



asme

CENTRE FOR THE ADVANCEMENT OF SCIENCE AND MATHEMATICS EDUCATION

# ANNUAL REPORT 2017

# A YEAR OF GROWTH.

Our vision is to be a world class centre for changing the lives of learners through quality and innovative mathematics and science education, by providing quality professional learning opportunities for mathematics and science teachers and learners in a context of under-resourced and rural schools in South Africa.

## MESSAGE FROM CHAIRPERSON & COO

PROF. JOHN D VOLMINK & HENRE BENSON

As Chairperson of the Board of Trustees and Chief Operations Officer of CASME we are pleased to present the 2017 Annual Report. This year we have adopted a leaner look and feel but have included some links to our website should you wish to take a deeper dive.

If one was to encapsulate 2017 for CASME it can be said it was a year of growth. We managed to curtail prior year losses. Additionally, not only did we drive more funding to our mathematics and science programmes, expand on tested intervention models, increase staff and welcome new partners, we did so in a strategic way. The year marked the start of a 3 year focused period of engagement across five strategic areas in order to cement CASME's status and impact in the mathematics and science education development field.

As NGOs face the coming ebb of resources within the context of national and international economic constraints,

it is essential to remain relevant and to offer our partners an impactful response to education challenges.

A significant driver of innovation and impact has been our willingness to collaborate, learn from others and provide leadership in bringing NGOs together through a variety of professional learning communities.

In this new phase, CASME is also exploring innovative technology based responses to improve the quality and reach of its programmes and to continue to operate more efficiently. In this CASME remains committed to Open Source Education principles and we look forward to sharing these in the near future.

Whilst we are very aware of the difficult task ahead, we are confident that we are laying foundations for sustainability and continued growth, and as always, we invite you to join us on this, the most rewarding of journeys.

## THEORY OF CHANGE

THAT ACKNOWLEDGES LOCAL CHALLENGES



we improve teacher competence in curriculum delivery and teaching methodologies, improve access to quality resources and information, and address learning skills and attitude...



we can improve learner performance in our focus subjects of mathematics and science.

### FACILITATED BY

*improving learner outcomes*

### THROUGH

Curriculum management

• Teacher competence in subject, method and assessment

• Access to opportunities and information

• Resources for teaching and learning

• Learning skills and attitude (of teachers and learners)



## STRATEGIC DIRECTION: FIVE FOCUS AREAS

WORKING TOGETHER FOR EVIDENCE BASED DECISION MAKING.



# KEY ACHIEVEMENTS OF 2017

FIRST YEAR OF IMPLEMENTATION (STRATEGY ADOPTED END 2016).

## 1. TEACHER TRAINING

- South African Council of Educators (SACE) approved two short courses
- Provisional ETDP SETA approval of 3 unit standards
- Recognising coaching as an important teaching approach

## 2. KNOWLEDGE MANAGEMENT

- Contracted to conduct SAPREF evaluation
- Initiated Knowledge Sharing seminars

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## 4. INNOVATION & SUSTAINABILITY

- Cuts across all focus areas

## 3. PARTNERSHIPS & COLLABORATION

- Concluded pilot phase of Jika Mfundo campaign in partnership with PILO (programme for improved learner outcomes) and National Education Collaboration Trust
- Formed partnerships with 5 education NPOs (KZN), to expand the Umjikelezo weScience reach

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## 5. ICT FOR EDUCATION

- Laid the foundation for new innovation using ICT to improve project impact in education

## AREAS OF GROWTH

An evaluation at the end of a three year pilot project, revealed a

**43% UPTAKE OF SCIENCE IN SCHOOLS.**

Moved from a resource centre based model to a

**MOBILE MODEL**

in order to better resource schools.

**ONE SCIENCE-2-GO VEHICLE RUNNING**

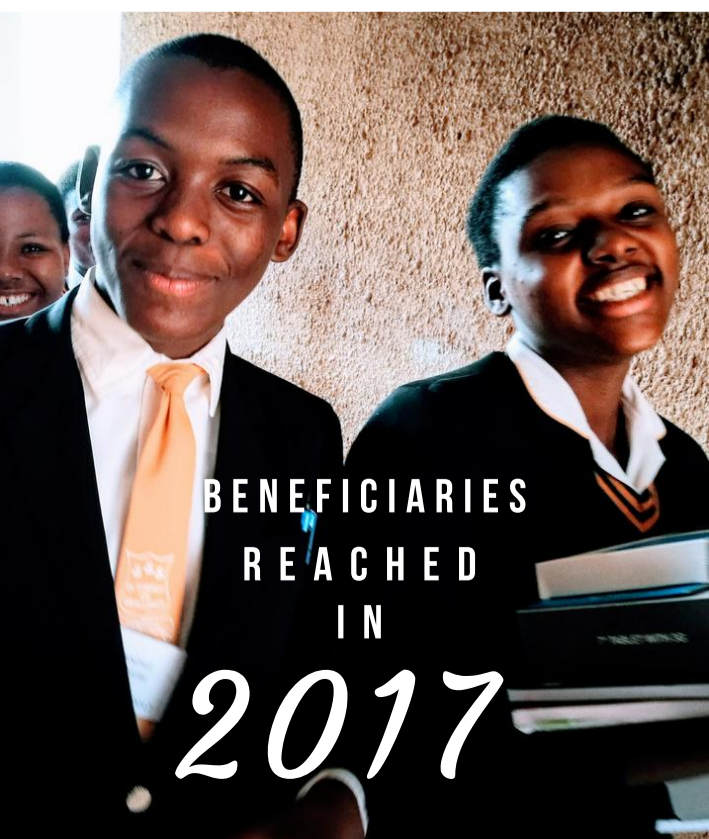
with a commitment for a second vehicle.



