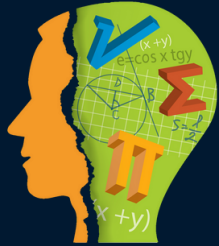


GMMDC

Govan Mbeki Mathematics
Development Centre
empowering young minds



Customized Techno-Blended Maths and Physical Sciences Solutions for Under- Resourced Secondary Schools

NELSON MANDELA
UNIVERSITY

Change the World

Techno-Blended Support Models & Digital Resources for

MATHEMATICS & PHYSICAL SCIENCES

Offline Gamma Resource
Centres & TAPS Support
Exciting GammaTutor Maths &
Science app learner support with
Technology After School Support
(TAPS) Guidance
"Secondary Sites of Learning"

Offline & Online M-learning
Support via Mobile Phones
MobiTutorZA app and Applet
support across all Grades. Online
School competitions
and MobiMetric Exam Practice
"Anytime Anywhere Access"

Academy Support
Programme for
Learners
Structured
series of Topic
Learning Cycles
for improvement
in matric results
"Incubation & Access"

**GMMDC's
Development Projects
for Mathematics
& Physical Sciences
in Secondary
Schools**

Professional
Development
of Teachers
Accredited
series of short
programmes
for Professional
Teaching Practice
"Professional Network"


STEAM Education
Awareness Workshops
Experiential Learning
Workshops to promote
creative problem-solving and
mathematical design thinking
"Critical Thinking for 4IR"

National Math-Art School
Competition
Promoting Trans-disciplinary
Problem solving and Real Life
Connections between
Mathematics & Art
"Maths in Creative Design"


What makes it Unique?

The GMMDC offers unique customized solutions that are scalable. Where they have been tried, the results were excellent. Teachers were more confident and better supported, learners improved their marks - sometimes dramatically in one year. Frequent feedback from the GMMDC projects include: "This has made teaching and learning much more accessible, meaningful and enjoyable!"

Contact Us:

 041 5044743

 gmmdc.nmu@gmail.com

 <https://mbeki-maths-dev.mandela.ac.za>



A Customized Solution

Hybrid Offline- & Online Support
Programmes and Interactive Digital
Resources for Teachers & Learners



No ICT Skills? No problem!

Easy plug & play apps with full access
via mouse click or touch of screen



No Internet? No data? No problem!
Full access to offline digital packages



No laboratory? No problem!

Professional videos of all physical
sciences experiments with
syllabus discussions are available



No teacher available? No problem!
Self-directed learning
programme is available including
support via mobile phones



No learner programme? No problem!
24/7 interactive digital support
including lessons, self-tests, exam
support and access to topic applets



No learning skills? No problem!
Soft skills support and guidance
for own-paced and self-directed
learning are included



No English? No problem!
Interactive anywhere anytime
multi-language support included
Change the World

Innovative New Gamma Teaching & Learning Device



- Teacher Assistant**
- In Classroom
 - At Home
- Learner Support**
- After-school Access

Easy Plug & Play
Covers Complete Maths & Science Syllabus for All Grades

Components of Interactive CAPS Maths & Science Apps



Full Curriculum Support

- | | |
|---|---|
| <p>PowerPoint & Video Lessons</p> <p>Topic Self-Tests, Scoring & Feedback</p> <p>Career Guidance & Soft Learning Skills Support</p> <p>Multi-language Support</p> | <p>Scientific Calculator Support</p> <p>Textbook & Exam Support via Past Papers & Memo's</p> <p>Animations, Simulations and Demo's</p> <p>Science Experiment Videos</p> |
|---|---|

M-learning Support Projects

MobiTutorZA

Online App - Any Device

- Free Mathematics and Physical Sciences Curriculum Support
- Annual Mathematics School Competition
- MobiMatric Exam Paper Practice



GeoGebra

Online App - Any Device

- Customized interactive applets designed for mobile phone screens
- Supports FET & SP CAPS Mathematics
- Access via QR codes or web-links



Offline App - Android Device
Complete Mathematics and Physical Sciences Packages for Gr's 10-12

"Anytime Anywhere Access"



Structured Matric Mathematics Programme for Improved Results

Structured Self-Directed Learning

A Series of Topic Learning Cycles is presented via a successful hybrid blended model using a combination of printed learner guides for soft-skills and curriculum support. Live Zoom support, sessions, WhatsApp broadcasts, and the GMMDC's customized online & offline apps are also used in the MobiTutorZA Academy project.



Professional Development Programme for In-Service Mathematics Teachers

SACE Accreditation

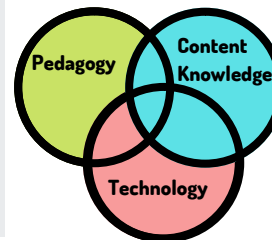


- Eight one-day short learning programmes (SLP's)
- Each SLP carries ten SACE accreditation points.
- Improved ICT - assisted classroom practice.
- A Technology Pedagogy and Content Knowledge (TPACK) model is used.
- Separate FET - level and Senior Phase programmes.



Programme approach:

- CAPS aligned
- Classroom Practice
- Integrate use of ICT
- Includes exposure to STEAM Education



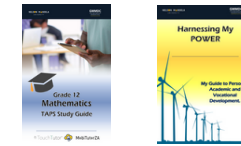
The STEM Education Challenge

Our country needs a workforce with technological skills for the future workplace. But the crucial building blocks of education – maths and science – are seen as 'too difficult' by learners. Also, South Africa has a shortage of qualified maths and science teachers. Rural schools have a legacy of poor infrastructure. There is a lack of teaching aids, and learning resources, intermittent or nonexistent internet, inadequate security... It's a vicious circle. How is it possible to improve the quality of teaching, and support more learners?

Technology-Assisted After-School Peer Support Programme (TAPS)

Second Site for Self-Directed Learning

Structured Support Programme for Teachers and Learners



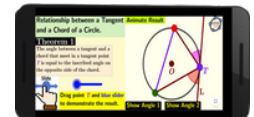
CAPS Aligned Topic & Soft Skills Learner Guides



School-based Resource Centres for offline CAPS aligned Video Lessons, Self-Tests with Feedback, Exam Revision and Language Support



Online and Offline access to PDF lessons, Textbooks, Past Papers & Memos, Language Support and Career Guidance via personal Mobile Phones



Online access to customized interactive GeoGebra Applets via personal Mobile Phones

"Having an expert explaining the syllabus visually anywhere, anytime is just what I need."