



basic education

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA

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# 2023 ASSESSMENTS



**basic education**

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA



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# South African Primary Maths: Validated standardized tests

## Purpose

To identify conceptual obstacles, and to place each child on a specific level of numeracy development.

## Target Phase(s)

Foundation Phase

## Target learner age-group

5-8 years

## Target grade(s)

Pre-school (Marko-D0)

Grade 1 (Marko-D1)

## Standardized or Class-based

Standardized

## Domain(s)/Sub-domain(s) covered

Number Sense

## Language(s) of assessment

Afrikaans, English, isiZulu & Sesotho

## Level of use

School level

## Administration modality

Individual administration

## Format

Paper-based and administered orally as a one-on-one interview

## Start year of use and/or duration

2013 to date

## Collaborators

The Schools Development Unit of the University of Cape Town

## Cost

KEY cost drivers:

License fee

Kit hire

Printing (Free online)

Training of Assessors

Technical support

Analysis and reporting

## Primary articles/reports on the instrument and its use

Henning, E., Balzer, L., Ehlert, A., & Fritz, A. (2021). Development of an instrument to assess early number concept development in four South African languages. *South African Journal of Education*, 41(4)

Fritz, A., Balzer, L., Ehlert, A., Herholdt, R., & Ragpot, L. (2014). A mathematics competence test for Grade 1 children migrates from Germany to South Africa. *South African Journal of Childhood Education*, 4(2), 114-133.

Henning, E., Bezuidenhout, H., Ramasodi, R., & Simelane, F. Community of Practice for Social Systems Strengthening to Improve Child Well-being Outcomes.

## Secondary articles on the instrument and its use

Fritz, A., Ehlert, A., & Balzer, L. (2013). Development of mathematical concepts as basis for an elaborated mathematical understanding. *South African Journal of Childhood Education*, 3(1), 38-67.

Bezuidenhout, H.S. (2018). Diagnostic test for number concept development during early childhood. *South African Journal of Childhood Education*, 8(1), a584.<https://doi.org/10.4102/sajce>.

Henning, E., Ehlert, A., Herholdt, R., Balzer, L., Ragpot, L., & Fritz, A. (2019). MARKO-D. Mathematics and arithmetic diagnostic instrument.

Bezuidenhout, H. S. (2022). Associations between early numeracy and mathematics-specific vocabulary. *South African Journal of Childhood Education*, 12(1).





# ANNUAL NATIONAL ASSESSMENTS (ANA)

## Purpose

To afford learners the opportunity to demonstrate relevant skills. To understand and assist the education system with diagnosing learner shortcomings.

## Target Phase(s)

Foundation, Intermediate and Senior Phases

## Target learner age-group

Target by grade not by age

## Target grade(s)

Grade 1-6 and Grade 9

## Standardized or Class-based

Standardized

## Domain(s)/Sub-domain(s) covered

CAPS Curriculum

## Language(s) of assessment

All SA official languages

## Level of use

National

## Administration modality

Group administration

## Format

Paper-based

## Start year of use and/or duration

2011 - 2014

## Collaborators

Sole initiative of the Department of Basic Education

## Cost

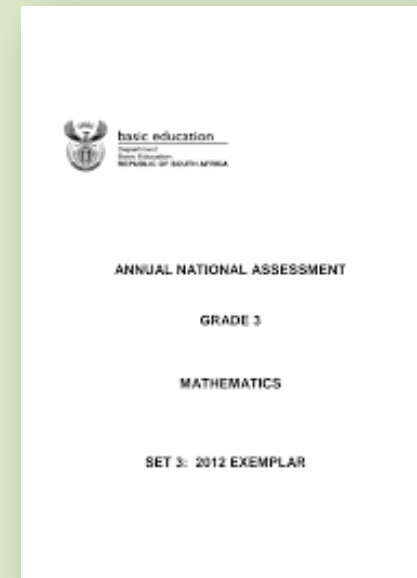
Paid by Department of Basic Education

## Primary articles/reports on the instrument and its use

Department of Basic Education. (2012). Report on the Annual National Assessments of 2012: Grades 1 to 6 & 9. DOI: <https://thutong.doe.gov.za/>  
Department of Basic Education. (2014). Report on the Annual National Assessments of 2014: Grades 1 to 6 & 9. DOI: <http://thutong.doe.gov.za/>