## REACH, ACTIVITIES & PROJECTS

Teacher development, learner tuition, and providing resources for improved maths and science learning, remain the core of CASME activities.

In 2017, CASME collaborated, innovated, and got creative, to bring science and maths to learners who need it most.



BENEFICIARIES REACHED IN

**2017**

LEARNERS

**39 567**

TEACHERS

**1886**

SCHOOLS

**658**

ACTIVITIES

**839**

SUCH AS

school visits | learner tuition  
teacher workshops



A joint project between five key role players in the field of science education. Taking the message of science on the road to rural KwaZulu-Natal schools.

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**Izimpende Lokukhanya**  
In partnership with the Zenex Foundation

Partnering with The Zenex Foundation, the project aims to increase the number of well-functioning schools offering quality maths, science and English teaching, in six schools in the Ilembe District of KZN.

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The Young Scientist Incubation Project is a joint project between CASME, Eskom, and STEC@UKZN, to improve science, technology, maths and innovation in South Africa. The Y-SiP project aim is to improve science learning outcomes for a group of black learnersthrough developing their investigative and problem solving skills.

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The biggest challenge to inspiring interest and enthusiasm for science in schools? Non-existent functional science labs. Together with Mahle Behr South Africa, CASME brings portable lab kits to schools, for practical, hands-on science learning and teaching.

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## KEY PROJECTS

### LEARNER TUITION PROGRAMME

Noxolo Phiri's journey of teaching maths to grade 8 and 10 learners at Nqabakazulu High School was sparked through the CASME Learner Tuition Programme in 2012. As a grade 12 learner, she and 13 others, qualified to attend weekend study classes. Of the 14, only three were female.

Her teaching style mirrors that of the CASME tutors who inspired and motivated each learner, helping them to "erase the fear of maths". She believes conquering this fear starts with changing this negative maths mindset. Many children fear maths, believing it is too hard, or in the case of girls, only for boys.

She is now seeing the fruits of her labour, "I have a grade 10 class who now love maths, when before they hated it. Now they can see it is not as difficult as they were led to believe."

Ms Phiri is currently studying for her honours in Maths and Science, and intends to go on to obtain her masters degree.



JOSEPH LUTHULI & TEBOGO QWABE - LAMONTVILLE RESOURCE CENTRE

### NEWS WORTHY

#### SIGNIFICANT PARTNERSHIPS

In May 2017, CASME and Chevron launched their partnership to address educational challenges facing communities in Durban's South Basin area. The initiative provides resources for teaching, support for teachers, and creates learning opportunities for school children.

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#### FROM UMLAZI TO LUCKNOW!

The Wizards at Mathematics International Competition (WZMIC) was held in Lucknow, India. Four grade 7 learners travelled across India, and burnt the midnight oil, to prepare for the International Maths Olympiad. One medal was awarded, and after the revaluation of the results, a second child was awarded a medal.



# FINANCIALS

IN 2017, WE RAISED  
R 8 794 829.00

TOTAL OPERATING COSTS:  
R 9 196 948.00

[CLICK HERE FOR FULL FINANCIALS](#)

## THE BOARD OF TRUSTEES

**Prof John David Volmink (Chairman):** Has served on several of the Ministerial Commissions and Task Teams on Education, as well as on the Boards of education Non-Governmental Organisations such as the Media in Education Trust (MIET Africa), Africa Ignite, and the Environment and Language Education Trust. He has also acted as the interim Vice Chancellor at both the Durban University of Technology (DUT) and the Cape Peninsula University of Technology (CPUT).

**Prof Renuka Vithal:** Deputy Vice Chancellor: Teaching and Learning at University of KwaZulu-Natal (UKZN).

**Dr Shamritha Bhikha:** Chief Director: Accreditation in the National School of Government.

**Mr Magnate Ntombela:** Regional Director for KwaZulu-Natal at the University of South Africa (UNISA).

**Mr Sifiso Mncube:** Divisional Procurement Manager at Foskor.

**Dr Herbert Khuzwayo:** Department of Mathematics, Science and Technology Education at the University of Zululand.

**Prof Sibusiso Moyo:** Director for Research and Postgraduate Support at the Durban University of Technology (DUT), as well as the Acting Deputy Vice-Chancellor: Engagement.



## TO OUR PARTNERS

*Thank You*

The Department of Basic Education  
EDTP-SETA

The National Education Collaboration Trust  
Programme to Improve Learning Outcomes

Natal Portland Cement-InterCement  
Chevron South Africa  
Mahle Behr South Africa

Anglo American Chairmans Fund  
SAPREF

First National Bank  
Kingdom Slots

Philanga Themba Sibaya Community Trust  
Zenex Foundation  
Cennergi

