

Every child is a National Asset

Curriculum Tests

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@ Birchwood



basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA



Read to Lead
A Reading Nation is a Leading Nation

PRESENTATION OUTLINE

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Curriculum Tests Overview

Rationale

- Tests are one of the three components of the GEC and form an important part of the 360° assessment model as they cover content from the ATPs and CAPS.

The five GEC subjects

- Mathematics
- Natural Sciences
- Economic and Management Sciences
- Home and First Additional Language

The design of the tests has a weighting of 80% MCQ and 20% open ended responses

Curriculum Tests Overview cont.

- The same subjects in 2023 as in 2022
- The DBE will only set some papers in certain subjects

2022	2023
EMS P1 and P2	EMS P2 only
NS	NS
Maths	Maths P1 only
HL (10 languages were versioned)	HL (11 languages and no versioning)
FAL (Afrikaans versioned) only 2 languages	FAL ((11 languages and no versioning)
No subject guidelines provided	Subject guidelines will be provided

Test Panels

Test panels

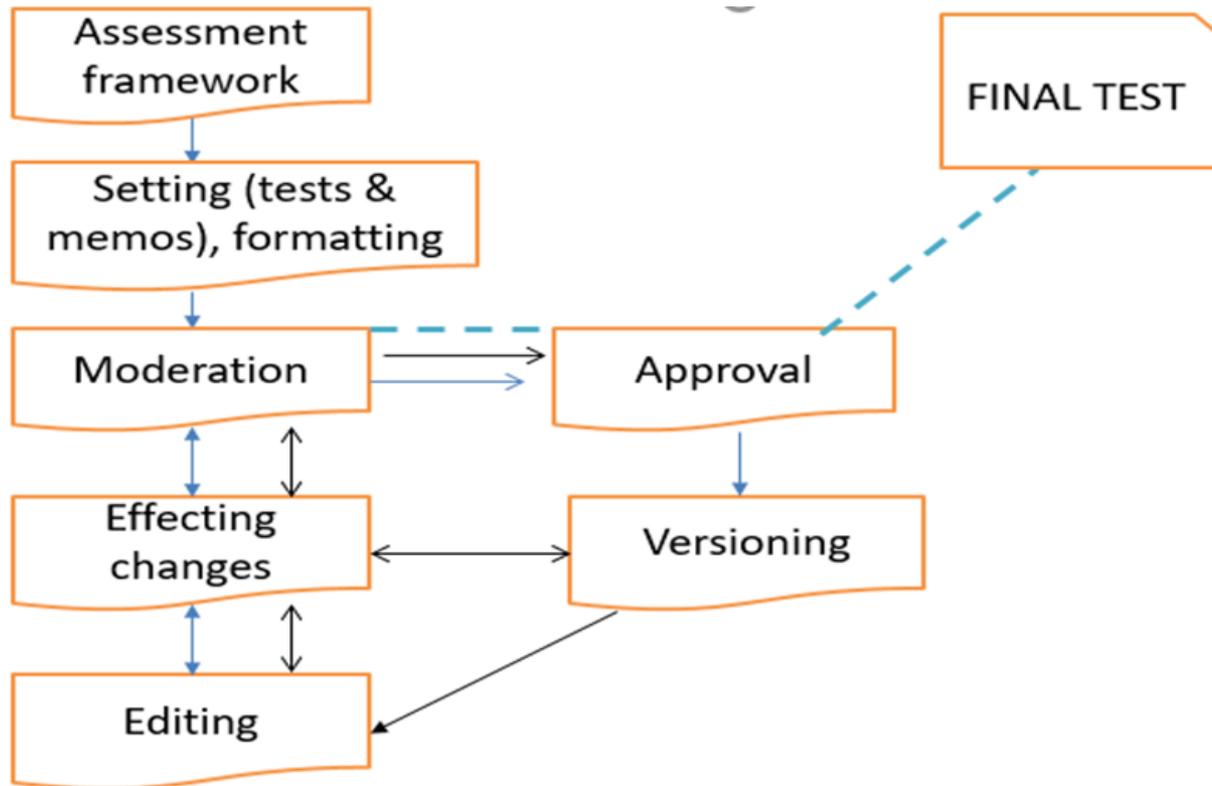
- Request by the DBE for nominations from provinces (school and office based teachers)
- Criterion (amongst others):
 - Qualified in the subject and language
 - At least REQV 13
 - Min of 3 years teaching the subject in the grade
 - supporting teachers in the subject and phase
 - Not retired
 - May be from public/government or independent schools if it's a teacher
- Interviewed and appointed by the DBE
- Panels are evaluated resulting in reshuffling or dismissal. Replacements are done from the pool of nominations

