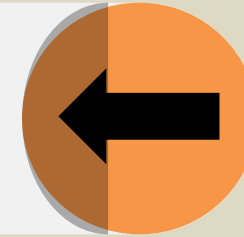
Learning Losses the purpose of this exercise are defined as:

Learning Outcomes *(content, skills & competencies, values & attitudes) as stated in the revised ATPs not achieved during the 2020 school year.*

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Principles

1 — Use of the **2020 Curriculum Recovery Framework** as the **base** document

2 — Learning losses inform the **Three Year Recovery Plans for School –based Assessment**

3 — Management of the **learning losses and the School Based Recovery Plans**

4 — Create opportunities through adjusted ATPs to strengthen **pre-knowledge, consolidation, revision, and deeper learning**

5 — Entrench **Assessment for Learning** as a **Pedagogical Approach** to address the learning losses

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Principles

6 The 2021 Recovery ATPs maintains the use of current LTSM and resources already available in the system.

7 Content topics removed in 2020 were not automatically returned in the 2021 Recovery ATPs.

8 Fundamental and core topics were retained in the Recovery ATPs

9 To guide and support effective teaching and learning

Underpinning Assumptions

ASSUMPTION 1

All learners will return to school from day 1 of the 2021 academic year and norm-times as stipulated in the CAPS will be adhered to for the entire school year;

ASSUMPTION 2

Learning losses due to COVID-19 across grades and subjects will vary from school to school, class to class and even within classes.

ASSUMPTION 3

Each Teacher will have a record of learning losses and Departmental Heads and Subject Advisors will monitor progress in learning loss recovery;

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Underpinning Assumptions

ASSUMPTION 4

All schools will develop & implement school-based support programmes for all grades/years with particular **focus on all the exit grades/years (3, 6, 9 and 12) throughout the three-year period.**

ASSUMPTION 5

All Circulars related to the 2020 ATPs including SBA to be withdrawn and revised to align to the 2021 ATPs.

ASSUMPTION 6

Schools have systems in place to manage the possibility of a second wave of the pandemic in Q1 and Q3 of the 2021

The Development of the 2021 Recovery ATPs

The Recovery ATPs are aligned to the:

- 2021 School calendar
- Abridged S4 of CAPS
- Curriculum and assessment principles as prescribed in the CAPS policy for IT.

Reorganisation of Content Topics

Theory

Content clustered for accelerated teaching and learner-directed learning. Supported by formative assessment through PowerPoint presentations, videos, Q&As, quizzes

Practical

Practical content repackaged for new time frames

Term 1

TERM 1: 45 days	Week 1: 27-29 Jan (3)	Week 2: 01-05 Feb	Week 3: 08-12 Feb	Week 4: 15-19 Feb	Week 5: 22-26 Feb	Week 6: 01-05 Mar	Week 7: 08-12 Mar	Week 8: 15-19 Mar	Week 9: 23-26 Mar (4)	Week 10: 29-31 Mar (3)
CAPS topic	Basic concepts of computing	Basic concepts of computing + Algorithms	Data representation and storage + Algorithms	Algorithms	Data representation + Solution development	Solution development	Solution development	Solution development	Social implications	Social implications
Concepts, skills and values	What are ICTs? Define Information Technology Explain what a computer is: Overview and concepts of the main components of a computer system: Types of computers	Advantages + disadvantages of using computers Data and information What is an ICT system?	Data, information and knowledge Bits and bytes Number systems: decimal, binary, hexadecimal — Primitive data types and Data structures Basic concepts of an algorithm Examples of algorithms in everyday life	Explore various algorithms. Algorithms to solve a problem Tools: IPO table/flow charts /pseudo code for algorithms Tracing algorithms– trace table Compare algorithms: sequence, precision and efficiency	Value of accurate, well-tested algorithms Computer file management File-naming conventions Common file types and extensions Saving as another type Intro to the programming tool	Exploring the use of variables Variable naming conventions Assigning values to variables Exploring data types: integers, strings, floats, Boolean Casting	Operators like: (+ , , * , /, mod, div) Functions: random, round, square root, truncation Calculations Formatting of output (fixed, currency)	Basic string concatenation Using "+" or Concat-function	Software licence agreements, piracy, copyright, copyleft Digital divide Basic string concatenation	Social, ethical and legal issues pertaining to ICTs? Economic reasons using computers
Pre-knowledge	Gr 10: Programming skills and knowledge									
Resources (Not textbook) to enhance learning	YouTube videos / Mr Long – channel / DBE textbook / Workshop material / Study guides / PowerPoints									
Informal assess; remediation	1 informal assessment task	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	1 informal assessment task	2 informal assessment tasks	2 informal assessment tasks	1 informal assessment task