## Secondary articles on the instrument and its use

SADTU. (2014). Annual National Assessment & (ANA): A SADTU perspective  
Van der Berg, S. (2015). What the Annual National Assessments can tell us about learning deficits over the education system and the school career. *South African Journal of Childhood Education*, 5(2), 28-43.  
Chisholm, L., & Wildeman, R. (2013). The politics of testing in South Africa. *Journal of Curriculum Studies*, 45(1), 89-100.  
Chapter 4 The role of assessment in Foundation Phase improvement: The Annual National Assessments and beyond *Carol Nuga Deliwe & Servaas van der Berg*.



# Western Cape Education Systemic Evaluation

## Purpose

The results assist schools to identify areas for improvement and the WCED to identify areas of the curriculum that require additional support.

## Target Phase(s)

Foundation and Intermediate Phases

## Target learner age-group

Target by grade not by age

## Target grade(s)

Grade 3 & 6

## Standardized or Class-based

Standardized

## Domain(s)/Sub-domain(s) covered

CAPS Curriculum

## Language(s) of assessment

Afrikaans, IsiXhosa and English

## Level of use

Provincial

## Administration modality

Group administration

## Format

Paper-based

## Start year of use and/or duration

2002 - 2022

## Collaborators

University of Cape Town, Schools Development Unit

## Cost

Free (covered by the province)

## Primary articles/reports on the instrument and its use

None available

## Secondary articles on the instrument and its use

Hazell, E., Spencer-Smith, G. and Roberts, N. 2019. Improving Grade R mathematics teaching in South Africa: Evidence from an impact evaluation of a province-wide intervention. *Journal of Education*, 2019 - Issue 76, Chapter 10 The conceptualisation, development, implementation, and evaluation of the Grade R Mathematics Project (R-Maths) in the Western Cape (2016–2019) *Garth Spencer-Smith, Eleanor Hazell & Cally Kuhne*



Western Cape  
Government  
Education

## EXEMPLAR ITEMS

**MATHEMATICS**  
**GRADE 3**  
**(ENGLISH)**

# Early Grade Mathematics Assessment Grade 1 (EGMA 1)

## Purpose

Used in monitoring and evaluation of impact of interventions.

## Target Phase(s)

Foundation Phase

## Target learner age-group

Target by grade not by age

## Target grade(s)

Grade 1

## Standardized or Class-based

Standardized and school based

## Domain(s)/Sub-domain(s) covered

- It assesses the foundational elements of Number (a component of Number, Operations and Relationships)
- It makes no claim to provide curriculum coverage (it does not) – even for Number, Operations and Relationships
  - It assesses learners on a range of “*foundational skills that research has shown to be predictive of future success in mathematics*”

## Language(s) of assessment

All official SA languages

## Level of use

National

## Administration modality

Group administration

## Format

Learner tablets  
Paper-based

## Start year of use and/or duration

2021

## Collaborators

Brombacher and Associates  
RTI International

## Cost

KEY cost drivers:  
License fee  
Printing (Free download)  
Training of Assessors  
Kit hire  
Technical support  
Analysis and reporting

## Primary articles/reports on the instrument and its use

Platas, L. M., Ketterlin-Gellar, L., Brombacher, A., & Sitabkhan, Y. (2014). Early grade mathematics assessment (EGMA) toolkit. *RTI International, Research Triangle Park, NC.*

## Secondary articles on the instrument and its use

Moloi, Q., & Roberts, N. (2021). A validation process towards the modification of the Grade 1 Early Grade Mathematics Assessment. In Proceedings of the 26th Annual National Congress of the Association for Mathematics Education of South Africa, 14th–16th July (pp. 502-512).

Roberts & Moloi (2021) A validation process towards the modification of the grade 1 early grade mathematics assessment. AMESA long paper.