A panel constitute:

- Moderator
- Chief Examiner (setting panels only)
- Examiners/versioners
- An editor

Overview Setting Process

The versioning applies to certain subjects e.g. EMS where in a grade there is more than one language of teaching and learning



Test specification framework

- The first step of the setting process is the development of a test specification framework

Why?

- It specifies the subject content that should be assessed and the corresponding skills and assign context to content
- For Languages it also indicates the text types
- It indicates types and number of items that should be developed
- It lays out the basic design and structure of the test (sections/ questions)
- It specifies the cognitive & difficulty levels
- It informs the test and not the other way round
- It becomes the source of reference for examiners during setting. At school level teachers of the same phase or grade can work together and develop one for each grade
- Moderators use it for moderation of the test

No setting should commence without the test specification framework.

Test specification framework cont.

Where to start?

- Have the CAPS, ATPs, assessment circulars or programme of assessment at hand
- Some schools e.g. schools that are occupational and/or vocational inclined use the subject statement and the draft CAPS
- Some of the mentioned documents provides guidelines on the mark allocation (or minimum). Decide on the total mark of the test.
- Select the desired content that can be assessed through pen and paper (Term 3 – 4 and Term 1 – 4 for Mathematics)
- Workout the mark distribution guided by the weightings
- E.g. a subject has a 30:50:20 weighting. If the total mark for that test is 80 then it should have 24 marks of easy (lower order) items, 40 marks of moderate (middle order) and 16 marks of difficult (high order) items
- In the context of the national set tests 64 marks will be MCQs (80% of 80 marks) and 16 marks of open ended responses i.e. the 80/20% distribution
- NB! At this stage it is important to consider the weightings of the applicable taxonomies, where specified for the subject

Test specification framework cont.

- Subject weightings and content coverage of the following subjects:

Difficulty levels	Subjects	Content from
Lower – High Order/Easy – Difficult)		
40:50:10 25:45:20:10 (cognitive levels)	Mathematics	Term 1 – 4
40:40:20	HL, FAL and LO	Term 3 – 4
40:45:15	NS	
30:50:20	EMS and SS	
30:40:30	Tech and Creative Arts	

- Do we need synergy in the weightings?
- The distribution of the weightings in a test is not per section/question, it is throughout the entire test.

Test specification framework cont.

Next steps:

- Break down the topics/concept into sub-skills
e.g. Business plan → SWOT analysis → list threats. Continue to do the same for all selected topics/concepts
- Allocate the cognitive and/or difficulty levels
e.g. remembering → lower order/easy

Topic: Entrepreneurship							
Sub-topic	context	content	skill assessed	cognitive and difficulty levels		score	type
Business plan	local	SWOT analysis	list threats	remembering	M	1	MCQ



Test specification framework cont.

Example 1(MCQ)

26.	Which option below is regarded as a threat?		
	A	Financial issues, market demand dries up and existing competition	
	B	Financial risk, illegal liability and existing competition	
	C	Financial risk, online marketing, sales and existing competition	
	D	Financial issues, increase in material and legal liability	(1)

Next steps:

Count the number of items per content to ensure that all selected topics/concepts are covered

Test specification framework cont.