Term 2

TERM 2: 51 days	Week 1: 13-16 Apr (4)	Week 2: 19-23 Apr	Week 3: 28-30 Apr (3)	Week 4: 03–07 May	Week 5: 10-14 May	Week 6: 17-21 May	Week 7: 24-28 May	Week 8: 31 May–4 Jun	Week 9: 07–11 Jun	Week 10: 14–18 Jun	Week 11: 21–25 Jun
CAPS topic	Solution development	Solution development	Conditionals	Conditionals + Hardware	Hardware	Strings	Strings	Strings	Networks + Communications	E-Communications + Social implications	Events + Validation
Concepts, skills and values	Applying algorithms such as swapping values, finding aggregates, isolate digits in an integer number (mod, div) Event handling e.g. Button (Click only)	Event handling e.g. Button (Click only)	Comparison operators and performing logical comparisons Conditional constructs + Boolean Boolean logic/operators	Nested if's (three levels in the nesting) CASE statement Extend the use of variables, relational operators' (and or not, etc, IN)	Output /Storage devices / Input + Output System Unit Ports and connectors Compare computing devises Describe system software Extend system software concept Utility programs Device drivers	String methods: length, copy, pos, left, right String operations (using the string methods)	Find a character in a string Count the number of occurrences of a specific character in a string String handling: Length function Copy function	Enforce principles: of operations: (position of a character); copy (creating a substring); delete (deleting a character/s) ; insert (inserting a character/s) (strings/Listbox) logical operator IN with strings	Describe a network, Reasons for using networks, Types of networks, Internet as a WAN, Client-server vs peer-to-peer, Reasons for logging in	Describe e-communication Tools to facilitate e-com E-mail as e-com Social issues: work done up to here:	Events Basic validation techniques Debugging techniques (ShowMessage) Debugging using trace tables
Pre-knowledge		Gr 10: Programming skills and knowledge									
Resources (Not textbook) to enhance learning		YouTube videos / Mr Long – channel / DBE textbook / Workshop material / Study guides / PowerPoints									
Informal assess; remediation	2 informal assessment tasks.	2 informal assessment tasks.	2 informal assessment tasks.	2 informal assessment tasks	2 informal assessment tasks.	1 informal assessment task	2 informal assessment tasks.	2 informal assessment tasks.	1 informal assessment task	1 informal assessment task.	1 informal assessment task

Term 3

TERM 3: 52 days	Week 1: 13-16 Jul (4)	Week 2: 19-23 Jul	Week 3: 28-30 Jul	Week 4: 02–06 Aug	Week 5: 10-13 Aug (4)	Week 6: 16-20 Aug	Week 7: 23-27 Aug	Week 8: 30 Aug–03 Sep	Week 9: 06 Sep – 10 Sep	Week 10: 13 Sep –17 Sep	Week 11: 20 Sep –23 Sep
CAPS topic	Iteration constructs	Iteration constructs	Iteration constructs	Computer Management	Strings	Strings	Loops & strings	Loops& Strings	Internet & WWW	Internet & WWW	Application Development + PAT
Concepts, skills and values	Iteration -Loops: **For-loop - structure**	Iteration -Loops: **While -loop structure**	Iteration -Loops: **Repeat Until- loop structure**	Describe computer management Various management tasks and Iteration - Loops: operating system utilities	Strings: Implement algorithms to solve computing problems	Strings: Implement algorithms to solve computing problems	Loops & strings: Implement algorithms to solve computing problems	Loops & strings: Implement algorithms to solve computing problems	Describe Internet ISP Overview of WWW Browsing and searching W3C Criteria to evaluate Web sites	Overview of plug-in applications What are Internet services technologies? Social Issues: Work done up to here	**Develop simple applications:** Solve a problem using problem-solving steps Input & output using text file (for PAT only)
Pre-knowledge	Past programming skills and knowledge										
Resources (Not textbook) to enhance learning	YouTube videos / Mr Long – channel / DBE textbook / Workshop material / Study guides / PowerPoints										
Informal assess; remediation	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	1 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	2 informal assessment tasks	PAT	