# Core Early Grade Mathematics Assessment (EGMA Junior)

## Purpose

Used in monitoring and evaluation of impact of interventions

## Target Phase(s)

Foundation Phase

## Target learner age-group

Target by grade not by age

## Target grade(s)

Grade 2 & 3

## Standardized or Class-based

Standardized and school based

## Domain(s)/Sub-domain(s) covered

- It assesses the foundational elements of Number (a component of Number, Operations and Relationships)
- It makes no claim to provide curriculum coverage (it does not) – even for Number, Operations and Relationships
  - It assesses learners on a range of “*foundational skills that research has shown to be predictive of future success in mathematics*”

## Language(s) of assessment

All official SA languages

## Level of use

National

## Administration modality

Group administration

## Format

Learner tablets

Paper-based

## Start year of use and/or duration

2016-Present

## Collaborators

The development of the EGMA was led by RTI International and funded by the United States Agency for International Development (USAID) Jumpstart

## Cost

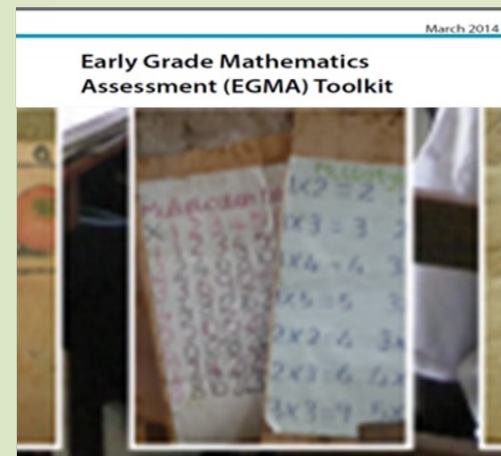
KEY cost drivers:  
License fee  
Printing (Free download)  
Training of Assessors  
Kit hire  
Technical support  
Analysis and reporting

## Primary articles/reports on the instrument and its use

Platas, L. M., Ketterlin-Gellar, L., Brombacher, A., & Sitabkhan, Y. (2014). Early grade mathematics assessment (EGMA) toolkit. *RTI International, Research Triangle Park, NC.*

## Secondary articles on the instrument and its use

Platas, L.M., Ketterlin-Geller, L.R., & Sitabkhan, Y. (2016). Using an assessment of early mathematical knowledge and skills to inform policy and practice: Examples from the early grade mathematics assessment. *International Journal of Education in Mathematics, Science and Technology*, 4(3), 163-173.  
DOI:10.18404/ijemst.20881





# Senior Early Grade Mathematics Assessment (EGMA Senior)

## Purpose

Used in monitoring and evaluation of impact of interventions.

## Target Phase(s)

Intermediate Phase

## Target learner age-group

Target by grade not by age

## Target grade(s)

Grade 4-7 (with plans to extend to Grade 8)

## Standardized or Class-based

Standardized and school based

## Domain(s)/Sub-domain(s) covered

- It assesses the foundational elements of Number (a component of Number, Operations and Relationships)
- It makes no claim to provide curriculum coverage (it does not) – even for Number, Operations and Relationships
  - It assesses learners on a range of “*foundational skills that research has shown to be predictive of future success in mathematics*”

## Language(s) of assessment

English and Afrikaans

## Level of use

National

## Administration modality

Group administration

## Format

Learner tablets  
Paper-based

## Start year of use and/or duration

2016 and later

## Collaborators

Brombacher and Associates

## Cost

KEY cost drivers:  
License fee  
Printing (Free download)  
Training of Assessors  
Kit hire  
Technical support  
Analysis and reporting

## Primary articles/reports on the instrument and its use

Platas, L. M., Ketterlin-Gellar, L., Brombacher, A., & Sitabkhan, Y. (2014). Early grade mathematics assessment (EGMA) toolkit. *RTI International, Research Triangle Park, NC.*

## Secondary articles on the instrument and its use

Reports available from Brombacher and Associates.

# JET Custom Assessments

## Purpose

Designed to track where learners are (grade level) in terms of the curriculum specifications.