Business Functions	Local	Kinds of business functions	Distinguish between the three different levels of management			
			Top	Analysing	M	2
			Middle	Analysing	M	2
			Lower	Analysing	M	2

Example 2 (OE)

The information below relates to the 3 levels of management.

- A. Participate in employment and training of lower-level management.
- B. Lay down the objectives and broad policies of the enterprise.
- C. Responsible for the quality as well as quantity of production.
- D. Control and coordinate the activities of all the departments.
- E. Assign responsibilities and tasks to various workers.
- F. Responsible for coordinating the activities within the department.

61. From the information given, use the table provided in the answer booklet to distinguish between the 3 levels of management. Write the letter only.

(6)



Test specification framework cont.

Natural Sciences Weighting

- 40:45:15 (e.g. 60 marks) → 24, 27 and 9 marks
- 80:20 distribution → 48 MCQs and 12 OE
- Apply the same principles for developing the framework

Test specification framework cont.

NS Example

Strand: Planet Earth and Beyond							
Sub-topic	context	content	skill assessed	cognitive and difficulty levels		score	type
Mining of mineral resources	Wider-world	Refining minerals	Justify arguments of who should benefit with a legitimate reasoning	Creating	D	1	MCQ

Titanium was discovered on the Xolobeni Coast in Mbizana. Mining rights were granted by the Department of Minerals and Energy. The decision to mine was suspended after legal interventions because of resistance from the community.

45. How would you convince the community of Xolobeni regarding the benefits of mining titanium?

- | | | |
|---|--|-----|
| A | People close to mines should be the only beneficiaries to help their families. | |
| B | Mining of resources should only benefit big companies to create employment. | |
| C | Mining should benefit all African people as long as they live in South Africa. | |
| D | Government should own the mines and use profits to improve South Africa. | (1) |

Test specification framework cont.

- The development of a framework takes time and needs to be planned for and should not be rushed
 - As the template is populated there is a need to balance the number of items per cognitive and difficulty levels
 - Keep within the weighting percentage
 - Cover the selected topics and skills to be assessed
- There is a lot of going forwards and backwards in the process and it is normal

GEC Setting

During setting:

- The moderator assigns a set of skills to be assessed from the framework to each panel member
- For languages he/she assigns a text type
- Each panel member sets one item per template and submits for moderation
- Do not use a stimulus e.g. pictures even when it is unnecessary. If a question can be answered without the stimulus then it is redundant.

GEC Setting cont.

GEC Item Template

Subject:	Grade: 9	Name of examiner	
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Content Area/strand/skill:	Topic/text type/content/ concept:	Text format/ subtopic
Cognitive level:	Skill assessed:	Context
Item Type:	Difficulty	

Item:

MCQ

Stimulus (where necessary/applicable)

Stem

A		
B		
C		
D		(1)

Scoring

MCQ- Key and Rationales

Please write "KEY" next to the correct response option and provide supporting calculations for or an explanation of why the answer is correct. For each incorrect response option, describe the common misconception or computation error the option represents or any logical explanation.

GEC Setting cont.

GEC Item Template

OE

Stimulus (where necessary/applicable)

1. Summarise /draw a graph or mindmap/calculate (3)

Scoring Rules

In the space next to "Key" list the correct answer. Award 1 mark or 0 mark (e.g. 1 mark: All 5 parts correct; 0 marks: 4 or fewer parts). E.g. sequencing/order of events or other items with just 1 mark. Indicate what the partially correct answers are, other than 0 and the full Mark in table a. or b. below.

a. Scoring Rules - 1-mark Item

	Scoring Rules
Key	
1 Mark	
0 Marks	

OR

b. Scoring Rules – 2 marks or more

	Scoring Rules
Key	
3 Marks	
2 Marks	
1 Mark	
0 Marks	

Add more marks and rows to accommodate the mark allocation for the stem in the OE type of question.