Term 4

TERM 4: 47 days	Week 1: 05-08 Oct (3)	Week 2: 11-15 Oct	Week 3: 18-22 Oct	Week 4: 25-29 Oct	Week 5: 01 Nov-05 Nov	Week 6: 08 Nov-12 Nov	Week 7 – 10: 15 Nov – 8 Des	
CAPS topic	Application Development + PAT	Application Development + PAT	Application Development + PAT	Application Development + PAT	Solution Development	Solution Development	**Final Examination**	
Concepts, skills and values	What is problem solving? Problem solving steps Solve a problem using problem-solving steps Use **appropriate tools** and **techniques** used in **software analysis**, viz. Develop simple applications PAT	Develop simple applications: Use **appropriate tools** and **techniques** used in **software analysis**, viz. Develop simple applications. PAT	Develop simple applications: Use **appropriate tools** and **techniques** used in **software analysis**, viz. Develop simple applications. PAT	Develop simple applications: Use **appropriate tools** and **techniques** used in **software analysis**, viz. Develop simple applications PAT (hand-in)	Consolidate and reinforce content, concepts, and skills. Design and develop solutions for a variety of problems that include computational thinking and applying software engineering principles	Consolidate and reinforce content, concepts, and skills. Design and develop solutions for a variety of problems that include computational thinking and applying software engineering principles	**PAPER 1** **Marks: 120 – Time: 3 hours** **(strings will be tested in all questions)** **Question 1** Properties, debugging, formulae, formatting **Question 2** Application of Decision making and repetition (loops) **Question 3** General problem-solving	**PAPER 2** **Marks: 120 – Time: 2hr 30** **Section A: Question 1** *Short questions (±20 marks)* **Section B: Question 2** *Systems Technologies (±20 marks)* **Section C: Question 3** *Communications and Network Technologies (±20 marks)* **Section D: Question 4** *Data and Information Management (±20 marks)* **Section E: Question 5** *Solution Development (±20 marks)* **Section F: Question 6** *Integrated Scenario (±20 marks)*
Pre-knowledge	Gr 10: Programming skills and knowledge							
Resources (Not textbook) to enhance learning	YouTube videos / Mr Long – channel / DBE textbook / Workshop material / Study guides / PowerPoints						**Cognitive levels:** Lower order – **30%**; Middle order-**40%**; Higher order-**30%**	
Informal assess; remediation	1 informal assessment task	1 informal assessment task	1 informal assessment task	1 Informal assessment task	1 Informal assessment task	1Informal assessment task		

Overview of Assessment Changes

School-based Assessment (SBA)

No June Examination

June Examination replaced by controlled test.

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Revised Programme of Assessment

| Task	Term 1	Term 2		Term 3		Term 4	
	Task 1	Task 2	Task 3	Task 4	Task 5	End-of-Year Examination	
	Theory Test	Practical Test	Control Test (Replace June Exam)	Alternative Task/ Theory Test	Practical Test	Practical Exam	Theory Exam
SBA Weighting	20%	20%	20%	20%	20%	50%	50%
Promotion Weighting	Convert to 60%					Convert to 10%	Convert to 10%
Total Marks	Min: 45	Min: 45	Min: 45	Min: 45	Min: 45	120	120
Time Allocation	Minimum: 60 min	Minimum: 60 min	Minimum: 60 min	Minimum: 60 min	Minimum: 60 min	3 hours	2½ hours
PAT	Promotion weighting of PAT: 20%						

Revision of Examination Structure

Paper 1 (Practical) – Proposed layout

Marks: 120 – Time: 2h 30 min (strings will be tested in all questions)
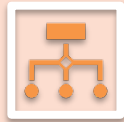
Question 1:
Basic, general programming skills

Question 2:
Application of decision making and repetition (loops)

Question 3:
General problem-solving

Revision of Examination Structure

Paper 2 – Theory – Proposed layout

Marks: 120 – Time: 2½ hours

Question 1:   *Short questions (±20 marks)*

Question 2:   *Systems Technologies (±20 marks)*

Question 3:   *Communications and Network Technologies (±20 marks)*

Question 4:   *Data and Information Management (±20 marks)*

Question 5:   *Solution Development (±20 marks)*

Question 6:   *Integrated Scenario (±20 marks)*

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Conclusion

- No learning losses had to be accommodated as IT is a new subject in Grade 10
- The theory content is clustered and compressed for accelerated learning.
  - Follow a learner-directed learning approach supported by presentations, videos, questions and quizzes
  - Time gained is used for teaching and practising practical content
- Use maximum time for practical content

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