



science & technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

Youth into Science Strategy

Drawing youth with talent and potential into SET careers for a brighter future



Group of DST National Youth Service volunteers attending a presentation at a science centre.



DST supported engineering students completing vacation work



Another DST supported engineering student on vacation work.

Science, engineering and technology (SET) are pivotal to South Africa's economic growth, social development and improved quality of life for all. Availability of SET human resources is another enabler of SET's contribution to these areas, hence the Department of Science and Technology (DST) embarks on a number of initiatives to develop SET human resources. Among them, is the implementation of the Youth into Science Strategy (YiSS), which was approved by Cabinet in March 2007. The Strategy focuses on enhancing access of young people to SET by targeting mainly, school-going youth and undergraduate SET students. The strategy is implemented through the following interventions:

- * Stimulating learners' interest in science and technology through, among others, the NATIONAL SCIENCE WEEK and SCIENCE FESTIVALS.
- * Contributing to participation and performance of youth in SET through among others, the NATIONAL EDUCATOR SUPPORT PROGRAMME and the NATIONAL SUPPLEMENTARY TUITION PROGRAMME.
- * Identifying and nurturing of youth with talent mainly through the use of **Olympiads and Competition; camps** held during school vacations and an undergraduate support programme for top performers from camps.
- * Organised support to the development of a NATIONAL NETWORK OF SCIENCE CENTRES, which is the infra-structure identified to assist in the implementation of the Youth into Science Strategy.
- * NATIONAL YOUTH SERVICE which supports the implementation of the YiSS.

NATIONAL YOUTH SERVICE

The National Youth Service (NYS) is a government-wide initiative that seeks to contribute to the enhancement of youth. The National Youth Development Agency (NYDA) guides the design and implementation of the programme. Among them is a three-tier implementation model i.e. community service, learning, personal development and exit opportunities in the form of formal employment or further studies.

Youth development in the DST is driven mainly by an intention to increase the youth's access

to studying science, technology, engineering and mathematics (STEM). During 2008/2009, the programme focused on unemployed Science, Engineering and Technology (SET) graduates. These graduates were deployed for voluntary community service, to science and technology organisations that collaborate with the DST in the implementation of the YiSS, mainly the science centres. Volunteers acquired life and other crucial skills such as project management, leadership, entrepreneurship, communication, a driver's license, etc. Since January 2008, at least 284 volunteers have participated in the DST-NYS programme. More than 50% of these volunteers exited the programme within the first 12 months to permanent employment.

The next cycle on DST-NYS implementation which begins in 2010 will include students in institutions of higher learning and further education and training; learners and young professionals as volunteers. Recruitment period and processes will be advertised through local media when positions are available.

TALENT AND POTENTIAL

There is a global decline in interest in science studies among young people. South Africa is not unique in this regard. Another reality is that the numbers of productive scientists and technologists needed for improving quality of life and wealth creation is declining. A study done in 2003/4 highlighted that the majority of scientists are aging, white and male. At that stage 70% were white, 38% female and 50% of the research output was achieved by the over 50-year old group.

In order to change this apparently stagnant situation, a new generation of productive and also representative science, engineering and technology researchers are required. Identifying talent at a young age and nurturing it is important for guiding youth in pursuing productive careers.

Olympiads and competitions and specialised camps for talented learners, provide school-going youth with exposure and opportunities to develop the required problem-solving skills and self-confidence.

MATHEMATICS AND SCIENCE CAMPS

The DST funded a series of Maths and Science camps from 2005 – 2009. These camps were held for talented school-going youth (mostly from disadvantaged backgrounds) in Grades 11 and 12 from all provinces. During this period more than 8000 youth attended the stimulating science / accounting and maths lessons, life skills activities and a careers event. These camps were life-changing experiences for the participants; they were highly motivated after the camp and they received good material which assisted them in their studies. Many of the camp participants have moved into science-based studies at university and we are expecting some of them to graduate with degrees and diplomas during the next few years.

The DST is now exploring a modified and improved model for the camps which will use Olympiads / competitions and other tools to identify the talent followed with interventions including holiday camps which will prepare youth to excel at school, and most importantly prepare them for university study in science, engineering and technology. The new youth talent programme is being developed for implementation in 2011.



DST NYS volunteers at a science centre.



DST NYS volunteers, with the science center manager and the DST NYS co-ordinator