## Target Phase(s)

Foundation Phase and Intermediate Phase

## Target learner age-group

Target by grade level not by age

## Target grade(s)

Grade 1-6

## Standardized or Class-based

Standardized and school based

## Domain(s)/Sub-domain(s) covered

100% CAPS

## Language(s) of assessment

English

## Level of use

National

## Administration modality

Group administration

## Format

Learner tablets

## Start year of use and/or duration

## Collaborators

None

## Cost

KEY cost drivers:  
logistics  
printing  
couriering  
fieldwork  
marking  
moderating  
coding or recoding  
analysis and reporting  
presenting of results

## Primary articles/reports on the instrument and its use

None available

## Secondary articles on the instrument and its use

None available

# Magic Classroom Collective

## Purpose

Designed to assess primary mathematics development in the rural contexts of the Eastern Cape where IsiXhosa is the main Language of Learning and Teaching (LOLT)

## Target Phase(s)

Foundation Phase

## Target learner age-group

Target by grade not by age

## Target grade(s)

Grade R-3

## Standardized or Class-based

Standardized

## Domain(s)/Sub-domain(s) covered

CAPS

## Language(s) of assessment

English and IsiXhosa

## Level of use

Provincial (Eastern Cape)

## Administration modality

Group administration

## Format

Paper-based

## Start year of use and/or duration

2007 to present

## Collaborators

Developed by the Nelson Mandela University in collaboration with the University of Fort Hare

## Cost

KEY cost drivers:  
Printing @ R??? per 1 000 copies  
(To be confirmed)

## Primary articles/reports on the instrument and its use

## Secondary articles on the instrument and its use

Ramadiro, B., & Porteus, K. (2017). *Foundation phase matters: Language and learning in South African rural classrooms*. Magic Classroom Collective Press.

Porteus, K. (2022). Improving rural early grade mathematics: Design principles and patterns of improvement in Venkat & Roberts (Eds) *Early grade Mathematics in South Africa*, Oxford University Press.

## B. Addition and Subtraction

/20



I will give you 2 minutes to complete as many addition and subtraction problems below as you can. When I say, "stop," please put your pencil down!

### 2-Minute Tangle

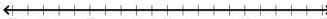
$3 + 3 =$	$10 - 4 =$	$20 - 3 =$	$5 + 5 =$
$10 - 5 =$	$6 + 6 =$	$15 + 4 =$	$21 - 2 =$
$12 + 3 =$	$8 - 4 =$	$10 + 10 =$	$4 + 13 =$
$11 - 2 =$	$18 - 1 =$	$7 + 10 =$	$16 - 15 =$

/4



Great! The rest of this assessment is not timed.  
You can take your time and check your work carefully!

2. Solve by showing on the number line:


 $29 + 4 =$

/2

## Purpose

The ELOM indicates whether an Early Childhood Development (ECD) programme is effective in preparing children for Grade R and identifies areas for programmatic improvement.

## Target Phase(s)

Foundation Phase

## Target learner age-group

50-69 months

## Target grade(s)

Grade R

## Standardized or Class-based

Standardized

## Domain(s)/Sub-domain(s) covered

100% CAPS

## Language(s) of assessment

IsiXhosa, IsiZulu, English, Afrikaans and SeTswana

## Level of use

National

## Administration modality

Group administration

## Format

Paper-based

## Start year of use and/or duration

2016-Present

## Collaborators

N/A

## Cost

KEY cost drivers:  
 License fee  
 Training of Assessors  
 Kit hire  
 Technical support  
 Analysis and reporting

## Primary articles/reports on the instrument and its use

Dawes, A., Biersteker, L., Girdwood, E., Snelling, M. and Horler, J. (2020). The Early Learning Programme Outcomes Study. Technical Report. Claremont Cape Town: Innovation Edge and Ilifa Labantwan  
 Dawes, A., Biersteker, L., Girdwood, E., Snelling, M.J.T.L., & Tredoux, C.G. (2020). Early Learning Outcomes Measure. Technical Manual 3rd edition. Claremont, Cape Town: The Innovation Edge.

## Secondary articles on the instrument and its use

Dawes, A., Biersteker, L., Snelling, M., Horler, J., & Girdwood, E. (2021): To What Extent Can Community-based Playgroup Programmes Targeting Low-income Children Improve Learning Outcomes Prior to Entering the Reception Year in South Africa? A Quasi-experimental Field Study, Early Education and Development, DOI: 10.1080/10409289.2021.2005748  
 Anderson, K.J., Henning, T.J., Moonsamy, J.R., Scott, M., Du Plooy, C. & Dawes, A.R.L. (2021). Test-retest reliability and concurrent validity of the South African Early Learning Outcomes Measure (ELOM), South African Journal of Childhood Education 11(1), a881.  
 Dawes, A., Biersteker, L., Girdwood, E., Snelling, M.J.T.L., and Tredoux, C.G. (2018). Early Learning Assessment Innovation in South Africa: A Locally Appropriate Monitoring Tool. Childhood Education, 94:1, 12-16.