Moderation and editing

Moderation

- Moderators are not involved in the setting process
- Feedback is sent to each panel member per item before a test is compiled. Once a test is compiled a common feedback session is held
- At least two items per subskill/skills is required
- Common and major errors are discussed

Compilation of a test and a marking guideline

- All individual items are discussed within a panel for further refinement where applicable
- A test is compiled in the order of easy to difficult for each topic

Editing

- Each panel member has a responsibility of editing own work before submission
- The assigned editor edits the compiled test booklet
- Cross editing and proofreading. In 2023 additional QA is scheduled
- An editing guideline document is used as a reference

Versioning

Versioning

- The final paper is discussed by the English test panels together with Afrikaans panels (additional QA)
- Versioning commences afterwards
- Afrikaans moderators and editors follow the same process of moderation and editing to ensure that the original cognitive and difficulty levels are maintained

Marking guideline discussions

2022

- virtual marking guideline discussion were held in the afternoon on each day of the writing
- Participants were requested to mark 3 – 5 scripts prior to the discussion using the draft marking guidelines
- Marking guidelines were enhanced and final signed off marking guidelines were dispatched the next day

2023

- The provincial QA session will discuss the test and marking guidelines
- Final memo will be dispatched
- No national marking guideline

Exemplars

- 2022 tests available as exemplars from the DBE website: <https://www.education.gov.za/GEC2022.aspx>
- 2023 exemplars in the following subjects will be made available (beginning Term 4):

Subject	Total mark (from the question paper)
EMS Paper 1	70
Mathematics Paper 2	75
SS: Geography	75
SS: History	75
Technology	80
LO	70
CA: Dance	50
CA: Drama	50
CA: Music	50
CA: Visual arts	50

Exemplars cont.

- Additional exemplars for Language and Maths are available from the DBE website:
- <https://www.education.gov.za/2020DiagnosticTestItems.aspx>
- <https://www.education.gov.za/DiagnosticTestItems.aspx>
- <https://www.education.gov.za/DiagnosticTestItems2022.aspx>

Lessons learnt

Tests

- Versioning of language tests did not work well
 - All language tests are set
- Additional external quality assurance required
 - Provincial subject specialist will form part of the final QA
- The duration of some of the tests was under estimated
 - Some of the 2023 tests' duration were revised
- The tests were of good standard at large
- Some of the subjects do not naturally land themselves to the 80/20% distribution
 - Not all tests will be set for a common sitting
- Numbering positioning in the items (stimulus) was confusing
 - The positioning of the numbering for the stimulus is revised
- Reading time required
 - 15 minutes reading time provided in all tests outside the duration time

Answer booklets

- The answering format of the MCQ was not user friendly (congested) particularly for marking
 - The MCQ part of the answer booklet is revised and allow learners to write the selected letter
- 2021 learners were answering on the question paper (space provide). 2022-2023 answer booklets were developed

Lessons learnt cont.

Marking guidelines

- Draft marking guidelines were used by some schools instead of the signed off ones. That was evident during the DBE moderation process
 - One marking guideline will be issued

Marking guideline discussions

- In 2022 subject teachers of sampled schools, assessment officials, subject advisors took part
- Due to a large number of participating schools in 2023 virtual marking guideline will not be doable
 - Will be limited to subject specialists nationally
 - Provinces will mediate marking guidelines discussions with schools
- Marking guidelines discussions turned into a workshop for some subjects, which was good but was time consuming and led to some participants signing out (after 14:00)
- Some teachers did not mark prior to the discussion, this added extended time scheduled for the discussion

Multiple Choice Questions

- MCQs can be an effective and efficient way of assessing learning outcomes.
- Like any other type of questions, they have advantages and limitations.
- Refer to page 54 number 'b' of the GEC Training Manual 2023, for what the MCQs can or cannot attain.
- Tips of writing good MCQ questions: page 55 number 'c' of the GEC Training Manual 2023

“I have not failed 10 000 times. I have successfully found 10 000 ways that won’t work.”

Thomas A Edison



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Thank you!

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callcentre@dbe.gov.za

callcentre: 0800 202 933