## Purpose

To assess baseline knowledge on a particular concept.  
To inform teaching that focuses on developing strategic efficiency as opposed to calculating using highly inefficient methods.

## Target Phase(s)

Foundation Phase and Intermediate Phase

## Target learner age-group

Target by grade not age

## Target grade(s)

Grade 1 – 6 (Piloted at Grade 3 level to data)

## Standardized or Class-based

Standardized and school based

## Domain(s)/Sub-domain(s) covered

CAPS Aligned

## Language(s) of assessment

Multilingual

## Level of use

National

## Administration modality

Group administration

## Format

Paper-based

Materials can be found on:

<https://www.education.gov.za/MSAP2022.aspx>

## Start year of use and/or duration

2011

## Collaborators

Jointly funded by the FirstRand Foundation, Anglo American, Rand Merchant Bank and the Department of Science and Technology. It is administered by the National Research Foundation (Website).  
Materials- developed collaboratively by the Numeracy Chairs at Wits and Rhodes Universities, the Department of Basic Education, as well as additional international and local experts.

## Cost

KEY cost drivers:  
Printing (free download)

## Primary articles/reports on the instrument and its use

Graven, M. & Venkat, H. (2019) Piloting national diagnostic assessment for strategic calculation.  
*Mathematics Education Research Journal.*

## Secondary articles on the instrument and its use

Askew, M., Graven, M. & Venkat, H. (2022). From what works to scaling up: Improving mental strategies in South African Grade 3 classes. In C. Fernández, S. Linares, A. Gutiérrez, & N. Planas (Eds.), Proceedings of the 45th Conference of the International Group for the Psychology of Mathematics Education (Vol. 2, pp. 27-34). PME: Alicante, Spain.  
Chapter 12 Bringing the Mental Starters Assessment project to scale in Foundation Phase: A 'building your timber' approach *Hamsa Venkat & Mellony Graven.*  
Chapter 13 Lessons learned and evidence of impact: Formative assessment in an integrated reading and mathematics intervention *Anil Kanjee & Jayesh Bhana*  
Mike Askew, Mellony Graven, Hamsa Venkat (2022) From what works to scaling up: Improving mental strategies in South African Grade 3 classes PME 45.

Bridging Through Tens Pre-Test

PART 1

2 minutes for this page

$7 + 3 =$ <input type="text"/>	$50 + 6 =$ <input type="text"/>
$2 + 8 =$ <input type="text"/>	$3 + 60 =$ <input type="text"/>
$10 - 7 =$ <input type="text"/>	$40 - 7 =$ <input type="text"/>
8 less than 10 is <input type="text"/>	$40 + 8 =$ <input type="text"/>
	What is the next multiple of 10? 45 <input type="text"/>
	$100 + 27 =$ <input type="text"/>



# Research Based Early Math Assessment (REMA)

## Purpose

Diagnostic assessments measuring children's mathematical knowledge and skills along research-based developmental progressions

## Target Phase(s)

Foundation Phase

## Target learner age-group

3-8 years (full assessment)  
Grade R only (REMA brief)

## Target grade(s)

Grade R

## Standardized or Class-based

Standardized

## Domain(s)/Sub-domain(s) covered

100% CAPS

## Language(s) of assessment

English

## Level of use

International

## Administration modality

Group administration

## Format

Paper-based

## Start year of use and/or duration

2008

## Collaborators

None

## Cost

Not available

## Primary articles/reports on the instrument and its use

None identified

## Secondary articles on the instrument and its use

Alkhadim, Ghadah & Cimetta, Adriana & Marx, Ronald & Cutshaw, Christina & Yaden, David. (2021).

Validating the Research-Based Early Math Assessment (REMA) among rural children in Southwest United States. Studies in Educational Evaluation. 68. 100944. 10.1016/j.stueduc.2020.100944.